Chapter 4

Results

4.1 Medicinal plants of Tulunadu

4.1.1 Natural medicines

1. *Abelmoschus esculentus* (L.) Moench (Plate 1 A)

Syn: *Hibiscus esculentus* L.

Family: Malvaceae

Vernacular Name: San: Bhenda, Tindisha

Eng: Lady’s finger, Okra

Kan: Bende, Bende kaayi

Mal: Venta, Venda

Tulu: Bende

Habit: Erect stout herb.

Habitat: Widely grown as garden vegetable.

Status: Common. Exotic.


Uses: Fruit mucilage in water is given for urinary disorders. Paste prepared by grinding its leaves and fruits is applied for swellings and furuncles. *Raw fruit is cooked and its steam is inhaled for sound fall. Root decoction is used for rheumatism. *Fruit pieces soaked overnight in water is consumed next day for controlling diabetes and hypertension. Root powder in milk is given for
leucorrhoea. Root extract is given with sugar for burning urination. *Young fruit along with sugarcandy is chewed early morning in empty stomach for 41 days to increase the quality and quantity of semen as well as sexual vigour. *Rasam* prepared from young fruits is recommended for digestive problems and allergy in lungs. *Plant ash is used for eye diseases. *Decoction made of its root, *Mucuna pruriens* root, outer shell of copra, sugarcandy and dried grapes is used for backache.

Note: There are a number of cultivars of okra, of which the traditional white, long fruit variety is preferred for medicine. Stem peel is used as shampoo.

2. *Abelmoschus manihot* (L.) Medik. (Plate 1 B)

Syn: *Hibiscus manihot* L.

Family: Malvaceae

Vernacular Name: Eng: Aibika  
                    Kan: Kaadubende  
                    Mal: Kaattuvenda  
                    Tulu: Kaattubende

Habit: Erect herb.

Habitat: Wasteland along roadsides.

Status: Occasional.


Uses: *Oil extracted from seeds or plant juice is applied for skin diseases and hair fall. *Root decoction is given to stop loose motion in calves. It is also used for rheumatism.
Etymology: The name Kaadubende (wild okra) indicates its wild nature.

Note: It is used in place of *Hibiscus radiatus*.

**3. Abelmoschus moschatus** Medik. (Plate 1 C)

Syn: *Hibiscus abelmoschus* L.

Family: Malvaceae

Vernacular Name: San: Latakasturika  
Eng: Ambrette  
Kan: Kaadukasthuri, Kasthuribende  
Mal: Kaattu kasturi, Kasturi venda  
Tulu: Kaattu kasthuri

Habit: Tall annual herb.

Habitat: Wastelands, often cultivated for seeds.

Status: Rare in wild condition.


Uses: Usage as vegetable or fruit soaked water is recommended for nervous debility, spermatorrhoea, urinary disorders and gas trouble. Fruit is nutritious and expels phlegm. *Seed extract is given to expel worms and also for gastro-intestinal disorders. Plant or fruit juice is used as general tonic. *Seed powder dissolved in water is given with honey at night after food for blood discharge in urine, shortage of urine and protein discharge in urine. *Young fruit chewed and eaten every morning or decoction made of its leaf or seed is used to gargle for mouth ulcers, ulcers in gum, gum bleeding, foul smell of mouth and loose teeth. Seeds are used along coffee, which acts as cardiac stimulant. Plant decoction is used for phlegm, breathing problems, diabetes, eye diseases, as sexual and nervine stimulant. *Seed
along with cardamom seed powder, pearl shell powder and gold bhasma*, mixed, eaten with sugar twice a day for a month for leucoderma. *Seed powder is inhaled for rhinitis in pregnant ladies.

Etymology: The name Kasthuribende (musk okra) is due to its musk-scented seeds.

Note: It is believed that these seeds have same properties as that of musk and it is widely used as aphrodisiac agent.

4. **Abrus precatorius** L. (Plate 1 D)

Family: Papilionaceae

Vernacular Name: San: Aruna, Chudala, Chudamani, Gunja, Gunjika, Raktika
Eng: Coral pea, Crab’s eye, Indian liquorice, Jequirity
Kan: Galaganji, Gulaganji, Gulagunji, Gurugunji
Mal: Kunni, Cuvannakunni, Kunnikkuru
Tulu: Gurugunji

Habit: Twining shrub.

Habitat: Deciduous thickets and lateritic plains.

Status: Common but less frequent than *Abrus pulchellus*. Poisonous.


Uses: Seed paste is applied for skin diseases, eye diseases, rat and spider bites. Purified seed is said to have properties similar to that of *Glycyrrhiza glabra* and is used for cough. Seed paste is applied for tinea versicolor. Seed ash is applied for cut, wounds and scabies. *Seed paste with Solanum virginianum fruit juice is applied for alopecia totalis. *Hair oil prepared by heating seed paste, Eclipta prostrata, cardamom, Nardostachys jatamansi root, Cedrus deodara heart wood and Saussurea lappa seeds in gingelly oil helps in proper growth of hair. *Seed powder
heated in coconut oil is applied for warts, eczema and tinea versicolor. *Seed along with cumin, clove, badam, *Piper cubeba* fruits and camphor are fried, powdered and is given with sugar for rheumatic problems in cattle. Seed paste is applied to vagina and navel region to expel dead baby. Seed powder extract with water is used both externally and internally for snake bite. Oil extracted from the seed is used as hair oil. *Seed or root of white variety along with *marmani* tablet, *Glycyrrhiza glabra* rhizome, *Spondias pinnata* bark, *Moringa pterygosperma* barks are made into a paste with milk and is applied for furuncle in breast. Root decoction has aphrodisiac property and is given for sexual dysfunction. Root paste is externally applied for swellings. Root extract is used in case of snake bite. *One spoon of root extract with rice washed water is given after two hours of delivery to prevent infections after delivery. *Root along with *Moringa pterygosperma* bark, *Spondias pinnata* bark and *marmani* tablet are made into a paste and is applied for urticaria. Root, tamarind bark and rock salt are crushed and applied for toothache. Leaf extract with honey is applied for swellings. *Dried leaf powder mixed with sugar is given for cough. *Leaf juice mixed with *Andrographis paniculata* juice is recommended for one month in case of leucoderma. Crushed leaf is applied for toothache and dental cavities. A small cloth soaked with its leaf juice is used for toothache. *Leaf along with gingelly seeds and jaggery are ground and eaten to stop menstrual bleeding. *Crushed leaf boiled with water is given by adding equal quantity of milk twice a day or seed powder dissolved in milk is taken once in the morning for protein in urine. *Leaf decoction with water is given by adding milk for stomach swelling due to gas trouble.

**Etymology:** Name Gunja (a clump of creepers) is due to its habit. It forms a mass or clump over the thickets.

**Note:** As it is of hot nature it should be used only with the strict supervision of an experienced physician. It is one of the ingredients of *Gorocanadi vatika, Nilibhrngadi taila, Mrtasanjivani gutika, Gunjabhadra rasa* and *Svetagunjadi vatika* (Sivarajan & Balachandran, 1996; Sharma *et al.*, 1998). Active constituents in the plant are picatorine, abrine, trigonelline, glycyrrhizin and abrasine (Kapoor, 1990). It
is believed to have properties similar to that of *Glycyrrhiza glabra* and presence of glycyrrhizin in both the plants forms supporting evidence. Seed powder mixed in coconut oil is used as a raticide. Formerly its seeds were used to denote weight in jewelleries.

**5. *Abrus pulchellus* Wall. ex Thw. (Plate 1 E)**

Family: Papilionaceae

Vernacular Name: San: Karanjika

Tulu: Kolputha ballu

Habit: Climbing shrub.

Habitat: Deciduous forests and lateritic plains.

Status: Common.

Description: Climbing shrubs. Leaves paripinnate; leaflets 12 – 16 pairs, oblong. Flowers in long-peduncled lax racemes; longer than leaves. Sepals 5. Petals 5, pale blue. Stamens 9, monadelphous. Fruit flat pod, with oblong black seeds.

Uses: *After smearing the coconut oil over the chest, its leaves are pasted over the chest for difficulty in breathing as well as abdominal spasm. *Whole plant decoction is used for rheumatism and lung disorders. *Either six leaves are pasted over the chest or their extract with gingelly oil is poured into opposite side ear in case of breathing problems, chest pain and abdominal spasm. *Whole plant paste with lime juice is applied for herpes in children.

Etymology: The name Kolputha ballu (climber useful for breathing problems and abdominal spasm) indicates its use.

Note: Both the species of *Abrus* are identical. However, *Abrus pulchellus* differs from the *Abrus precatorius* by the larger leaflets, long peduncle and black seeds.
6. *Abutilon indicum* (L.) Sweet (Plate 1 F)

Family: Malvaceae

Vernacular Name: San: Atibala  
Eng: Country mallow  
Kan: Ane kadeeru, Anekurunthoti  
Mal: Anakkurunthotti  
Tulu: Malla kadre

Habit: Woody herb.

Habitat: Wastelands along roadsides.

Status: Occasional. Weed.

Description: Erect woody herb; stem tomentose. Leaves simple, ovate to suborbicular; basal shallowly 3-lobed. Flowers solitary, axillary. Calyx campanulate; lobes 5. Petals 5, yellow to orange. Stamens monadelphous. Fruit globular schizocarp, with reniform mericarps.

Uses: Root decoction is given for UTI, lumbago and nervous debility. Root paste is applied for leprosy and swelling. Seed extract is given as a laxative. Root decoction is used for fever. *Leaf along with barks of Syzygium cumini and Calophyllum inophyllum* are crushed, powdered, dissolved in water and taken by adding equal quantity of water for a week in case of leucorrhoea. *Leaf boiled in water is given by adding equal quantity of milk for protein discharge in urine of young children. Extract of seed powder with milk is also used for same purpose.

Etymology: Name Anekurunthoti suggests that this belongs to the kurunthoti group (*Sida*) and is the largest of the group.

Note: It is used as a substitute of *Sida rhombifolia*. This plant and *Sida acuta* are used in the name Anekurunthoti. It is used for preparations like *Bala taila*, *Narayana taila* and *Mahanarayana taila* (Sharma et al., 1998).
7. *Acacia caesia* (L.) Willd. (Plate 2 A)

Syn: *Acacia columnaris* Craib

Family: Mimosaceae

Vernacular Name: San: Nikunjika
   Eng: Soap bark
   Kan: Antarike, Barasige, Chende mullu
   Mal: Inja, Incha, Velutha incha
   Tulu: Chendetha mullu

Habit: Large armed shrub.

Habitat: Wastelands and hedges.

Status: Common.

Description: Large climbing shrub, armed with hooked prickles. Leaves bipinnate; rachis with prickles on the underside and glands between all pairs of pinnae; pinnae 5 – 10 pairs; leaflets 10 – 20 pairs, oblong. Flowers in heads, on terminal panicles, greenish-white. Calyx funnel-shaped, 5-lobed. Petals 5. Stamens many. Fruit strap-shaped, brown, pod.

Uses: *Young shoot tip is chewed or its tambuli* is given for mouth ulcers. It is also beneficial for gastritis, gas trouble and indigestion. *Bark decoction is given for rheumatism. *Plant ash is applied for wounds, cuts, burns and poisonous bites. *Leaf paste is applied for cuts and wounds.

Etymology: Name Velutha incha (white soap bark) is due to the whitish stem. There are two types of soap barks – white (*Acacia caesia*) and black (Kareencha – *Acacia pennata*). Nikunjika means a thicket or an arbour. It usually forms a large mass of impenetrable thicket.

Note: It is usually used as a substitute of *Acacia sinuata*. *Stem is used in basket making and fencing. Tender shoot tip is edible.
8. *Acacia catechu* Willd. (Plate 2 B)

Syn: *Acacia chundra* Willd.; *Acacia sundra* (Roxb.) DC.

Family: Mimosaceae

Vernacular Name: San: Khadira, Khadirah, Kantaki, Karkati  
Eng: Red cutch  
Kan: Kaachu, Khadira  
Mal: Karingali  
Tulu: Kachi

Habit: Medium-sized tree.

Habitat: Lateritic plateau.

Status: Frequent.


Uses: Heart wood decoction or extract in the form of hot water or with milk (1:2) is consumed as a blood purifier for improving general health. Heart wood decoction is given for skin diseases, mouth ulcers, dysentery and worms. Heart wood decoction is given to purify blood, also for urticaria, leprosy and IBS. Twig is used as tooth brush for strengthening teeth and gums. *Bark decoction is used as a gargle for mouth ulcers. *Decoction made of its heart wood and *Andrographis paniculata* is recommended for fever. *Heart wood paste with bee wax and honey is applied for water oozing or pus releasing wounds and ulcers. Drinking the heart wood extract in hot water daily can reduce the amount of blood in human body. Heart wood decoction is recommended for gastric ulcers and diabetes. It is also used for leucoderma, tinea versicolor and black marks. *Decoction made of its heart wood, *Curculigo orchioides* tuber and *Triticum aestivum* root (1:1:2) is dried, powdered and is used with honey for a week in case of over urination.
Etymology: Kaachu (cutch) comes from cutch, the gum resin obtained from its heart wood.

Note: This plant is an integral part of traditional Vedic rituals. Heart wood is well known for its blood purifying property. Heart wood contains catechin, catechutannic acid and epicatechin as main constituents, making it useful for digestive disorders and bleeding from body parts (Kapoor, 1990). It is used in preparations like Khadirarista, Arimedadi taila and Khadiradi gutika (Sharma et al., 1998). Heart wood extract is used along with betel leaves in *pan*.

9. *Acacia farnesiana* (L.) Willd. (Plate 2 C)

Syn: *Vachellia farnesiana* (L.) Wight & Arn.

Family: Mimosaceae

Vernacular Name: San: Arimedha, Arimedah, Irimedah
Eng: Cassie flower, Sweet acacia
Kan: Jali, Sanna jali, Kasthoori jali, Bilijali
Mal: Velvelam, Pivelam
Tulu: Boldu kaachi

Habit: Small tree.

Habitat: Cultivated on roadsides and gardens.

Status: Occasional. Exotic.

Description: Small tree, with white bark. Leaves bipinnate; rachis with a gland below the base of the lowermost pinnae; pinnae 3 – 8 pairs; leaflets 10 – 20 pairs, oblong. Flowers small, dark-yellow, in globose heads. Calyx-lobes 5. Petals 5. Stamens many. Fruit cylindric, pointed pod.

Uses: Bark decoction is used as a blood purifier. Its twig or stem peel is chewed for strengthening teeth and gums, also for toothache. Root bark decoction is given for fever.
Etymology: Name Sanna jali is due to its size which is much lesser than the jali (*Acacia catechu*). Bilijali, the name itself suggests the whitish bark.

Note: Plant is highly recommended for oral problems. Active components present are benzaldehyde, salicylic acid and methyl salicylate (Kapoor, 1990).

**10. Acacia nilotica** (L.) Brenan (Plate 2 D)

Syn: *Acacia arabica* (Lam.) Willd. var. *indica* Benth.

Family: Mimosaceae

Vernacular Name: San: Babbula

    Eng: Babul bark, Sant pods, Indian gum arabic

    Kan: Kari jali

    Mal: Karivelam

Habit: Small tree.

Habitat: Planted along roadside.

Status: Rare.


Uses: *To overcome the weakness due to snake bite its bark extract is used as tonic. Bark decoction is used for washing septic wounds and ulcers. Bark powder mixed with gingelly oil is also applied for foul ulcers. *Buds are chewed to get relief from cough, while resin extract is given for over urination.

Etymology: Name Kari jali indicates its dark brown bark.

Note: It is known for its wound healing property and widely used for oral diseases. Active constituents of the gum are arabic acid, malic acid and tannin (Kapoor,

11. **Acacia sinuata** (Lour.) Merr. (Plate 2 E)

Syn: *Acacia concinna* (Willd.) DC.

Family: Mimosaceae

Vernacular Name: San: Satala, Saptala  
Eng: Soap nut Acacia  
Kan: Seege, Mugli, Seege kaayi  
Mal: Civikka, Cinikka, Carmalanta  
Tulu: Seege

Habit: Large climbing shrub.

Habitat: Along hedges.

Status: Rare.

Description: Large prickly climbing shrub. Leaves bipinnate; rachis with strong hooked prickles; pinnae 4 – 6 pairs; leaflets 12 – 20 pairs, linear. Flowers yellow or white, in terminal paniculate heads. Calyx campanulate. Petals yellowish white. Stamens many. Fruit thick, fleshy pod, depressed between seeds, wrinkled when dry.

Uses: *Fruit powder is given as an emetic agent to remove poisons from stomach. In case of constipation also, fruit decoction is used. *Leaf is used for preparing tambuli*, which is digestive, useful for gastritis and indigestion. *Leaf rasam* or decoction is given for gastritis, to improve digestion and as a uterine contractor after delivery. Fruit powder is given internally to induce vomiting, while its decoction as laxative. Fruit powder is used to wash hairs, helps for proper development of hair. Its extract is hot, given for asthma and bronchitis. *Root bark ground with chillies is applied or used for stomach swelling in cattle. Leaf rasam* helps to decrease the cholesterol level in the body and is recommended three times in a week. Tambuli* prepared from leaf is highly recommended for ladies after delivery, also useful for
rheumatism and biliousness. Tender shoot tip decoction is given for indigestion due to fatty foods. Rasam\* prepared from its shoot tip is recommended once in a week to increase digestion. Leaf and bark ground in water is applied externally, while pod decoction is used as bath for skin diseases and wounds. *One spoon of water oozing out from the cut stem mixed with saffron and gorochana*\* is recommended three times in a month in three cycles for asthma. *Leaf along with tamarind, salt, jaggery, pepper seeds and cumin seeds are made into a rasam*, which is used along with rice for indigestion due to over eating of oily food. *Regular use of rasam*\* prepared from its leaf prevents gall bladder stones.

Etymology: Seege kaayi is a colloquial version of Shikhakai, Hindi name for soap nut Acacia.

Note: It is one of the best digestive agents. Due to the detergent and astringent action of the pods, these are very much used for skin and hair care (Chaudhri, 1996). Fruit is used as soap. Tender shoot tip is used as vegetable.

12. *Acacia torta* (Roxb.) Craib. (Plate 2 F)

Syn: *Mimosa torta* Roxb.

Family: Mimosaceae

Vernacular Name: Kan: Chende mullu
               Tulu: Chendetha mullu

Habit: Large armed shrub.

Habitat: On exposed forest borders.

Status: Occasional.

Uses: *Same as *Acacia caesia.*

Note: It is used in synonymous with *Acacia caesia.* Stem is used in basket making and fencing.

13. *Acalypha ciliata* Forssk (Plate 3 A)

Family: Euphorbiaceae

Vernacular Name: San: Haritamanjari
   Kan: Thuppa keere, Kuppi gida
   Mal: Kuppameni
   Tulu: Kuppi dai

Habit: Herb.

Habitat: Plains and wastelands.

Status: Frequent. Weed.

Description: Erect annual monoecious herb, with striate branchlets. Leaves simple, ovate. Flowers unisexual, small, yellowish green, in short axillary spikes; female flowers below; male above. Bracts leafy, ciliate along margins. Fruit glabrous capsule.

Uses: Uses are similar to that of *Acalypha indica.*

Etymology: Haritamanjari (green bunch of flowers) is due to the green condensed spike inflorescence. Thuppa keere (ghee amaranth) indicates its palatability.

Note: Used in the absence of *Acalypha indica.*

14. *Acalypha fruticosa* Forssk. (Plate 3 B)

Family: Euphorbiaceae

Vernacular Name: Eng: Birch leaved Acalypha
   Kan: Chinnimara, Cinni
   Mal: Perim-munja, Sinnimaram, Chini, Kuppameni
Habit: Erect shrub.

Habitat: Wasteland and plains.

Status: Occasional.

Description: Much branched erect shrub. Leaves simple, ovate, acuminate, glandular below. Flowers unisexual, yellowish, in axillary spikes; female flowers few, below; male above. Perianth-lobes tomentose with glands. Bracts campanulate. Fruit globose capsule with yellow glands.

Uses: Leaf decoction is consumed for indigestion, vomiting, diarrhoea and stomachache. *4 – 5 leaves are boiled with buttermilk and taken for shortage of urine, constipation, gas trouble and backache. *Leaf ground in lime juice or butter milk is applied for bruises, hardened blood clots and varicose veins, however, over dose results in indigestion. Butter milk is the antidote. Leaf decoction is an appetizer, used for rheumatism, gas trouble, biliousness and malnutrition in children.

Note: Plant is widely used for digestive disorders.

15. Acalypha indica L. (Plate 3 C)

Family: Euphorbiaceae

Vernacular Name: San: Aristamanjari, Haritamanjari
    Eng: Indian Acalypha
    Kan: Kuppi gida, Chalmari, Thuppa keere
    Mal: Kuppameni
    Tulu: Kuppi dai

Habit: Erect herb.

Habitat: Wastelands.

Status: Common. Weed.

Description: Erect annual herb. Leaves simple, broadly ovate. Flowers green, polygamous, in axillary spikes; female below; male above. Bracts leafy, campanulate, folded, dentate. Fruit hispid capsule.
Uses: *Leaf along with salt is made into a paste in lime juice, applied for ringworm, eczema and skin diseases. *Leaf juice is consumed for cough and bronchitis. Leaf juice along with garlic is given for worms, while leaf paste is applied for septic wounds and ulcers. *Plant juice in small doses is given for asthma; however, overdose may cause vomiting. Root and leaf decoction is used as a purgative. Paste made of its leaves and salt is applied for ringworm and itches. Oil prepared from decoction of this plant is applied for rheumatism and body spasms. *1 – 2 drops of leaf decoction are poured into ear for earache, while it along with garlic is given to expel worms. Whole plant extract is given for tuberculosis. Whole plant paste is applied for poisonous bites. Whole plant juice mixed with equal quantity of gingelly oil is applied for swelling and pain. *Cotton dipped in leaf juice is kept into nose for headache. Plant decoction is also used for vomiting, rheumatism and mental problems. Leaf along with garlic and pepper are ground in water and taken twice a day for running nose. *Leaf, garlic and pepper ground with water are used once a day for three days in case of menstrual pain. *Leaf juice crushed with brinjal (cooked in burning charcoal) is given to eat in empty stomach for pinworm infestation. *Leaf, mustard seeds and garlic ground with rice washed water is given for phlegm in children. *Powder of dried whole plant is used for recto vaginal fistula.

Etymology: Haritamanjari (green bunch of flowers) is due to the green condensed spike inflorescence. Thuppa keere (ghee amaranth) indicates its palatability.

Note: Presence of cyanogentic glucosides is responsible for the expectorant activity of this plant (Chaudhri, 1996).

16. *Acampe praemorsa* (Roxb.) Blatt. & McCann (Plate 3 D)

Syn: *Acampe wightiana* Lindl.

Family: Orchidaceae

Vernacular Name: San: Rasna
   Kan: Marabale
   Mal: Maravazha

76
Tulu: Marabare

Habit: Epiphytic herb.

Habitat: Common on trees along roadsides.

Status: Common.

Description: Epiphytic herb; stem thick, covered with leaf sheaths. Leaves distichous, coriaceous, apex unequally 2-lobed. Flowers in axillary, densely arranged corymb. Sepals and petals yellow; lip white with red stripes. Fruit fusiform capsule.

Uses: Similar to Vanda tessellata.

Etymology: Name Marabale (tree plantain) is due to its epiphytic nature and stem which is covered by leaf sheaths.

Note: Used either in absence of or as synonymous to Vanda tessellata.

17. *Acanthus ilicifolius* L. (Plate 3 E)

Family: Acanthaceae

Vernacular Name: San: Harikasa, Harikusa
  Kan: Hole chulli, Kaandla chulli
  Mal: Chulli, Chakkara mullu
  Tulu: Sude chulli

Habit: Erect littoral shrub.

Habitat: Along banks of estuaries close to sea shore.

Status: Common.

Description: Erect shrub. Leaves simple, pinnatifid, margins with few large spines; petiole with 2 spines at base. Flowers crowded in terminal spikes. Bracts and bracteoles ovate, mucronate. Calyx 4-partite. Corolla blue. Stamens didynamous. Fruit ovoid, capsule.
Uses: *Leaf paste is applied for poisonous bites. *Root decoction is used as a gargle for toothache and also for thrush in tongue.

Etymology: Kaandla chulli (mangrove *Hygrophila*) is due to its occurrence along mangrove forests and similarity to *Hygrophila* due to spiny stem.

Note: Usually it grows in masses along the boundary of mangrove forests and forms a strong impenetrable fence.

18. *Achyranthes aspera* L.  (Plate 3 F)

Family: Amaranthaceae

Vernacular Name: San: Apaamarga  
Eng: Prickly chaff flower  
Kan: Uttarane, Uttarani  
Mal: Kadaladi, Kataladi, Valiyakadaladi, Vankadaladi  
Tulu: Uttarane

Habit: Erect herb.

Habitat: Wastelands.

Status: Common. Weed.


Uses: *During complicated delivery of cattle, its branches are rubbed 3 times from stomach to the tail before the delivery and from tail up to stomach region after the delivery so as to prevent prolapse of uterus. Ash prepared by burning the whole plant is dusted over septic wounds, ulcers and bleeding piles. Plant paste is applied to stop bleeding from cuts and wounds. *Paste with turmeric rhizome is applied for swelling and growth in nose. *Whole plant ash (½ tsp) mixed with rice cooked water is given for dropsy and oedema. Flower and inflorescence or seed powder is given along with meals for rabies, snake bite, skin diseases and eye diseases. Leaf paste is
applied for scorpion bite. Root is used as tooth brush for toothache and to strengthen gums. Tender shoot tip and garlic are crushed into a paste and applied for corns. * In case of dumbness or ear block due to cold, plant ash mixed with coconut oil is heated and poured into the ear. Plant ash is taken with water for asthma and bronchitis. Plant paste is applied for all types of wounds. In order to decrease appetite its seeds are consumed. Whole plant decoction is recommended for gas trouble and rheumatism. Crushed root is consumed with honey for dog bite. * Leaf along with that of white Calotropis gigantea, Wattakaka volubilis, Gynandropsis gynandra, Flueggea leucopyrus and Dalbergia volubilis are made into oil and used as nasya for chronic rhinitis and running nose. Plant paste with garlic and cumin seeds is recommended for piles. Stem pieces are fried in coconut oil and the filtrate is poured into ear in case of ear block. 1 – 2 drops of heated leaf juice are used as ear drop for earache. Plant juice is poured into nose as nasya for tumours in nose. Plant decoction is used for urinary disorders and urinary stones. * Plant along with Centella asiatica, Justicia adhatoda, Plumbago zeylanica, Ocimum tenuiflorum, Plectranthus amboinicus, Cyperus rotundus and lime juice in equal quantity, along with 100 gm pepper seeds, 100 gm cumin seeds, 100 gm honey, ½ kg sugarcandy, 1½ kg fried pepper seeds, ginger, dried ginger, rhizome of Zingiber zerumbet, Trachyspermum ammi seeds, black cumin seeds and clove are boiled in brandy and used for asthma and bronchitis. Root decoction is used as menstruation inducer. 6 – 8 drops of leaf juice mixed with lime juice are poured into nose as nasya for growth inside nose. * Seeds are kept in butter milk overnight, on morning ground in it and consumed in empty stomach to decrease appetite. Stem is used as tooth brush. Seed powder is made into a decoction with rice washed water and given internally for bleeding piles. * This along with Senna alata, Jasminum grandiflorum and neem leaves are used for preparing oil used for psoriasis. Leaf along with that of Justicia adhatoda are made into a paste and applied for pimples due to dandruff. * Crushed root preserved in tender coconut water is consumed for three days in case of erysipelas in children. Oil prepared by boiling stem pieces in oil is used as ear drop for hearing problems. * In case of over bleeding, leaf and Cynodon dactylon (1:2) are ground with rice washed water and recommended for a week by adding
sugarcandy. Sometimes cumin seeds and *Tragia involucrata* leaves are also added to the above said preparation. Root ground with pepper and *Foeniculum vulgare* seeds is used for fits. *Plant or juice (3 – 4 spoons) is given at night and morning for 14 – 21 days for leucorrhoea. Leaf paste is applied for oedema. Leaf along with *Cynodon dactylon*, ground and dissolved in water, by adding double milk it is taken two times a day with sugarcandy for 7 – 14 days in case of over bleeding and dysmenorrhea. Root ground in water is given at morning for 3 days for menstrual disorders. Root ground in ghee is taken for 7 – 14 days in the morning for vaginal infections or disorders. *Seed powder is taken with *Euphorbia nivulia* latex for 2 – 3 weeks in case of piles. Whole plant ash is made into paste with cow urine and applied for piles. Whole plant ash is applied for tinea versicolor. For the same disease, its leaf paste with cow urine is also recommended. Fried leaf paste with cheese is applied for septic wounds. Plant ash ground with cooked lime (3:1) in castor oil is applied for skin diseases. *Whole plant is made into a decoction and the hot steam is inhaled for fever, cold, nasal blockage and red eyes in children. This is also useful for migraine. *One drop of oil prepared by grinding fried leaf with gingelly oil is used as ear drop for earache and boils in ear. *Decoction made of its whole plant, *Tinospora cordifolia* stem, ginger and turmeric is used for fever especially chickun gunia. *Root bark along with equal quantity of pepper ground in breast milk is given for fever in children. It is believed that tying its root to the waist helps to overcome tertian fever or intermittent fever. Tying its root with that of *Eclipta prostrata* on ear is beneficial for quartan fever. Leaf ground with pepper and garlic is recommended once a day for malarial fever. Root paste is applied to eyes for opacity of cornea, ophthalmia and night blindness. Root decoction is recommended for night blindness, syphilis and colic. *Root along with rock salt and curd are ground in a copper vessel, used as *anjana* for night blindness and water release from eyes. Root powder is recommended with water at bedtime for four days in case of night blindness. Root paste is boiled with gingelly oil and used as ear drop for earache. *Leaf and *Cynodon dactylon* juice are ground with gingelly oil and used as ear drop for expelling the insects that entered the ear. *Root soaked in water overnight is boiled and mixed with rock salt and curd is stored in a bottle for
three days. It is used as eye drop twice a day for burning eyes, water release from eyes and conjunctivitis. Plant ash along with gingelly oil and water (1:4:16) are boiled to use as ear drop for tinnitus and deafness. This is also useful for pus release from ear and other ear diseases. Plant juice is used as ear drop for deafness. *Plant juice is ground with *Curculigo orchioides tuber and the juice is used as ear drop for deafness. *Tender shoot tip, garlic and pepper seeds are ground (10:3:3), heated with gingelly oil and used as ear drop for earache. One litre of whole plant juice is boiled with 400 ml gingelly oil, used as nasya for ozeena, nasal infections and disorders. Leaf ground with lime juice is applied to the inner portion of nose for nasal infections and warts or swellings inside the nose. *Fresh seeds, *trikatu and *Embelia ribes seeds (in equal quantity) are heated with four part gingelly oil and cow urine. This preparation is used as nasya for headache, ozeena, inflammation of nasal mucous membrane and chronic rhinitis. Seed powder is used as nasya for running nose and migraine. Plant extract with gingelly oil is used as nasya for migraine. *Decoction prepared by crushing root along with heart wood of *Acacia catechu is used as gargle for bleeding from gums and gum infections. Stem is used as tooth brush. Plant ash ground with cow urine is applied for facial scars. Dried root powder along with one tsp *Justicia adhatoda leaf juice is mixed with 1 – 2 tsp honey and is given to expel phlegm. Root powder mixed with equal quantity of pepper powder is taken with hot water for breathing difficulty due to phlegm. *Seeds along with long pepper ground with honey are taken twice a day for hiccough. Ashes of its seed and ripe leaf of *Ficus benghalensis are taken thrice a day for same problem. Plant ash dissolved in hot water is taken 6 – 7 times a day for expelling phlegm in cough. Ash is given with honey for bronchitis. *Whole plant or leaf powder is put into fire and its smoke is inhaled, while root powder mixed with pepper powder is taken with hot water for breathing difficulty. Whole plant ash with that of *Hordeum vulgare is taken for abdominal distension. *Leaf along with *Calotropis gigantea shoot tip and *Euphorbia nivulia latex are taken equally, ground with cheese or castor oil is applied for glandular swellings of the neck. 3 – 4 drops of seed ground with cow urine is used as nasya 2 – 3 times in a week for epilepsy. Plant ash dissolved in sheep urine is used for urinary calculi and bladder stones.
Plant ash mixed with borax powder is used for dysuria and urinary calculi. *Dried root powder is taken with hot water in the morning for 21 days in case of urinary calculi. *Crushed leaf ground with Syzygium cumini bark juice is dried in shade in an iron vessel, after seven days this material is ground with Eclipta prostrata juice and is used for juvenile diabetes. Plant ash is given along with Tribulus terrestris, Piper cubeba and Cucumis melo seeds for bladder swelling and boils or ulcers in urethra. Whole plant ash is dissolved in water and taken for two weeks in case of organic stricture of urinary bladder. One tsp whole plant ash is dissolved in one cup water and taken twice a day for urine block. Root paste with rice washed water is mixed with honey and is applied for piles. Leaf and pepper are ground in water are taken for bleeding piles. *Leaf along with Curcuma longa rhizome is ground into a paste and is applied for 6 – 9 days to cure polyp in nose. Leaf juice is applied to stop bleeding from wounds.

Note: Ingredient of Surasadi taila, Jatyadi taila, Ardhasivam kashaya, Apamargaksara, Apamargaksara taila, Abhaya lavana, Jyotismati taila (Sivarajan & Balachandran, 1996; Sharma et al., 1998). Active constituents found in this plant include achyranthine, dapsone, saponins and hentriacontane (Kapoor, 1990; Chaudhri, 1996). There are two types of Kadaladi – Valiya kadaladi (large Achyranthes) or Venkadaladi (white Achyranthes) and Cherukadaladi (small Achyranthes) or Chuvanna kadaladi (red Achyranthes) with easily distinguishable size and stem. Achyranthes aspera is the white Achyranthes and Cyathula prostrata is the red Achyranthes due to the reddish stem.

19. Acorus calamus L. (Plate 4 A)

Family: Araceae

Vernacular Name: San: Vaca, Vacha, Uragandha
Eng: Sweet flag, Flagroot
Kan: Baje
Mal: Vayambu
Tulu: Baje
Habit: Aromatic marsh herb.

Habitat: Marshy areas, often cultivated.

Status: Rare in wild.


Uses: *Rhizome paste is given for 40 days to small children for thrush on tongue. *Rhizome paste in milk is taken if there is difficulty in breathing; this is not recommended for ladies due to its uterus shrinking property. *Root paste with salt is applied for whitlow. Rhizome ground with honey is given to increase intellect, expel phlegm, for cough, to clear speech and voice in children. Over dose causes vomiting. Its decoction is given for fits and bleeding piles in children, while paste is applied for headache, tonsillitis and lymph node enlargement. It is also used for malnutrition in children. Rhizome extract is given to children for indigestion, dysentery and phlegm. Rhizome extract expels phlegm. Rhizome extract with water is taken at morning for speech clearance. *Rhizome paste with salt water is applied for finger tip swelling. Over dose may cause vomiting and giddiness. Antidote is lime juice or *Anethum graveolens seed decoction. *Rhizome along with long pepper and *Elaeocarpus ganitrus seed are ground in hot water and this extract is consumed to expel phlegm. *Rhizome along with heart wood of *Sterculia foetida, nutmeg, dried ginger and pepper are ground in milk and are given for malnutrition in children. Rhizome ground in rice washed water is applied to tongue for clearing the speech. Dried pills made by grinding equal quantity of its rhizome, long pepper, clove, *Piper longum root, cardamom, cumin, black cumin, ajowan, opium, *Dichrostachys cinerea leaf, asafoetida, *Aegle marmelos leaf, musk, borax, *Limonia acidissima fruit, *Punica granatum fruit rind, ginger, *Caesalpinia crista fruit, *Senna sophera leaf, puvan* banana flower, *Cyclea pelteta root, *Erythrina variegata and *Ficus racemosa bark in sour butter milk are consumed with buttermilk, curd water or rice washed water for diarrhoea due to malabsorption in children. *Rhizome paste
with sandal wood or sulphur is applied for tinea versicolor. *Rhizome along with ginger, sandal wood, very tender coconut and *Ixora coccinea* root are ground into paste and is applied over the tongue for speech clearance in children. *Rhizome is made into paste with milk, heated and applied over fore head, face and chest for cold in small children. *Rhizome along with tubers of *Protasparagus racemosus* and *Trichosanthes tricuspidata* are made into paste and applied externally, while the extract is given internally for snake bite.

Etymology: Vaca (speaking) indicates that it is related with speech. Rhizome along with honey is given to children for speech clearance.

Note: Plant extract is used to kill mosquitoes. Major ingredient of *Vacaditaila*, *Ayaskrti*, *Vaca lasunadi taila*, *Sarasvata churna*, *Sarasvatarista*, *Manasamitra vataka*, *Candraprabha vati*, *Khadiradi vati*, *Saraswati churna*, *Sudarshana churna*, *Sanjivani vati*, *Yogaraja guggulu* and *Brhat rasnadi kashaya* (Sivarajan & Balachandran, 1996; Dey, 1994; Sharma *et al.*, 1998). Rhizome has aryl-aldehyde, acorin, ascarone, pinene, camphene, α-asarone and β-asarone as active components (Kapoor, 1990). Used highly for intellect development and speech clearance in children.

20. *Acronychia pedunculata* (L.) Miq. (Plate 4 B)

Syn: *Jambolifera pedunculata* L.; *Acronychia laurifolia* Bl.

Family: Rutaceae

Vernacular Name: Kan: Benkipettigemara, Sonemavu
Mal: Beenel, Perin-panel, Orila teepettimaram
Tulu: Suthakaddimaro

Habit: Medium-sized tree.

Habitat: Evergreen and semi evergreen forests.

Status: Occasional.

Uses: *Bark paste with rice washed water is applied externally for sores and ulcers.

Etymology: Name Orila teepettimaram arises due to its simple leaves, while Teepettimaram (*Melicope lunu-ankenda*) has compound leaves.

Note: A soft wooded tree which is mostly used for making match sticks. Fruits are edible.

21. *Adansonia digitata* L. (Plate 4 C)

Family: Bombacaceae

Vernacular Name: San: Brahmamlaka, Dirghadandi, Chitrala, Panchaparnika  
Eng: Baobab, Judas’ bag, Monkey bread  
Kan: Ane hunase, Magi mavu  
Mal: Baobab  
Tulu: Magimavu

Habit: Large deciduous tree.

Habitat: Planted in gardens.

Status: Occasional.

Description: Large deciduous tree, with broad bottle shaped trunk. Leaves digitately compound. Flowers large, white, pendent, with strong stinking smell, open in the night and fall in the morning. Fruits large, woody, oblong, with brown velvet hairy surface.

Uses: Leaf or bark decoction is used for fever. Fruit juice is given for fever. *Fruit rind and seed decoction is given for dysentery and indigestion.*
Etymology: Dirghadandi (long stick) is due to the long fruits, which often one feet or more in length while Panchaparnika (five leaved tree) is due to its digitately compound leaves.

Note: It is believed that it was brought to India in the 13th century. At present only five trees exists in the areas adjoining to the study area, Thalassery, Kasaragod, Bangalore, Savanur and Madikeri.

22. *Adenanthera pavonina* L. (Plate 4 D)

Family: Mimosaceae

Vernacular Name: San: Kamboji, Kucandanah, Ranjaka, Tamraka

   Eng: Jumbie beans, Red sandalwood

   Kan: Aane gulaganji, Dodda gulaganji, Manjatti

   Mal: Manjaadi

   Tulu: Chenne

Habit: Large deciduous tree.

Habitat: Found growing near villages.

Status: Occasional.

Description: Large deciduous tree. Leaves bipinnate; pinnae 4 – 6 pairs; leaflets 6 – 10 pairs, elliptic-oblong, glaucous beneath. Flowers in axillary racemes or panicles, fragrant. Calyx 5-toothed, campanulate. Petals 5, pale-yellow. Stamens 10. Fruit falcate, linear pod, which is twisted when dehiscing. Seeds red, hard.

Uses: *Paste made of its seed powder and honey is applied for ulcers and bruises. Bark paste is applied for septic wounds and ulcers. Paste made of its fruit with honey is applied for wounds, ulcers and infections in calves. *Bark decoction is given for water in legs and hands of a pregnant woman, also for vomiting in pregnant woman. *Bark or leaf paste is applied for insect and other poisonous bites. Bark decoction is blood purifier. *Pods are chewed and eaten for getting relief from cold. Bark decoction is recommended for biliousness. *Bark with *Tribulus*
terrestris fruits and *Erythrina variegata* bark are made into a decoction and is used for 15 days in case of menopause syndrome. *Bark along with that of* *Pongamia pinnata* is made into a decoction and used for three days in case of backache in pregnant women.

Etymology: Aane gulaganji or Dodda gulaganji (elephant jequirity or larger jequirity) is due to the larger size of seeds and resemblance with *Abras precatorius* seeds.

Note: In the past, seeds were used to weigh gold and diamonds.

23. *Adenia hondala* (Gaertn.) de Wilde (Plate 4 E)

Syn: *Modecca palmata* Lam.; *Adenia palmata* (Lam.) Engler

Family: Passifloraceae

Vernacular Name: San: Vidari
   Eng: Passion fruit
   Kan: Kempu chendina hannina balli, Undala
   Mal: Palmuthuku, Motta-madecca, Vidari
   Tulu: Irolu kande

Habit: Large woody climber.

Habitat: Semi evergreen forests.

Status: Rare.

Uses: Leaf juice is applied for skin diseases. Its rhizome and fruits are highly poisonous. *Rhizome juice is applied externally for cuts, wounds and to expel maggots from wounds.

Etymology: Kempu chendina hannina balli (Red ball fruit climber) is due the red globose fruits.

Note: Used in preparations like Vidaryadi ghṛta, Dasamularista, Chyavanaprasha as synonymous with Ipomoea mauritiana and Pueraria tuberosa (Sivarajan & Balachandran, 1996). Tuber is used as fish poison. Leaves are used as vegetable.

24. Adiantum capillus-veneris L. (Plate 4 F)

Family: Adiantaceae

Vernacular Name: San: Hamsapadi, Hansaraja
                Eng: Maiden hair fern
                Kan: Hansaraja, Mayurashikha
                Mal: Mayurashikha
                Tulu: Navilbeelo

Habit: Small herb.

Habitat: Cultivated in gardens.

Status: Occasional.

Description: Delicate fern. Rhizome creeping, densely clothed by brown scales. Stipes slender, sub-erect, blackish. Fronds bipinnate, alternate, pinnae ascending; pinnules stalked, obtriangular, obovate; veins forked, dark brown.

Uses: Plant powder or its extract is given for cough and bronchitis. *Leaf extract is given as a laxative in case of constipation in children. *Plant, stem and leaf ground in lime juice is applied over scalp for dandruff and small boils on head. *Leaf tied in cloth is boiled in water in which raw rice is cooked. Later, this rice is consumed with butter milk for difficulty in breathing. Antidote for overdose is Cynodon
dactylon decoction. Plant decoction is intoxicant, blood purifier, is useful for skin
diseases and lung disorders.

Etymology: Hamsapadi (goose foot) is due to the resemblance of pinnules with foot
of a goose, while Mayurashikha (peacock’s crest) is due to the sharp ending of the
fronds.

Note: In the study area it is found only in cultivation.

25. *Adiantum caudatum* L. (Plate 5 A)

Family: Adiantaceae

Vernacular Name: San: Mayurashikha

   Eng: Maiden-hair fern
   Kan: Ane kivi, Gaja karna, Mayurashikhe
   Mal: Mayoorashikha
   Tulu: Ane kebi

Habit: Erect herb.

Habitat: Commonly grown in gardens.

Status: Occasional.

Description: Delicate fern. Rhizomes erect, densely covered by scales all over.
Stipes numerous, tufted, dark brown, with slender hairs all over. Fronds proliferate;
lamina oblong-lanceolate, simply pinnate; pinnae about 40 pairs, alternate, sessile;
veins very slightly distinct above and below.

Uses: *Leaf paste with lime is applied for cuts with knife or blade. *Leaf paste
boiled with gingelly oil is applied for septic wounds and ulcers.

Etymology: Name Mayurashikha (peacock’s crest) is due to the sharp ending of the
fronds and Ane kivi (elephant ear) is from the shape of pinnules, which resembles
elephant ear.

Note: In the study area it is found only in cultivation.
26. *Adiantum philippense* L. (Plate 5 B)

Syn: *Adiantum lunulatum* Burm. f.

Family: Adiantaceae

Vernacular Name: San: Hamsapadi  
Eng: Maiden hair fern  
Kan: Hamsapadi, Gajakarna, Gadimaddu  
Mal: Murikootti  
Tulu: Gadimardu

Habit: Small herb.

Habitat: Shaded areas and moist mud walls.

Status: Common.

Description: Small rhizomatous herb. Rhizome covered with persistent leaf bases and scales. Fronds simple, pinnate, stipe glabrous, black; pinnae 10 – 15, stalked, ovate, minutely 5 – 8 lobed on the upper margin.

Uses: The paste prepared by grinding the whole plant is used like a bandage over cuts and wounds (after cleaning) for fast recovery. *Plant paste with lime and salt is used for sudden blood clotting from cuts and wounds. Oil prepared from plant juice is applied for burns. *Plant ground with milk is consumed as general tonic. *Whole plant extract is recommended for leucorrhoea. Leaf paste is applied for wounds caused by iron objects. After one hour, the leaf ground and boiled in coconut oil is applied for same purpose. *Leaf paste with lime is applied for dog or other animal bites. *Leaf ground and boiled in gingelly oil is applied for cracks in skins and dry skin. Plant decoction is used for skin diseases, wounds, diabetes and headache. *Whole plant ground with tobacco into a paste is applied for furuncles. Whole plant ground with a little lime and salt is heated with coconut oil into a thick paste which is applied for cuts, wounds and bruises.
Etymology: Hamsapadi (goose foot) is due to the resemblance of pinnules with foot of a goose, Gadimaddu (medicine for cuts) comes from its wound healing property.

Note: Used in Vidaryadi ghrta, Svarnabhupati rasa, Kalakuta rasa, Vidaryasava, Manasamitra vataka, Madhuyastyadi taila as a substitute for Desmodium triflorum (Sivarajan & Balachandran, 1996; Sharma et al., 1998). Plant is used in black magic.

27. Aegle marmelos (L.) Correa (Plate 5 C)

Family: Rutaceae

Vernacular Name: San: Bilva, Bilvah, Vilva, Mahaphala, Sriphala, Tripattra
Eng: Bael fruit, Golden apple
Kan: Bilvapatre, Belapatre
Mal: Koovalam, Vilvam
Tulu: Billapatte

Habit: Spinous tree.

Habitat: Seen only in cultivation.

Status: Very rare in wild.

Description: Medium sized tree, with spiny older branches. Leaves trifoliolate; petiole auriculated; leaflets ovate-lanceolate, terminal one larger. Flowers scented, in axillary few-flowered panicles. Calyx pubescent; lobes 5. Petals 5. Stamens numerous. Fruit globose, with hard, woody pericarp; pulp orange coloured.

Uses: Leaf juice is given to children suffering from stomachache. *Leaf juice and Saraca asoca bark are made into a decoction and used to regulate menstrual cycle. Oil prepared from leaf juice is poured into the ear for earache and pus release from ear. Leaf tambuli and juice prepared from fruit pulp are used in gastritis, also to induce appetite. Fruit juice is given for weakness, fever and diarrhoea. Dried fruit powder is used as a laxative agent. Root bark decoction is given for fever. Leaf decoction is used for lung disorders. Leaf is tied over eyes in case of eye infections. Flower extract is applied for poisonous bites and is given internally. *Leaf decoction
is given to control the increasing diabetes and blood pressure. Oil prepared from leaf or root is used as hair oil for cold. Fruit extract is digestive, nutritive and is useful for rheumatism. Root decoction is used for rheumatism. Leaf is eaten for diabetes. Fruit pulp is made into bilvadi lehya\textsuperscript{●} which is used for rheumatism. Leaf extract is given for cough and phlegm. *Leaf juice is applied all over the body half an hour before bath for removing foul body odour. *Root ground in water is used as gargle for dental cavities. Due to its digestive property, fruit decoction is used for gas trouble. *Tambuli\textsuperscript{●} prepared from leaves is useful for rheumatism, phlegm, fever, protein in urine and is digestive. Young fruit pulp decoction is given for diarrhoea. *Root ground in water and mixed with butter (1:1) is consumed in empty stomach with strict food restrictions for 48 days in case of asthma. *Root along with Premna serratifolia and Sida rhombifolia roots are made into a decoction used for chest pain and breathing difficulty during pregnancy. *Leaf juice along with Ocimum tenuiflorum leaf juice and equal quantity of breast milk are crushed first in a brass vessel, then in a copper vessel and is applied as anjana\textsuperscript{●} for yellow eyes and vision problems. *Leaf juice is mixed with equal quantity of coconut oil. To this mixture 60 gm Tamarindus indica root bark paste with lime juice is added and heated. This is applied after washing the infections with Aegle marmelos leaf and bark decoction in case of ring worm. Crushed bark tied in a cloth is heated in fire and kept near nose for 3 – 4 minutes in case of unconsciousness due to fits. Crushed leaf boiled with water is used twice a day for burning sensation in stomach. Fruit ground with milk is given once a day for fever. Leaf paste with water is applied for scabies. Leaf decoction is also useful for indigestion and liver problems. Ripe fruit pulp ground with water is given once in the morning for venereal diseases. *Pieces of leaves along with that of Celastrus paniculatus and Kalanchoe pinnata in equal quantity mixed with Gossypium barbadense seeds are used as fodder to cattle in case of DUB. *Leaf paste is applied over chest in case of breathing difficulty due to phlegm in children, also useful for pneumonia. Oil prepared using leaf juice is applied for mosquito bites. *Root, coriander, Sida rhombifolia root, ginger and green gram seeds decoction is consumed by adding sugar for vomiting. *Leaf juice
along with coconut oil, milk and coconut milk (2:1:1) are heated and used as hair oil for pus release from ear.

Etymology: Tripatra (three leaves) arises from its trifoliolate nature of leaves, Sriphala (sacred fruit) as this plant is sacred to lord Shiva.

Note: It is one among the dasamulas*. Used for the preparations like Asanavilvadi taila, Bilvadi lehya, Brhat Gangadhara churna, Manasamitra vataka, Agastya haritaki rasayana, Amrtarista and Dasamularista (Sivarajan & Balachandran, 1996; Sharma et al., 1998). Angelin, \( \gamma \)-sitosterol, aegelinin, limonene, dictamine, marmasin and \( \beta \)-sitosterol are active ingredients (Kapoor, 1990).

28. **Aerva lanata** (L.) Juss. ex Schult. (Plate 5 D)

Family: Amaranthaceae

Vernacular Name: San: Astmabayda, Bhadra, Pashanabheda
    Eng: Polpala
    Kan: Bili sooli, Bili hindi gida
    Mal: Cheula, Cerula
    Tulu: Pashanabedhi

Habit: Erect herb.

Habitat: Sandy grounds.

Status: Frequent.

Description: Tomentose herb, with erect to decumbent stem. Leaves simple, elliptic-obovate, white-wooly beneath. Flowers minute, greenish white, in axillary clustered spikes. Perianth-segments 5, lanate. Stamens 5. Fruit rotund, 1-seeded utricle.

Uses: *Whole plant decoction is given with milk to the pregnant ladies thrice in a month for easy delivery. *Half a glass of plant juice is given to cattle for indigestion and gas trouble due to eating the leaves of jack fruit tree. *Decoction prepared from one feet long piece of this plant with 1 feet long piece of *Boerhavia diffusa* is recommended for 30 days in case of kidney and bladder stones. Plant decoction is
given for old backache and gas trouble. *Whole plant extract (20 – 30 gm) in concentrated form is given for a week for bleeding piles. Whole plant decoction is recommended for kidney, bladder stones and all kinds of urinary diseases. Root paste is applied externally for pus release and easy heals of furuncles. Root decoction is given for urine block. *Whole plant is ground in milk or its decoction is given for 12 days in early morning for leucorrhoea. Whole plant ground with *Tri**bulus terrestris* fruits and barley seeds (each 10 gm) are made into a decoction and is given twice a day for expelling kidney and bladder stones. *Whole plant along with *Tribulus terrestris*, seeds of *Ensete superbum* and *Hordeum vulgare* are made into a decoction and is used for blood discharge through urine and urinary stones. Decoction of whole plant is consumed both morning and night in empty stomach for bladder stones. As a side effect power to control urine gets decreased. *Whole plant along with *Sida rhombifolia* root decoction is given for three days in case of stomachache in pregnant women.

Etymology: Name Pashanabheda (stone or rock breaker) comes due to its property to dissolve kidney stones.

Note: β-sitosterol and α-amyrin are the active components in the plant (Jain *et al*., 1991). Used for preparing *Satavaryadi ghrta* (Sharma *et al*., 1998).

**29. *Aeschynomene indica* L. (Plate 5 E)**

Family: Papilionaceae

Vernacular Name: San: Damana
  Eng: Shola pith, Trailing Sesbania
  Kan: Bidukasa, Tanakali gida
  Mal: Neli-tali

Habit: Erect herb.

Habitat: Moist soil near paddy fields.

Status: Occasional. Exotic and weed.

Uses: *Bark pieces mixed with coconut oil is used as raticide. *Plant paste is externally applied for swellings.

Etymology: Bidukasa (increasing weed) indicates its rapid multiplication and is a spreading weed.

Note: The stem is often used to make sun hats.

30. *Agave americana* L. (Plate 5 F)

Syn: *Agave cantula* Roxb.

Family: Agavaceae

Vernacular Name: San: Kantala
   Eng: Bombay aloe, Cantala fibre
   Kan: Ane kathale, Kattale, Kalnaru, Bhutalae
   Mal: Aanakaitha
   Tulu: Daddoli, Ane mundeyi

Habit: Stout herb.

Habitat: Often planted as hedge plant.

Status: Frequent. Exotic.


Uses: *Root decoction is given for blockage in urine flow. *Oil prepared from plant juice is applied for joint pain and skin diseases. Leaf poultice over stomach also has
diuretic action. Plant decoction is used for rheumatism. *Leaf is split into two and is tied around waist just like belt for ringworm. *Juice from crushed leaf mixed with white rock powder is applied for hardened swellings. *One burnt leaf and another fresh leaf are crushed and made into paste with oil of Calophyllum inophyllum. This paste is applied for ulcers due to hair fall in calves. *Rhizome along with Pandanus odorifer shoot tip and wild Ananas comosus shoot tip are cooked with rice and given for ulcers due to hair fall in dogs. *Tender shoot tip juice ground with garlic is given for asthma and bronchitis. *Crushed leaf extract with buttermilk is given internally and paste is applied externally for localized hair fall in cattle and dogs.

Etymology: Kalnaru (stone fibre) is due to the strong fibres obtained from this plant which is often grown as hedge plant in rocky areas.

Note: Plant contains hecogenin, chlorogenin, diosgenin and agavosides (Jain et al., 1991). Leaf juice mixed with lime is applied to the walls of house to prevent termite attack. Fibre obtained from leaf is used in cordage industry.

31. Ageratum conyzoides L. (Plate 6 A)

Family: Asteraceae

Vernacular Name: San: Vishamustih
Eng: Goat weed, Tropic Ageratum
Kan: Oorala gida, Naayi tulasi
Mal: Appa, Kattappa, Murikootti
Tulu: Naayi tulasi

Habit: Soft annual herb.

Habitat: Common weed in wastelands.

Status: Common. Exotic and weed.

Description: Erect hairy, soft annual herb, with whitish pilose stem. Leaves simple, ovate, hirsute. Flowers in homogamous heads on terminal corymbs. Involucres
campanulate. Corolla tubular, white or pale blue. Fruit black, oblong, 4 – 5 ribbed achenes.

Uses: *Plant is rubbed over the body as an antidote for itching due to contact of *Tragia and *Laportea. *Oil prepared using the juice of this plant is used for burns and cold. Plant juice or paste is used to stop bleeding from cuts and wounds. *Plant juice mixed with coconut or gingelly oil is applied for rheumatism and joint pain. *Whole plant paste is applied for swellings. 5 – 6 tsp leaf juice is crushed with one tsp turmeric powder, 5 – 6 garlic bulblets and is boiled with coconut oil which then applied after washing with salt water for swelling, pain, itches, allergic swelling, septic wounds, fungal infection hands and legs. Plant paste is applied for skin diseases. Leaf paste is applied for hardened tumours. Leaf paste is applied for insect bites and allergic skin diseases. *Root along with dried grapes are crushed and kept in tender coconut water for three hrs, then given in empty stomach for quick recovery from skin diseases. *Oil prepared using leaf juice is applied for body ache during rainy season. Flower extract is recommended for leukemia. *Leaf, green chillies and shell paste is applied for small pox and measles. Patient is made to sit on a tub with whole plant decoction for piles treatment.

Etymology: Naayi tulasi (dog basil or wild basil) comes due to aromatic and antiseptic nature of the plant, just like basil. In Malayalam Appa is a general term used for herbaceous plants which rapidly spread.

Note: Leaves are known for their wound healing property. Oil extracted from seeds is used to increase the smell and taste of tobacco.

32. *Aglaia elaeagnoida* (A. Juss.) Benth (Plate 6 B)

Syn: *Aglaia roxburghiana* (Wight & Arn.) Miq.; *Aglaia talbotii* Sundararaghvan

Family: Meliaceae

Vernacular Name: San: Priyangu

Kan: Thottila kaayi, Kempu nola

Mal: Punnyava, Cheeralam
Tulu: Pucche pajje, Pucche parandu

Habit: Small tree.

Habitat: Lateritic slopes.

Status: Common.


Uses: *Fruit is edible, has cooling effect and is useful in gastric irritation. Root and bark decoction is used for rheumatism. *Root extract in tender coconut water is given internally, while its paste is applied externally for urticaria and rashes. *Root decoction is given for conception in cattle. *Root decoction is given for asthma and bronchitis. *Roots collected on black moon days are ground in one day old water and is given for asthma (if vomiting occur immediately after its consumption then rice cooked water is recommended as an antidote). If there is no sign of weakness in patient then the same is repeated on the next day also, otherwise it is done once in two days for a period of one week. *Root along with that of Holarrhena pubescens are ground with tender coconut water and is given internally for fits in cattle.

Etymology: Pucche parandu (cat fruit) is due to the resemblance of aril covered seeds to the eye of cat.

Note: Used in the preparations like Priyangwadi taila, Pippalyasava and Karanjadi yoga (Sivarajan & Balachandran, 1996). It has quercitannic acid and used as a substitute for Callicarpa tomentosa (Dey, 1994). Fruits are edible.

33. Ailanthus excelsa Roxb. (Plate 6 C)

Family: Simaroubaceae

Vernacular Name: San: Aralu, Araluvrksha, Mahanimba, Syonaka
Eng: Tree of heaven
Habit: Large deciduous tree.

Habitat: In plains.

Status: Rare in study area.

Description: Large deciduous trees, with persistent leaf scars. Leaves imparipinnate; leaflets 8 – 14 pairs, elliptic to ovate-lanceolate. Flowers polygamous, yellow, in large axillary and terminal panicles. Sepals 5. Petals 5. Stamens 10. Fruit oblong, flat, yellowish samara; wings with prominent nerves.

Uses: *Bark decoction is given for indigestion and also as a tonic for weakness. Its gum powder is given to stop diarrhoea. Gum dissolved in milk is given for dysentery and phlegm. *Fruit extract in rice washed water is used to wash eyes in eye infections. Bark decoction is given for fever.

Etymology: The name Hemmara (large tree) indicates the gigantic size of the tree, Dodda bevu (larger neem) is due to the resemblance of leaves with that of neem.

Note: Bark has triacontane, hexa-triacontane, ailanthione and ailanthine with anticancer activity (Jain et al., 1991). Pusyanuga churna, Brhat Gangadhara churna, Aralu putapaka are the important formulations prepared using this plant (Sharma et al., 1998).

34. *Ailanthus triphysa* (Dennst.) Alston (Plate 6 D)

Syn: Ailanthus malabarica DC.

Family: Simaroubaceae

Vernacular Name: San: Aralu, Syonaka
   Eng: Tree of heaven
   Kan: Halmaddi, Guggula dhoopa, Deva dhoopa
Mal: Matti, Perumaram, Pongilyam
Tulu: Agar dhupo, Mande dhupo

Habit: Large tree.

Habitat: Often planted in deforested areas.

Status: Frequent.


Uses: *Decoction prepared from the bark is given for fever, weakness and indigestion. *Oil prepared from plant juice is applied for rheumatism, while the same can be applied over head for running nose. *Bath with its leaf decoction is recommended for paralytic stroke. *Gum is also used for smoking to ward off evil spirits.

Etymology: Guggula dhoopa comes from the gum resin (Dhup or guggulu) obtained from the tree. It also received the name Deva dhoopa (sacred dhup) as the gum resin is used as incense while worshiping the god.

Note: It is a soft wooded tree, with much demand from plywood industry. Plant is very much used for rheumatic complaints. Gum is used as incense.

35. *Alangium salvifolium* (L. f.) Wangerin ssp. *hexapetalum* (Lamk.) Wangerin (Plate 6 E)

Family: Alangiaceae

Vernacular Name: San: Ankodah, Ankola, Ankolah, Tamraphala
Eng: Sage leaved Alangium, Stone mango
Kan: Ankola, Ankole, Kallu mavu
Mal: Alinnil, Ankolam, Velittondi
Tulu: Ankole
Habit: Large straggling shrub.

Habitat: Boundaries of semi evergreen forests.

Status: Rare.


Uses: *Fruit decoction is given after rabid dog bite and bark decoction is used to wash the dog bitten place. Fruit paste or oil is also used for external application. *Root or bark ground in water is applied for eczema and is given internally to expel worms. *Root paste or seed oil in lime juice is applied for snake bite. *Paste of root powder is applied for snake bite. Root juice is applied for swellings. Bark decoction is used for rheumatism. Oil extracted from seeds is applied for rheumatism. Bark paste is applied for swellings. It has a property of converting muscle into fat. *Owl fecal matter and oil extracted from the seeds are ground into a paste and applied over forehead to improve eye sight. *Root paste with lime juice is applied externally and used internally for rabid dog bite. *Root decoction is used for diarrhoea.

Etymology: Tamraphala (copper coloured fruit) arose due to the purplish-red berries.

Note: Ingredient of *Mahabhutaravaghrta* (Sivarajan & Balachandran, 1996). Alangine, ankorine, alangimarckine, tuberlosine, alangicine, betulinic acid and isotubulosine are the active constituents of this plant (Kapoor, 1990). Whole plant is used in black magic. Fruit is edible.

36. *Albizia chinensis* (Osb.) Merr. (Plate 6 F)

Syn: *Albizia stipulata* (Roxb.) Boiv.; *Albizia marginata* (Lam.) Merr.

Family: Mimosaceae

Vernacular Name: San: Sirisha
Eng: White siris
Kan: Kallu baage, Betta baage
Mal: Pottavaaka, Vaaga
Tulu: Baage

Habit: Large deciduous tree.

Habitat: Plains and often planted as shade tree.

Status: Common.


Uses: Bark powder is used for various skin diseases. *Bark mixed with *Cyclea peltata root, *Ixora coccinea root, *Memecylon randerianum leaves and turmeric are ground in tender coconut husk juice; applied for herpes and poisonous bites. *Bark decoction is given to increase immunity during the treatment for allergies. *Seed extract controls human excretory system and is used for piles. *Flower extract is applied for swellings, skin diseases and snake bite. Bark powder is applied for snake bite. Oil extracted from its seed is applied for leucoderma. *Leaf paste is applied externally for glandular swellings. Bath with its bark decoction is recommended for skin diseases and allergies. *Bark paste is applied externally while its decoction is given internally for skin diseases and poisonous bites. Root extract with lime juice is given internally for snake bites. Bark powder is used to rub the body during bath. Bark powder is rubbed over the body for skin diseases. Bark decoction and its paste with rice washed water are used for skin diseases. *Tender shoot tip is used for preparing *tambuli*. *Crushed bark juice decoction is given internally while its paste with rice washed water is applied externally for skin diseases, repeated itches, wounds and scabies. *Seed and bark ground in coconut milk is applied for furuncles and wounds around neck. Its *panchanga* powder is applied for skin diseases,
breathing problems, lymph node swellings, swellings and blood disorders. Seed is a tonic. Seed and bark gum is given for improving semen quality. Flower extract is used for snake bite and eye diseases. *Tender shoot tip ground in cool milk is given for three days after menses, which helps in conception. *Flower extract with milk is given in early morning for disorders during pregnancy. *Its bark along with flower of *Gossypium barbadense, Cassia fistula and *Solanum americanum leaves are ground into a paste and is applied for leprosy.

Etymology: Kallu baage (stone siris) and Betta baage (hill siris) are due to the habitat preference of this tree. It usually grows in lateritic areas.

Note: Plant is much valued for skin diseases and poisonous bites.

37. *Albizia lebbeck* (L.) Benth. *(Plate 7 A)*

Family: Mimosaceae

Vernacular Name: San: Sirisha, Krishnasirisha

         Eng: East Indian walnut, Siris
         Kan: Baage, Hombaage, Shireesha
         Mal: Kaattuvaaka, Nenmenivaaka
         Tulu: Pulibaaji

Habit: Large deciduous tree.

Habitat: Plains and often planted as shade tree.

Status: Common.


Uses: Flower paste is applied for carbuncles, bruises, ulcers and poisonous bites. *Leaf decoction is used to wash eyes in case of eye infection. Bark powder is applied for carbuncles, eczema, ringworm and herpes. Leaf paste is applied for skin diseases. Bark decoction is given for rheumatism. *Seed decoction is given for
piles and to stop purgation. *Leaf and bark powder is applied for ulcers as well as snake bite. Oil extracted from the seed is applied for leprosy. *Bark and leaf paste is applied for allergy. *Bark decoction is recommended for swellings.

Etymology: Pulibaaji (sour siris) is due to the highly sour nature of the wood, which is very much susceptible for termite attack.

Note: Plant has tannin, pseudotannin, friedelin and γ-sitosterol as major constituents (Kapoor, 1990). Used in the preparations like Sirisarishta, Vajraka taila, Ayaskriti, Devadarvarista and Dasangalepa (Dey, 1994; Sharma et al., 1998).

38. *Albizia odoratissima* (L. f.) Benth. (Plate 7 B)

Family: Mimosaceae

Vernacular Name: San: Sirisha, Svetasirisha, Bhusirisha

Eng: Siris tree

Kan: Bilvara, Bilivara, Kaadubaage

Mal: Karivaaka, Kunnivaaka, Nellivaaka

Tulu: Chawthe baaji

Habit: Large deciduous tree.

Habitat: Wet deciduous forest.

Status: Occasional.


Uses: *Bark along with turmeric and lime juice is ground and boiled in coconut oil. This is applied for leprosy and bruises. *Bark or leaf paste is applied for joint pain and rheumatic joints. *Decoction also has similar property. *Bark decoction is given for swellings.
Etymology: Chawthe baaji (cucumber siris) arose as its leaves are used as manure for cucumber plants. Nellivaka (gooseberry siris) is due to the resemblance of the leaflets to that of *Phyllanthus emblica*.

Note: Wood is stronger than that of *Albizia lebbeck*.

**39. *Allamanda cathartica* L. (Plate 7 C)**

Family: Apocynaceae

Vernacular Name:  Eng: Allamanda, Climber of gardens  
                 Kan: Lambana, Lambas, Haladi hoo  
                 Mal: Kolaambi  
                 Tulu: Lambano, Saithana poo

Habit: Climbing shrub.

Habitat: Often grown in gardens.

Status: Common. Exotic and poisonous.

Description: Climbing shrub. Leaves simple, in whorls of 3 or 4, oblanceolate. Flowers very large, showy, in lax few-flowered racemes. Calyx deeply 5-parted. Corolla campanulate-funnel form, yellow. Stamens 5, included. Fruit prickly capsule.

Uses: *Leaf extract is used as strong purgative in very small dose, while overdose results in vomiting and diarrhoea. Plant extract is given to induce vomiting and diarrhoea. *Leaf along with cumin seeds and *Hibiscus rosa-sinensis* leaves are ground in cold water and applied for tendon pain and joint pain. * 4 – 6 drops of latex from the petiole are applied for whitlow. Root extract is recommended for leukemia and carcinoma.

Etymology: Kolambi (funnel) is due to the funnel shaped corolla.

Note: Allamandin, allamandiein, allamdin, plumeriein and isoplumeriein are the alkaloids (Jain *et al.*, 1991) present in the plant.
40. *Allophylus cobbe* (L.) Raeusch. (Plate 7 D)

Syn: *Allophylus rheedii* (Wight) Radik.

Family: Sapindaceae

Vernacular Name: San: Triputah  
Kan: Ervaala, Kasaballi, Thogaratti, Kavarele  
Mal: Mukkannanpezhu, Mukkannanperuku  
Tulu: Mooji kabaru thappu

Habit: Large shrub.

Habitat: Banks of streams.

Status: Common.


Uses: *Young shoot tip is ground with egg white and the resulting paste is applied for bone fracture.*  
*Leaf juice is used in the preparation of oil applied for rheumatoid arthritis.*  
*Leaf paste with rice washed water is applied for furuncles over back bone, if paste is made by adding leaf of *Tabernaemontana heyneana* then the result is far high. Leaf paste is applied for swellings.*  
*Oil prepared by using leaf juice is applied for rheumatism.*  
*Plant juice is given to correct the digestion in children.*  
*Leaf and *Capsicum frutescens* fruit are ground and is applied to throat to expel phlegm. Leaf paste is applied for skin diseases.*  
*Tender shoot tip or leaf ground is applied all over the body of child for 3 – 55 days to prevent skin diseases and for blood purification.*  
*Young leaf paste with cow urine is applied for warts.*  
*Plant juice is applied for all types of swellings, urticaria, itches and wounds, while internally for diarrhoea and to expel tape worms.*  
*Root or tender shoot tip paste is applied for black heads.*  
*Leaf paste is applied for septic ulcers*
Etymology: Kavarele (foliolate leaves) and Mooji kabaru thappu (three foliolate leaves) indicate the digitately trifoliolate leaves of this plant.

Note: Leaves are very much used in the treatment of bone fracture and rheumatism. Flower, tender shoot tip and fruits are edible.

41. *Allophylus serratus* (Roxb.) Kurz. (Plate 7 E)

Syn: *Ornitrophe serrata* Roxb.; *Schmidella serrata* DC.

Family: Sapindaceae

Vernacular Name: San: Triputah
   Kan: Sidisale, Kavarele
   Mal: Mukkannan pezhu, Mukkannan peruku
   Tulu: Mooji kabarutha thappu

Habit: Small trees.

Habitat: Dry deciduous forests.

Status: Occasional.


Uses: Similar to *Allophylus cobbe*.

Etymology: Kavarele (foliolate leaves) and Mooji kabarutha thappu (three foliolate leaves) indicate the digitately trifoliolate leaves of this plant.

Note: It is used synonymous with and also as a substitute to *Allophylus cobbe*.

42. *Alocasia macrorrhiza* (L.) G. Don. (Plate 7 F)

Syn: *Alocasia indica* (Lour.) Spach
Family: Araceae

Vernacular Name: Eng: Giant taro
Kan: Marasanige, Mundi
Mal: Aana chembu, Pazhchembu
Tulu: Mundi, Recchevu

Habit: Stout herb.

Habitat: Usually cultivated.

Status: Common.

Description: Large herb, with thick stem. Leaves with long sheathing base, broadly ovate-sagittate. Inflorescence peduncled; spathe with a lower, green accrescent tube and upper withering blade. Spadix shorter than spathe, with a basal pistillate part, a constricted sterile area, a staminate part and a terminal naked appendix. Fruit berries, enclosed in the accrescent tube.

Uses: *Petiole is heated and its juice is given for fever in children. *Petiole juice or paste is applied for expelling spines or thorns from body, pus release from ulcers and warts. *In case of severe injury by fire, the treatment is given by laying the patient on this plant leaf. Rhizome juice is applied for skin allergy. *In case of whitlow, the finger is kept for sometimes into the hole made in its petiole. *Petiole juice is poured into the body until itching starts after burns. *Leaf petiole decoction is given with cumin extract to make the baby into correct position and for easy delivery. *Leaf petiole is heated in fire and is tied over burnt area.

Etymology: Aana chembu (giant Colocasia) comes due to the resemblance with Colocasia esculenta and giant size.

Note: Phytosterols are the active constituents, while crystals of oxalate of lime present in the plant are responsible for the acridity (Kapoor, 1990). Rhizome is eaten after cooking. Rhizome is much valued as vegetable.
43. *Aloe vera* (L.) Burm. f. (*Plate 8 A*)

Family: Liliaceae

Vernacular Name: San: Kumari  
Eng: Aloe, Barbados aloe  
Kan: Lolesara, Kumari  
Mal: Kattarvazha  
Tulu: Njolisaro, Lolesaro

Habit: Acaulescent herb.

Habitat: Cultivated in gardens.

Status: Common. Exotic.

Description: Dwarf acaulescent herb, which propagates through stolons. Leaves in basal rosettes, ensiform, narrowed from base to apex, fleshy with full of mucilage, with spiny margins. Scapes 1 – 3; long racemes. Perianth cylindrical, reddish-yellow. Stamens 6. Fruit loculicidal capsule.

Uses: Leaf pulp is applied over the face to remove black head and other marks.  
*Leaf pulp is dried and preserved, known as *rakthabola*, whose extract is applied over the area with pain due to bruises and sprains. Leaf pulp is applied over head for headache.  
*Leaf pulp is applied in order to expel spines.  
*Pulp is boiled and the steam is given to get relief from pain due to bruises.  
*Leaf juice along with cumin seeds and sugarcandy is recommended for blood dysentery, leucorrhoea, amenorrhoea, menstrual problems and intestinal worms. Oil prepared from plant juice is used as hair oil for sleeplessness.  
*Leaf juice along with fried borax is poured into eyes in case of eye diseases. Oil prepared from its juice is used for burns. Juice has blood purifying property and it clears urine flow.  
*30 ml of its juice is recommended for one month for menstrual regulation.  
*30 ml juice three times a day in three days is recommended for jaundice.  
Plant paste or juice is applied for any kinds of inflammations.  
*Oil prepared by boiling leaf extract with gingelly oil is applied to head for sleeplessness. Dried leaf juice is used as
purgative. *Plant juice mixed with sugarcandy is given for leucorrhoea. *Leaf juice with ghee, egg white and marmani tablet are made into a paste and is applied for ankle twist and sprains. *Leaf extract is applied for cuts and wounds, to overcome black hardened veins and is given internally for acidic stomachache and in cases of beginning stages of stomach ulcers. Root extract is given to stop loose motion. Oil prepared from tender shoot tip juice is applied for burns. *Leaf juice mixed with sugarcandy is consumed in case of raktapitta. *Outer skin of leaf is removed and preserved in water with some sugarcandy. This extract is given for giddiness due to fever. *Rakthabola is made into a paste with egg white and is massaged to strengthen the breast. Leaf pulp paste with turmeric powder and water is applied over forehead for headache. Leaf pulp is smeared over eyes as eye pad for burning sensation in eye. *Leaf pulp fried in ghee and mixed with sugar is used for cough and phlegm. Leaf pulp extract with turmeric powder and water is used for constipation. *Leaf is split into two; Turmeric powder is kept between the two parts of splitted leaf and is tied for cuts and wounds. Leaf pulp is given with honey for menstrual stomachache and leucorrhoea. *Leaf pulp is ground in a copper vessel and is given 7 days before menses for irregular menses. *Leaf pulp mixed with Eclipta prostrata juice, sugar and honey are used as liver tonic. *Leaf is made into paste with marmani tablet, applied for three days in case of whitlow, swelling and bruises. Leaf pulp is eaten for blood purification. Leaf pulp is heated and is applied for swelling and pain. Leaf pulp, ghee and water (1:4:16) are boiled and is applied for burns. Leaf juice is made into a decoction with garlic and is used for stomachache. Leaf pulp mixed with egg is applied on scalp for dandruff. *Leaf pulp along with curd and cumin seeds is eaten for leucorrhoea. *Leaf juice, egg and sugarcandy mixed with boiled milk are given six days before and six days after menses for menstrual disorders. Leaf pulp is mixed with lime juice, applied for septic ulcers and wounds. *Rakthabola is ground with garlic juice and applied for hardened warts. Leaf pulp is applied on forehead for burning sensation in eyes. *Leaf pulp mixed with sugar is used for ulcers in stomach. 5 ml of the product obtained by heating castor oil (one litre) and long pepper (a little) with 100 ml juices of its root, Vitex negundo leaf, Graptophyllum pictum fruit, Urginea indica bulb and
lemon in a copper vessel is given with boiled then cooled water for genital disorders. *Shoot tip is baked in charcoal and its pulp is applied and tied for boils. Pulp mixed with equal quantity of castor oil is heated and applied for bleeding piles. *Pulp is applied to nipple of breast to stop baby feeding. Heated leaf juice is applied or fresh pulp is tied for burns. Oil prepared by boiling leaf juice with gingelly oil is used as hair oil for biliousness. *Leaf juice or pulp is used as shaving cream to prevent pimples and blisters. *Rakthabola is melted and applied for ankle twist and muscle sprains.

Etymology: Kumari (maiden) indicates its utility in treating gynecological problems.

Note: It is used in the preparations like Kumaryasava, Rajahpravartini vati, Cukkumtippalyadi gutika, Brhat candanadi taila, Annabhedisindura, Manjisthadi taila etc. (Sivarajan & Balachandran, 1996; Sharma et al., 1998). C-glycosides, anthraquinones, barbaloin, isobarbaloin and β-barbaloin are the active constituents (Kapoor, 1990). Highly used for treating the diseases of women. Plant decoction is mosquito repellent. Young shoot tip and petals are pickled.

44. *Alpinia calcarata* Rosc. (Plate 8 B)

Family: Zingiberaceae

Vernacular Name: Eng: Lesser galangal
Kan: Chikka dumparasme
Mal: Cittaratha, Kolinchi
Tulu: Koyin

Habit: Perennial herb.

Habitat: Commonly cultivated.

Status: Common.

Description: Stout herb. Leaves linear-lanceate, base tapering, coriaceous, glaucous below. Flowers in terminal panicles. Bracts 1 or 2-flowered. Calyx-tube funnel-
shaped. Corolla white; labellum with yellow and red streaks, broadly obovate, margin fimbriate. Fruit globose capsule.

Uses: Rhizome decoction is given for rheumatism and gas trouble. *Tuber ground with butter milk is heated and applied for all types of pain and swellings. *Rhizome and leaf paste with lime juice is applied for bleeding piles. Plant decoction is used for asthma, skin diseases and poisonous bites.

Etymology: Kolinchi (narrow stemmed ginger) arose as the plant resembles Zingiber officinale in habit but with long narrow stem.

Note: Used for preparations like Rasnadi kashaya, Rasnadi churna, Rasnadi taila and Asvagandharista (Sivarajan & Balachandran, 1996; Sharma et al., 1998).

45. **Alpinia galanga** (L.) Sw. (Plate 8 C)

Syn: Languas galanga (L.) Stuntz

Family: Zingiberaceae

Vernacular Name: San: Rasna, Aruna, Gandhamula, Sugandhamula, Elaparni
Eng: Siamese ginger, Greater galangal
Kan: Dumparasme, Dodda dumparasme, Rasme
Mal: Aratta, Arattha
Tulu: Kapparasunti

Habit: Tall herb.

Habitat: Cultivated in gardens.

Status: Common.

Uses: Rhizome decoction is given for fever, arthritis, rheumatism and phlegm. Rhizome paste is taken internally for rheumatism, fever, heaviness and stomachache. Rhizome decoction also has same property. *Rhizome extract in honey is used for phlegm in small children. *Rhizome decoction is given by mixing it with gingelly oil as a nerve tonic, bronchodilator, also for stroke, tubercle glands and intermittent fever. Rhizome decoction is also used for gas trouble. *Root along with oil, ghee, *Piper cubeba* fruits, bee wax, jaggery, rock salt and saffron rock powder are taken in equal quantity, heated and applied for cracks in lips. *Root, ginger and soil from termite shed, ground in butter milk and applied for furuncles in ear.

Etymology: Its leaves resemble that of cardamom and got the name Elaparni (cardamom leaf).

Note: Used for preparations like Rasnadi kashaya, Rasnadi churna, Rasnadi taila, Brahmi vati, Rasnadarvadi kashaya, Rasnapancaka, Rasna saptaka, Rasnairandadi kashaya and Asvagandharista (Sivarajan & Balachandran, 1996; Sharma et al., 1998). Rhizome has methyl cinnamate, cineole, camphor and d-pinene (Kapoor, 1990). It also has myrcene, which makes it bronchodilator, stomachic, carminative and stimulant. Acetoxy chavicol is responsible for antifungal activity of the rhizome (Chaudhri, 1996).

46. *Alseodaphne semecarpifolia* Nees var. *semecarpifolia* Hook. f. (Plate 8 D)

Family: Lauraceae

Vernacular Name: Kan: Mooche mara, Mashe gida, Erchi kootti
Mal: Mulakunari, Iracchi kootti
Tulu: Muje thappu, Mujuve, Erpe

Habit: Medium-sized tree.

Habitat: Evergreen and semi evergreen forests.

Status: Occasional.

Uses: *Leaf juice along with jaggery is given for gastritis. *Bark paste is used to set bones after fractures. *Leaf mucilage is used as a shampoo to wash hair. Bark is cooked with rice and eaten to purify blood. Bark decoction is given to stop bleeding from body parts. *Mucilage extracted from its leaf is poured into head in the form of dhara for giddiness, sleeplessness, burning sensation in the body and to induce cold in persons. *In case of menstrual irregularities, leucorrhoea and over bleeding in ladies, leaves ground in milk is consumed at 5 am for three days and the stomach is kept empty for four hrs. Bark decoction is given internally and paste is applied externally for joint pain. *Bark paste with Litsea glutinosa and Litsea coriacea barks is applied for bone fracture and shoulder dislocation.

Etymology: Erchi kootti (meat binder) is a clear indicator of its property to heal broken muscle and bones.

Note: Mucilage from leaves is used as shampoo and glue for whitewash.

**47. Alstonia scholaris** (L.) R. Br. (Plate 8 E)

Family: Apocynaceae

Vernacular Name: San: Saptaparni, Saptaparnah, Bahuparnah  
Eng: Dita bark  
Kan: Haale, Kadusaale, Maddale, Dodda haale  
Mal: Paala, Ezhilam paala, Daivappala, Yakshi pala  
Tulu: Paale

Habit: Large tree.

Habitat: Common in lateritic plains.

Status: Common.
Description: Large tree, with buttressed base and whorled branches. Leaves simple, 4 – 7 in a whorl, obovate or elliptic-oblong, glabrous. Flowers in sub terminal branched umbellate cymes, with unpleasant smell. Calyx-tube short; lobes 5. Corolla salveriform, greenish-white; tube cylindrical; lobes ovate-obtuse. Stamens 5, included. Fruit pendulous, cylindrical, slender follicles.

Uses: *Drinking bark extract in butter milk on the day of *Aati amavasi* is believed to prevent the attack of fever for a period of one year. Small piece of bark cooked with rice is given for gastrointestinal disorders. Bark paste is applied for snake bite and skin diseases. Latex is given in small dose once in a year to induce immunity. *The bark crushed with stones is cooked with rice and is consumed for three days as viral fever preventer. This is also said to prevent allergy for a period of one year. It is also given for malarial fever. Bark decoction is given for indigestion and worms. Bark paste in water is applied for furuncles and rheumatism. *Bark extract or juice is given to drink to expel all kinds of germs and worms, as preventive antidote for snake poison especially for cobra poison. *Bark is made into a decoction with butter milk and is given for infection in nursing mothers. Bark decoction is a blood purifier. Bark paste is applied for wounds, its decoction for stomachache and as an appetizer. *Extract of bark crushed with *Acorus calamus* rhizome and ginger is given after delivery to the ladies. *Flower juice mixed with long pepper powder and honey is used for cough. Bark decoction is used as bathing water by the patients suffering from leprosy. *Bark ground with *Tinospora cordifolia* and ginger are made into a decoction for lactating mothers in order to purify breast milk. Bark decoction is used for burning sensation and rheumatoid arthritis. *Bark along with that of *Briedelia retusa, Pterocarpus marsupium* and *Dillenia pentagyna* are made into a decoction and is used to stop over menstrual bleeding. Ripe fruit is made into a lehya* which increases sexual vigour. Unripe fruit extract is given for gas trouble and gastritis. Gargle with bark decoction is recommended for toothache. Bark decoction is recommended for malnutrition, digestive, liver, spleen disorders, fever and as blood purifier. *Bark juice is given to ladies after delivery to purify breast milk and thereby relieve the phlegm in children. Latex is applied for ring worm. *Latex mixed with coconut milk is applied for eczema. *Root ground with rice
washed water is used internally, while its paste externally for pus release from ulcers and boils. *Bark juice mixed with rice is given to eat for ulcers due to hair fall in chicken.

Etymology: Haale (tree with latex), Maddale (medicinal latex bearing tree), Dodda haale (large tree with latex), Saptaparni and Ezhilam paala (seven leaved tree) are the different vernacular names depicting the morphology.

Note: Ditamine, echitamine, echitenine, echitamidine, \( \alpha \)-amyрин are the active constituents (Kapoor, 1990). Used for ayurvedic preparations like \textit{Aragvadhadi kvatha}, \textit{Aragvadhadi churna}, \textit{Amrtarista}, \textit{Vajraka taila} (Sharma et al., 1998). Branch is used to worship \textit{Mahabali} and is planted behind the \textit{tulsi} dike for three days during Deepavali.

48. \textit{Alstonia venenata} R. Br. (Plate 8 F)

Family: Apocynaceae

Vernacular Name: San: Anadana, Vishagni
  Kan: Addasarpa
  Mal: Analivegam, Theppala
  Tulu: Ellya paale

Habit: Small tree.

Habitat: Planted in gardens.

Status: Occasional.


Uses: Root decoction is given internally while its paste with lime juice is applied externally for poisonous bites, especially viper bite.
Etymology: Analivegam (viper repellent) indicates its utility in the treatment of viper bite.

Note: Root has indane alkaloids, giving psychopharmacological properties to them (Chaudhri, 1996).

49. *Alternanthera bettzickiana* (Regel) Voss. (Plate 9 A)

Syn: *Telanthera betzickiana* Regel

Family: Amaranthaceae

Vernacular Name: San: Matsyakshi
- Kan: Matsyakshi, Meenamganni
- Mal: Meenamkanni
- Tulu: Meenamganni

Habit: Perennial herb.

Habitat: Common in damp places.

Status: Common. Exotic and weed.

Description: Erect or ascending herb. Leaves simple, elliptic to oblanceolate, long attenuate below. Flowers in axillary, globose to ovoid heads. Perianth-segments 5, with white hairs outside. Fruit indehiscent utricle.

Uses: Whole plant decoction is used to lower high blood pressure.

Etymology: Meenamganni (fish eye) is due to the resemblance of leaves to the eye of fish.

Note: It is used as a substitute for *Alternanthera tenella*.

50. *Alternanthera brasiliana* (L.) Kuntze (Plate 9 B)

Syn: *Gomphrena brasiliana* L.; *Alternanthera dentata* (Moench) Stuchl

Family: Amaranthaceae
Vernacular Name: Eng: Joy weed, Brazilian joy weed  
Kan: Kempu croton  
Mal: Croton cheera, Chuvanna cheera  
Tulu: Kempu croton  

Habit: Erect sub shrub.  

Habitat: Sandy disturbed areas.  

Status: Common. Exotic and weed.  

Description: Erect perennial sub shrub, with reddish-purple, glabrous stem. Leaves simple, ovate to lanceolate, villous, long attenuate at base. Flowers small, in axillary and terminal long pedunculate, white globose heads. Perianth-segments 5, greenish-white. Stamens 5. Fruit ellipsoid, brown utricle.  

Uses: *Leaves are rich in iron and are recommended as leafy vegetable to increase haemoglobin content of the blood.  

Etymology: Kempu croton (red croton) is due to the reddish plant body and ornamental nature of the plant.  

Note: Leaves are rich source of iron and used as leafy vegetable.  

51. *Alternanthera sessilis* (L.) R. Br. ex DC. *(Plate 9 C)*  

Syn: *Alternanthera triandra* Lamk.  

Family: Amaranthaceae  

Vernacular Name: San: Lonika, Matsyakshi, Matsyaksha  
Eng: Water amaranth, Sessile joy weed  
Kan: Honagane soppu, Honagonne  
Mal: Koluppa, Ponnamkanni, Ponnamkannikeera  
Tulu: Ponnamkanni  

Habit: Diffuse herb.
Habitat: Moist places and weed in gardens.

Status: Common. Weed.

Description: Diffuse or prostrate, glabrescent herb. Leaves simple, variable in shape, lanceolate, oblanceolate or linear-oblong. Flowers in axillary sessile heads. Perianth-segments 5, greenish-white, glabrous. Stamens 5. Fruit cordate-orbicular, compressed utricle.

Uses: Whole plant juice is given as a tonic for weakness. Whole plant decoction is given for increasing lactation and gonorrhoea. Oil prepared using plant juice is applied to head for sleeplessness, eye diseases and biliousness. It is also applied for wounds. *Whole plant ground in milk is given for over menses bleeding and for dysmenorrhea. Plant extract is given internally and paste is applied externally for piles. Plant decoction is recommended for rheumatism. Eating its preparations is beneficial for stomach or gastric ulcers. It is rich in vitamins. *Once a week, whole plant ground with half quantity of Hibiscus rosa-sinensis leaves are applied to the scalp and kept for 1 – 2 hrs before bath in case of dandruff and hair fall. *Leaf juice is consumed with green gram to increase breast milk. *Oil prepared by boiling leaf juice with gingelly oil is used as hair oil for eye diseases and sleeplessness. This oil is massaged all over the body before bath in case of skin diseases and to increase the beauty. *Leaf juice mixed with gooseberry fruit juice is boiled with coconut oil and is applied to head for hair fall. *Five spoons leaf juice mixed with equal amount of carrot juice and one tsp rock salt is taken twice a day for piles. Stem is used as tooth brush. Whole plant decoction is used for urinary disorders. Its food preparations are both muscle and blood increaser. *Tambuli* prepared from this plant is useful for rheumatism, biliousness and is blood purifier. It is good for eye health and mental problems. It is not recommended during rainy season. *For hair fall, dandruff and discolouration of hair, whole plant and Hibiscus rosa-sinensis leaf paste is applied on the head and washed after 1 – 2 hrs. Leaf ground in coconut milk is applied for marks over body, cracks in skin, feet and hands. Eating leaves helps to increase lactation. Oil prepared from this plant juice is used as hair oil for biliousness, sleeplessness, hair fall, night blindness and applied for cuts. Three
spoons of plant juice mixed with equal quantity of honey and *Raphanus sativus* juice is given for piles. *Leaf ash is used as *anjana* for eye problems and burning in eyes. Leaf preparations are given to increase lactation and for night blindness. *Leaf juice mixed with equal quantity of honey is given for night blindness in aged people. *Leaf juice along with equal quantity of *Raphanus sativus* leaf juice is ground with a little rock salt and is used for piles. Plant juice is given with sugar for biliousness. *Chutney made of its leaf, cumin, coriander and pepper is eaten with rice for stomachache due to increased body heat. Crushed root juice mixed with jaggery and ghee is consumed for a week for dysmenorrhoea. *Juice of whole plant with milk, cumin powder and sugar is consumed once a day for a week in case of protein discharge through urine. *Root ground with goat urine is given once for sudden urine block.

Etymology: Matsyakshi (fish eye) is due to the resemblance of leaves to the eye of fish. Ponnamkanni (golden eye) indicates it is as precious as gold for eyes. It is highly used for eye diseases and to improve eye sight.

Note: It is used in preparations like *Arukaladi taila, Kaccoradi taila, Brhat marmagutika* and *Traikantaka ghṛta* (Sivarajan & Balachandran, 1996; Sharma *et al*., 1998). Whole plant is used for preparing *sambar*.

52. *Alternanthera tenella* Colla *(Plate 9 D)*

Family: Amaranthaceae

Vernacular Name: San: Matsyakshi
   Kan: Matsyakshi
   Mal: Ponnamkanni
   Tulu: Meenamkanni

Habit: Prostrate herb.

Habitat: Grows in damp places.

Status: Common. Exotic and weed.

Uses: Same as Alternanthera bettzickiana.

Etymology: Matsyakshi (fish eye) is due to the resemblance of leaves to the eye of fish. Ponnamkanni (golden eye) indicates it is as precious as gold for eyes.

Note: Sometimes it is used as a substitute for Alternanthera sessilis.

53. *Alysicarpus vaginalis* (L.) DC. *(Plate 9 E)*

Family: Papilionaceae

Vernacular Name: Eng: Alyce clover  
Kan: Namada soppu  
Mal: Elu potti  
Tulu: Ellu potti, Elu kootti

Habit: Diffuse herb.

Habitat: Open moist places.

Status: Common.


Uses: *Oil from plant juice is applied as a pain reliever. *Plant paste with coconut oil is massaged over breast to increase its size. *Whole plant boiled in gingelly oil is used for massaging the body in case of bone cracks. *Plant ground in milk is given to strengthen the bones.

Etymology: Elu kootti (bone binder) is due to its property to heal bone fracture.

Note: Much valued plant for the traditional bone setters.
54. *Amaranthus spinosus* L. (Plate 9 F)

Family: Amaranthaceae

Vernacular Name: San: Kantaka, Sushaka, Tanduleeya, Tanduleeyaka  
Eng: Spiny pig weed  
Kan: Mullu keere, Mullu harive, Mullu dantu  
Mal: Mullancheera  
Tulu: Mullu padpe

Habit: Erect herb.

Habitat: Wastelands and roadsides.

Status: Common. Exotic and weed.


Uses: *Root or stem decoction is used for urinary block and other urinary disorders. Whole plant decoction is recommended for skin diseases.*

Etymology: Mullu harive and Mullancheera (prickly amaranth) indicates the spiny nature of this plant.

Note: Used for preparing *Satavaryadi kashaya* and *Ashokarista* (Sivarajan & Balachandran, 1996). Used as a leafy vegetable.

55. *Amaranthus tricolor* L. (Plate 10 A)

Syn: *Amaranthus gangeticus* L.

Family: Amaranthaceae

Vernacular Name: San: Alpamarisa, Marisa, Meghanada
Eng: Joseph’s coat, Tampala  
Kan: Dantina soppu, Harive  
Mal: Cheera, Chuvanna cheera  
Tulu: Padpe

Habit: Erect herb.

Habitat: Grown as green vegetable.

Status: Common.

Description: Erect or ascending herb, with green or reddish stem. Leaves simple, ovate or lanceolate. Flowers green to crimson, clustered in the axils and forming a long terminal interrupted spike. Perianth-segments 3, lanceolate, with a long capillary awn. Stamens 3. Fruit ovoid utricle. Seeds black, shining.

Uses: *Root decoction is given for urinary disorders, piles and malabsorption in children. *Tambuli* prepared from it is tonic and is not recommended for ladies after delivery as it can produce phlegm.

Etymology: Chuvanna cheera (red amaranth) indicates the reddish colour of the stem.

Note: Used in the classical Ayurvedic preparation *Candrakala rasa* (Sharma et al., 1998). Plant is much valued as a green vegetable.

56. *Amaranthus viridis* L. (Plate 10 B)

Family: Amaranthaceae

Vernacular Name: San: Vishaghna, Tanduliya, Tanduleeyaka  
Eng: Slender amaranth  
Kan: Sanna harive  
Mal: Cerucheera, Kuppaccheera  
Tulu: Ellya padpe

Habit: Erect herb.
Habitat: Weed in wasteland and roadsides.

Status: Common. Weed.

Description: Erect herb, with slender stem. Leaves simple, ovate or deltoid. Flowers green, in slender axillary or terminal branched spikes. Perianth-segments 3, ovate-oblong. Stamens 3. Fruit rugose, indehiscent utricle.

Uses: Whole plant or root decoction is given for neural pain and rheumatism. Whole plant decoction is used in case of skin diseases. Its decoction is useful for gas trouble. *Plant juice mixed with jaggery is given at night for constipation. Plant extract is a blood purifier. *Use of plant as vegetable helps to remove the poisons that entered the body through food.

Etymology: Sanna harive and Cherucheera (smaller amaranth) depicts the smaller size of the plant in comparison with the common amaranth. Kuppaccheera (amaranth of wastelands) clearly indicates its habitat.

Note: Used for preparing Satavaryadi kashaya and Ashokarista (Sivarajan & Balachandran, 1996). Often used as a leafy vegetable. Whole plant is a nutritious leaf vegetable and is used for preparing sasive.

57. *Amorphophallus bulbifer* (Roxb.) Blume (Plate 10 C)

Family: Araceae

Vernacular Name: San: Amalavela, Atyamlaparni
Eng: Wild yam
Kan: Kaadu kene, Haavu kene
Mal: Kaattu chena
Tulu: Kaattukene

Habit: Cormous herb.

Habitat: Undergrowths of forests.

Status: Frequent. Poisonous.
Description: Corm globose. Leaf solitary, appears after flowering, bulbiferous at the forks; leaf-blade trisect at base; segments bipinnatisect, lanceolate or obovate; petiole smooth, with whitish elongated patches. Spathe erect, ovate-cymbiform, yellowish, shaded with pink, rose-pink inside. Spadix stout, as long as the spathe, with pistillate region at the base, staminate above and upper most sterile elongate appendix. Fruit ovoid berries.

Uses: *Rhizome boiled in buttermilk is ground and consumed in low dosage for bleeding piles, constipation, nervous debility and cough.

Etymology: Kaadu kene (wild yam) indicates the wild nature of the plant, while Haavu kene (snake yam) is due to the petiole which has elongated white patches on black surface, giving the appearance of a snake.

Note: Usually corms are not consumed.

**58. Amorphophallus commutatus** (Schott) Engl. (Plate 10 D)

Family: Araceae

Vernacular Name: San: Amalavela

   Eng: Wild yam

   Kan: Kaadu suvarnagadde

   Mal: Kaattu chena

   Tulu: Kaattukene

Habit: Cormous herb.

Habitat: Shaded places.

Status: Common.

Description: Corm depressed-globose. Leaf solitary, appears after flowering; leaf-blade trisect at base; segments bipinnatisect, lanceolate or obovate; petiole rough and spotted. Spathe erect, ovate-lanceolate, brownish-purple outside, pinkish-purple inside. Spadix columnar, as long as the spathe, with pistillate region at the base,
staminate above and upper most, sterile obtuse, cream-coloured appendix. Fruit ovoid berries.

Uses: *Same as that of Amorphophallus bulbifer.*

Etymology: Kaadu suvarnagadde (wild elephant foot yam) clearly suggests its wild nature.

Note: Corms are not consumed.

59. Amorphophallus paeoniifolius (Dennst.) Nicolson var. campanulatus (Decne.) Sivadasan (Plate 10 E)

Syn: Amorphophallus campanulatus Decne.; Amorphophallus dubius Blume

Family: Araceae

Vernacular Name: San: Suranah
  Eng: Elephant foot yam
  Kan: Suvarna gadde
  Mal: Chena
  Tulu: Kene

Habit: Cormous herb.

Habitat: Often cultivated.

Status: Common.

Description: Corms globose. Leaf solitary, appears after flowering; leaf-blade trisect at base; segments bipinnatisect, obliquely oblong; petiole smooth, greenish with white blotches. Spathe broadly campanulate, light green with whitish patches outside, dark-purple at base. Spadix stout, with pistillate region at the base, staminate above and upper most sterile, subglobose or amorphous, dark purple, irregularly lobed appendix, spongy, broader than long and whitish within. Fruit ovoid berries.
Uses: Rhizome (cooked) is given to eat for piles, bleeding piles, fissure, fistula and dysentery. It is stronger than cultivated one. Corm paste is applied for allergies. Its decoction is also useful. Purified corm extract is given for piles, indigestion, diarrhoea and constipation. *Chutney prepared from its stem (after the removal of outer rind) tamarind, salt, chillies and coconut gratings is taken with rice during the months of Aati* for giddiness and cracks in feet and hands.

Etymology: Suvarna gadde (golden yam) clearly indicates that the corms are as precious as gold among different tuberous crops. It is much valued as a vegetable for its high fibre content.

Note: Used for preparations like Suranadi lehya, Suranadi ghṛta and Lasuna ghṛta (Sivarajan & Balachandran, 1996). Best vegetable for those suffering from piles. Stem (aerial portion) is used for preparing a variety of curries.

60. *Amorphophallus paeoniifolius* (Dennst.) Nicolson var. *paeoniifolius* (Plate 10 F)

Family: Araceae

Vernacular Name: San: Suranah  
Eng: Wild elephant foot yam  
Kan: Kaadu suvarnagadde  
Mal: Kaattu chena  
Tulu: Kaattukene

Habit: Cormous herb.

Habitat: Moist shady places.

Status: Common.

Description: Corms globose. Leaf solitary, appears after flowering; leaf-blade trisect at base; segments bipinnatisect, obliquely oblong; petiole rough, muricate, purplish-brown, with light pinkish blotches. Spathe broadly campanulate, light green with whitish patches outside, dark -purple at base. Spadix stout, with pistillate region at
the base, staminate above and upper most sterile, subglobose or amorphous, dark purple, irregularly lobed appendix, spongy, longer than broad and whitish within. Fruit ovoid berries.

Uses: Cooked corm is beneficial for piles, fissure, fistula and dysentery. It is also useful for carbuncles, eye diseases, phlegm and rheumatism. Regular use of its corm helps to reduce fat in the body. *Outer skin of the corm is removed, cooked in steam, mixed with salt, mustard seeds and gingelly oil so as to make a pallya* and is consumed daily (once) for piles. *Payasam* prepared from it or its paste with buttermilk is applied for chronic rheumatism. It is also useful for spleen diseases, digestive problems and worms. *Antidote for overdose is tamarind fruit extract in buttermilk. This is not recommended for pregnant women and persons with skin diseases and raktapitta*. *Corm extract with honey or its powder mixed with sugar and ghee is given at bed time for piles. Corm rind chutney is taken with rice for piles. *Cooked corm payasam* with coconut milk is recommended for piles. Dried corm powder with honey is also given for piles. *Corm, Plumbago zeylanica* root, ginger, long pepper and pepper (16:8:4:12:4) are powdered, crushed with old jaggery and made into small balls. These are consumed for piles.

Etymology: Kaadu suvarnagadde (wild elephant foot yam) clearly suggests its wild nature.

Note: Used for preparations like Suranadi lehya, Suranadi ghrta and Lasuna ghrta (Sivarajan & Balachandran, 1996). Corms and petiole are used as vegetable.

61. *Ampelocissus indica* (L.) Planch. (Plate 11 A)

Syn: *Ampelocissus arnottiana* Planch.

Family: Vitaceae

Vernacular Name: San: Amlavetasah
Eng: Wild grape
Kan: Chemballi, Sambhara balli, Sanyasi gadde
Mal: Schembra valli
Tulu: Chemballu

Habit: Climbing shrub.

Habitat: Forests and hedges.

Status: Occasional.

Description: Large climbing shrub, with striate, ferruginous-wooly branches. Leaves simple, broadly ovate, angled, ferruginous-hairy beneath. Flowers greenish-purple, in short dense racemes of umbels; peduncle long, with a trifid tendril below the raceme. Calyx-lobes 5, truncate. Petals 5, oblong, reddish-brown. Stamens 5. Fruit globose berries, purple when ripe.

Uses: Tuber decoction is given for three days after the occurrence of urticaria and rashes. *Tuber cooked with rice is recommended to eat for three days during the month of Aati* to prevent skin diseases. It is also beneficial in overcoming giddiness. Tuber paste is applied for furuncles, urticaria, rashes, herpes and other skin diseases. *Root cooked with rice is given as a blood purifier for all types of skin diseases especially for herpes, urticaria, rashes and eczema. Root juice is also applied for the same purpose. Tuber paste is applied over head for biliousness. Tuber decoction with milk is given as a general tonic. *Tuber decoction with milk is drunk three times a day for herpes, while decoction with Mucuna pruriens root, Tragia involucrata root, sugar and milk is given for urticaria and allergy, while same with the addition of Memecylon umbellatum tender shoot tip is recommended for allergies. *Tuber cooked with rice is given for herpes and diabetes. *Tuber along with roots of Tragia involucrata and Mucuna pruriens are made into a decoction and used for urticaria. *Decoction prepared from this plant is used to wash eyes in case of eye infections. Plant juice mixed with oil is applied for eye diseases. *Root ground, heated with coconut oil and milk is applied for furuncles and wounds. Root juice is given with sugar for dysentery. Plant extract is given to expel phlegm.
Etymology: Chemballi (copper vine) name arose due to the copper coloured tuberous roots. It is believed that these tubers are rich in copper content.

Note: Tubers are much valued for skin diseases, especially of viral origin. Fruit is pickled. Liquor is prepared from fruits.

62. *Ampelocissus latifolia* (Roxb.) Planch. (Plate 11 B)

Syn: *Vitis latifolia* Roxb.

Family: Vitaceae

Vernacular Name: San: Amlavetasah
   Eng: Wild grapes
   Kan: Bili hambu, Kaadu drakshi
   Mal: Shembara valli
   Tulu: Ballu ambate

Habit: Large climber.

Habitat: Forests and sacred groves.

Status: Occasional.


Uses: *After removing the impurities using clean cloth from the extract of crushed stem in castor oil (kept in sunlight for five days) it is applied externally for paralysis, backache and also for massaging in case of bone fracture. *Gruel prepared by cooking five pieces of stem (of the size of a finger) with rice is given for children suffering from malabsorption of food. *Fruit juice is digestive.

Etymology: Kaadu drakshi (wild grapes) is due to its bunch of purple coloured berries, resembling the grapes.
Note: Used in the preparations like *Pancamlataila*, *Hinguvacadi churna*, *Putkaranjasava* and *Abhrabhasma* as a substitute for *Cissus repens* (Sivarajan & Balachandran, 1996). Fruit is pickled.

63. *Anacardium occidentale* L. (Plate 11 C)

Family: Anacardiaceae

Vernacular Name: San: Kajutakah, Venamrah, Vrkkabijah  
Eng: Cashew nut  
Kan: Geru, Gerubeefa, Godambi  
Mal: Kashumavu, Parangimavu  
Tulu: Beejo, Gonkutha maro

Habit: Small tree.

Habitat: Cultivated throughout.

Status: Common. Exotic.

Description: Small tree. Leaves simple, obovate, coriaceous. Flowers small, polygamous, in terminal panicles; bracts large, deciduous. Calyx 5-partite, lanceolate. Petals 5, yellow with pink strips, recurved. Stamens 8 – 10. Fruit a reniform nut, seated on pyriform orange or red-coloured fleshy pseudocarp.

Uses: 1 – 2 drops of oil extracted from fruit rind is used for warts and corns. Bark decoction is given to expel intestinal worms. *Oil extracted from bark is applied for old septic wounds and ulcers. Fruit juice is given for diarrhoea. Fruit juice is given to stop purgation and externally applied for swellings. *Fruit juice in a clean bottle is kept in sunlight (until the water evaporates) and is given for indigestion in both humans and cattle. *Bark cooked with rice is given for conception in cattle. Seed coat is heated in fire and tied for corns. *Oil from seed coat is heated and poured to expel glass pieces or spines from the body. Oil extracted from four seed coats is applied for cracks in feet and heel. *Seed coat is cooked with rice and is given for ulcers due to hair fall in dogs. Crushed bark decoction is used as gargle for thrush in tongue. *Leaf is chewed and gargle with its juice is recommended for 1 – 2 weeks
in case of bleeding gums, mouth ulcers, throat ulcers and to strengthen loose teeth. Bark extract is germicidal and wound healer. Fruit is digestive; however it increases acidity and is constipating. Purified seed oil is applied for rheumatism, phlegm, skin diseases, piles and leucoderma. If seed coat oil causes allergy, then ghee is given internally and a bath with *Terminalia bellirica* bark decoction is recommended externally as an antidote. One seed is consumed daily in empty stomach at early morning to overcome rhinitis. *Oil from seed coat is applied for alopecia totalis and ring worm. If burn occurs as a side effect, then coconut oil is applied as antidote. *Oil from seed coat mixed with coconut oil (4:1) is applied for ring worm. The gruel prepared by cooking its bark with rice is eaten with coconut milk for 12 days in case of black heads and for menstrual disorders. Full grown leaf veins are used to brush teeth to overcome bleeding from gums, gum ulcers and loose teeth. *Tender shoot tip and that of *Psidium guajava* are taken in equal quantity and masticated every morning to overcome dental problems.

Etymology: Parangimavu (foreign mango) indicates its exotic nature.

Note: Kernels are rich in nutrients. Arrack is extracted from the edible pseudocarp. Oil extracted from seed coat is applied over wooden particles to resist termites. Seed coat is kept along seeds to repel insects.

64. *Anamirta cocculus* (L.) Wight & Arn. (Plate 11 D)

Family: Menispermaceae

Vernacular Name: San: Kakamari, Kakaphala, Garalaphala
   Eng: Fish berries
   Kan: Kakamari, Kagemari
   Mal: Karantakam, Polla
   Tulu: Chiplotte

Habit: Large woody climber.

Habitat: Low level evergreen and moist deciduous forests.

Status: Common. Poisonous.
Description: Large woody liana. Leaves simple, broadly ovate, palmately nerved, coriaceous. Inflorescence drooping panicles from old stems. Flowers unisexual. Male glabrous; outer tepals 2, pale green; inner 6, white or yellow; stamens connate into synandrium. Female glabrous; tepals 2 + 6; staminodes 6; carpels 3, ellipsoid. Fruit white, globose, glabrous drupe.

Uses: *Raw fruit juice is applied to kill lice and for vitiated ulcers with foul smell. *Paste prepared by grinding its seed is applied for ring worm and lymph node enlargement.

Etymology: Kakamari (crow poison) arose as the fruits are used to kill crows.

Note: It is much valued for its antifungal properties. Seed is highly poisonous and is used to kill crows. Leaf is placed above pickles during preservation as antifungal agent.

65. **Ananas comosus** (L.) Merr. **(Plate 11 E)**

Syn: *Ananas sativus* Schulf. f.

Family: Bromeliaceae

Vernacular Name: San: Anannasa, Bahunetra
   Eng: Pineapple
   Kan: Ananasu, Parangi hannu
   Mal: Kaithacchakka, Kappacchakka
   Tulu: Parangi pelakkayi

Habit: Erect herb.

Habitat: Often cultivated.

Status: Common. Exotic.

Description: Erect short-stemmed herb, with suckers arising from the base. Leaves in rosettes, long, channeled, spiny serrate. Inflorescence terminal head crowned with

Uses: Eating fruit is useful for expelling worms, phlegm, for swelling in body, indigestion, stomach disorders, dysmenorrhoea and asthma. However, it may cause allergic reactions in some. Fruit juice has thirst quenching property; overdose is abortive, in some it causes urticaria. *Antidote for this is drinking juice prepared from tamarind and jaggery. *Oil prepared from crushed leaf juice is applied for nervous debility and paralysis in cattle. Raw fruit juice is given as a diuretic agent. It is not recommended for ladies or girls. *Fruit piece along with salt and pepper seeds are given to improve digestion. Leaf juice mixed with sugar is given for hiccough. Fruit is abortive. Fruit juice or fruit pieces are eaten with honey for blood purification. Fruit extract increases raktapitta* and blood pressure. Fruit extract expels intestinal worms. *Juice extracted by heating leaf or inflorescence tip is consumed with jaggery for three days to treat skin diseases due to intestinal worms. *Fruit piece is chewed with sugarcandy for swelling in throat, spasm in throat and breathing difficulties. *Fruit pieces are chewed with pepper powder and salt for indigestion.

Etymology: Parangi hannu (foreign fruit) and Parangi pelakkayi (foreign jack fruit) clearly indicate its exotic origin.

Note: Bromelin is the active constituent in the fruit (Kapoor, 1990). Fruits are much valued for its digestive nature.

66. *Anaphyllum wightii* Schott (Plate 11 F)

Family: Araceae

Vernacular Name: Mal: Keeri kizhangu, Sulli

Habit: Erect herb.

Habitat: Shady places in upper hills.

Status: Rare.
Description: Slender herb, with creeping root stock. Leaves juvenile ones simple, ovate; mature ones pinnatisect; leaflets elliptic lanceate, with decurrent base. Spathe ovate-lanceate, spirally twisted. Flowers bisexual, cover the whole spadix. Fruit globose berries.

Uses: *Root decoction is given internally, while its paste with lime juice is applied externally for poisonous bites.

Etymology: Keeri kizhangu (mongoose corm), name itself suggests its utility against snake bite.

Note: Much valued for poisonous bites.

67. Andrographis paniculata (Burm. f.) Wall. ex Nees (Plate 12 A)

Family: Acanthaceae

Vernacular Name: San: Bhunimbah, Kiratikta, Kalamegha, Mahatiktah
   Eng: Kariyat
   Kan: Nelabevu, Kiriyattu
   Mal: Kiriyattu, Nilaveppu
   Tulu: Kirathakaddi

Habit: Erect herb.

Habitat: Cultivated in gardens.

Status: Common.


Uses: Plant decoction is given for fever, malaria, cough, rheumatism, to expel worms, upset stomach, indigestion, weakness, blood dysentery, typhoid and all viral fevers. *Plant is used for smoking in order to expel fear from children. Eating
leaves is beneficial for diabetes. Leaf juice is applied externally for skin diseases. *Whole plant is made into a decoction with the bark of Gmelina arborea and is given for cold in cattle. *Tender shoot tip juice is used as eye drop for conjunctivitis. Whole plant heated with Vernonia anthelmintica seeds in coconut oil are applied for boils, blisters and scabies. Whole plant decoction is given internally for chicken pox. Whole plant paste is applied for skin diseases. *Whole plant with tender shoot tip of Murraya koenigii ground in ghee is used for leucorrhea. Plant extract is digestive. *Tender shoot tip tambuli* is digestive and is used for blood disorders, fever, biliousness and infections. *Leaf decoction mixed with lime juice, long pepper powder and pepper is used for malaria. Leaf decoction along with sugarcandy is given after food during night for 24 days in case of weakness due to indigestion. *Whole plant along with the bark of Alstonia scholaris and Vernonia anthelmintica seeds are made into a decoction and is used for fever, while that with Vetiveria zizanioides for flue and with long pepper for cold type fever. *Whole plant along with Picrorrhiza scrophulariifolia and dried ginger powder are made into a decoction and is used for jaundice. Plant paste is applied for poisonous bites. For fever its decoction with ginger is also used. *Plant ground in Sphaeranthus indicus juice is applied for lymph node swellings. *Equal quantity of plant along with Vernonia anthelmintica seeds and Tinospora cordifolia are ground, made into decoction and is used for flue. *If fever is due to increased body heat, then addition of Vetiveria zizanioides or Picrorrhiza scrophulariifolia to this mixture is recommended. *If it is due to cold then addition of long pepper to above decoction is recommended. *Equal quantity of whole plant along with Tinospora cordifolia, Pterocarpus santalinus and ginger are powdered, made into decoction and is consumed with sugar and honey for all kinds of fever. *Plant along with Tinospora cordifolia, Justicia adhatoda, Solanum virginianum, Ocimum tenuiflorum, Cyperus rotundus and ginger (6:4:4:6:4:5) are made into a decoction and is used for piles. *Plant along with Hedyotis corymbosa is made into a decoction and is used for fever. *Plant paste with Sphaeranthus indicus juice is applied for lymph node swellings. *Whole plant decoction is given by adding sugar for 6 – 12 days to prevent repeated fever attack in children.
Etymology: Nelabevu, Bhunimbah and Nilaveppu (ground neem) is due to its herbaceous nature as well as highly bitter taste.

Note: It is used in the preparations like Tiktaka ghrt, Gorocanadi vatika, Candanasava, and Pancatikta kashaya (Sivarajan & Balachandran, 1996). Kalmeghin and flavones are the major constituents (Kapoor, 1990). Highly used for fever. Plant is used to ward off evil spirits.

68. *Anisochilus carnosus* (L. f.) Wall. ex Benth. (Plate 12 B)

Family: Lamiaceae

Vernacular Name: San: Karpuravalli  
Eng: Thick leaved lavender  
Kan: Karpurada gida, Karpuravalli, Madivala patre  
Mal: Kaattukkoorka, Mathilkkoorka  
Tulu: Iruver, Kuruver

Habit: Erect annual herb.

Habitat: Hollows of exposed rocks.

Status: Common.


Uses: *Whole plant decoction is given for cough, asthma, rhinitis and bronchitis. *Leaf juice mixed with sugar and gingelly oil is applied over head as a cooling agent.

Etymology: Karpurada gida (camphor herb) is due to its camphor like aroma. Mathilkkorka (wall Coleus) indicates its Coleus like appearance and habitat. It grows on wall and rock crevices. Kaattukkorka (wild Coleus) depicts its wild nature.
Note: Much valued for cold and cough.

69. *Anisomeles indica* (L.) Kuntze (Plate 12 C)

Syn: *Anisomeles ovata* R. Br.

Family: Lamiaceae

Vernacular Name: San: Mahadronah

Eng: Malabar catmint

Kan: Hennu kari thumbe, Mangamaari soppu

Mal: Chedayan, Karimthumba

Tulu: Karithumbe

Habit: Aromatic under shrub.

Habitat: Weed in wastelands.

Status: Frequent.


Uses: Same as that of *Anisomeles malabarica*

Etymology: Kari thumbe and Karimthumba (black *Leucas*) are due to the dark coloured stem and as it is related to *Leucas* group.

Note: It is one of the ingredients of *Surasadi taila, Pathadi vatika, Nirgundyadi ghrta* and *Nirgundyadi vatika* (Sivarajan & Balachandran, 1996).

70. *Anisomeles malabarica* (L.) R. Br. (Plate 12 D)

Syn: *Nepeta malabarica* L.

Family: Lamiaceae

Vernacular Name: San: Alamoola, Brahmani, Mahadronah, Sprkka
Eng: Malabar catmint, Devil’s frightener  
Kan: Karithumbe, Gandu karithumbe  
Mal: Karimthumba, Perumthumba  
Tulu: Kalo thumbo, Kari thumbe

Habit: Erect herb.

Habitat: Weed in wasteland and roadsides.

Status: Common.


Uses: *Plant decoction is given to induce appetite, for expelling phlegm and rheumatism.  *Leaf juice is given for indigestion and stomachache, while decoction for digestive disorders, diarrhoea and intermittent fever.  *Oil extracted by distillation of this plant is used to wash body in case of rheumatism and swellings.

Etymology: Kari thumbe and Karimthumba (black Leucas) are due to the dark coloured stem and as it is related to Leucas group.

Note: It is one of the ingredients of Surasadi taila, Pathadi vatika, Nirgundyadi ghrta and Nirgundyadi vatika (Sivarajan & Balachandran, 1996).

71. *Annona muricata* L. (Plate 12 E)

Family: Annonaceae

Vernacular Name: Eng: Graviola, Guanabana, Sour-sop  
Kan: Mullu Raamaphala, Lakshmana phala  
Mal: Mullaathi, Mullenchakka  
Tulu: Lakshmanaphalo

Habit: Small tree.
Habitat: Cultivated in gardens.

Status: Occasional. Exotic.


Uses: Fruit is beneficial for tuberculosis. *Leaf paste is applied to kill lice in head. *Dried fruit extract is given for dysentery. *Leaf paste is applied for septic wounds and ulcers, while its extract to expel worms. *Leaf decoction is used as mosquito repellent. Fruit is nutritive and a general tonic. *Seed ashes mixed with neem oil are applied for wounds in animals.

Etymology: Mullu Ramaphala (spiny bullock’s heart) and Mullanchakka (spiny jack fruit) is due to its resemblance to bullock’s heart and spiny surface.

Note: Fruits are edible and nutritious.

72. **Annona reticulata** L. (Plate 12 F)

Family: Annonaceae

Vernacular Name: San: Ramaphala, Mrduphala  
Eng: Bullock’s heart, Sugar apple  
Kan: Ramaphala  
Mal: Manilanilam, Parankippazha, Ramachitha  
Tulu: Ramaphalo

Habit: Small tree.

Habitat: Cultivated in gardens.

Status: Common. Exotic.

connectives. Carpels many. Fruit ovoid, yellow, smooth, with yellow pulp and black seeds.

Uses: Similar to *Annona muricata*.

Etymology: Ramaphala is due to its close relation with Sitaphala (custard apple).

Note: Fruits are edible and highly nutritious.

**73. *Annona squamosa* L. (Plate 13 A)**

Family: Annonaceae

Vernacular Name: San: Sitaphala, Bahubijaka, Krishnabijah
   Eng: Custard apple, Sweetsop
   Kan: Seethaphala, Amrutaphala
   Mal: Athamaram, Athacchakra, Seethapazham
   Tulu: Amchikaayi, Seethaphalo

Habit: Small tree.

Habitat: Cultivated in gardens.

Status: Occasional. Exotic.

Description: Trees, with glabrous branches. Leaves simple, elliptic-lanceolate, coriaceous. Flowers solitary or 2 – 4 flowered cymes. Sepals 3. Petals 3, green with purple base; inner reduced to scales. Stamens many with convex connective. Carpels many. Fruit globose, furrowed, greenish-yellow, with white pulp and blackish brown seeds.

Uses: *Fruits as such and leaf or seed decoction are beneficial for tuberculosis. *Leaf paste is applied to kill lice in head. This should be washed within half an hour. If kept for longer period hair fall may occur. *Leaf paste with salt is applied for pus release and easy heals of septic bruises as well as ulcers. *Fruit along with ginger are given internally, while in the form of paste are applied over head for insanity and mental problems. *Leaf paste with water is applied to expel maggots or worms
present in septic wounds or ulcers in cattle. *Leaf and turmeric in rice cooked water are ground into a paste, heated and applied for udder swelling in cattle. Crushed leaves are applied to expel maggots from ulcers of cattle. Eating fruits is beneficial in whooping cough. * Decoction of 3 – 4 leaves is given to expel intestinal worms. *Ashes of mature mixed with gingelly oil is applied for scabies. Seed or leaf paste is applied to kill lice and maggots. Leaf is heated and is pressed over body for pain. Leaf extract in water is used to expel maggots from wounds.

Etymology: Bahubijaka (many seeded) and Krishnabijah (black seeded) clearly indicate morphology of seeds.

Note: Fruits are nutritious and edible. Leaves are valued for their insecticidal property. Powdered seed is used as raticide and sprayed as insecticide. Oil extracted from the seeds is used as insecticide.

74. *Anodendron paniculatum* (Roxb.) A. DC. *(Plate 13 B)*

Syn: *Anodendron manubriatum* Merr.

Family: Apocynaceae

Vernacular Name: Kan: Mani balli, Ajjana gadda

Mal: Kaka kodi

Tulu: Mirebaputha thappu, Moranda ballu

Habit: Large climber.

Habitat: Semi evergreen forests.

Status: Occasional.

Uses: *Root paste prepared by crushing with lime juice is applied for breast swelling both in humans and cattle. *Root decoction or water oozing from cut stem is used for gonorrhoea. *Root decoction is given for skin diseases.

Etymology: Mirebaputha thappu (leaf used for mastitis) clearly indicates its medicinal property.

Note: Identification feature is when a leaf is plucked or stem is cut water oozes out.

75. *Antiaris toxicaria* Lesch. (Plate 13 C)

Family: Moraceae

Vernacular Name: San: Valkala
Eng: Ako, Upas tree
Kan: Ajjana patte, Ajjampatte, Jaaguri
Mal: Aranjili, Maravuri, Nettavil
Tulu: Bilupale

Habit: Large tree.

Habitat: Evergreen and semi evergreen forests.

Status: Frequent. Poisonous.

Description: Large trees, with buttressed base and grey bark; branchlets brown pubescent when young. Leaves simple, elliptic to obovate, covered with long thick hairs. Flowers unisexual, on different inflorescences. Male boat-like, pubescent; involucral bracts triangular. Female pear-shaped, 1-flowered, covered by numerous bracts. Fruit pear-shaped, bright red to purple red drupe.

Uses: *Stem bark powder is recommended for dysentery.

Etymology: Ajjana patte (grandfather's cloth) and Maravuri (bark cloth) arose as using the bark fibres of this plant cloths, ropes and nets were prepared traditionally.

Note: Much valued for bark fibres.
76. Antidesma acidum Retz. (Plate 13 D)

Syn: Antidesma diandrum (Roxb.) Roth.

Family: Euphorbiaceae

Vernacular Name: Kan: Huli majjige kolu, Kiri hulipa, Kiri hulive
    Mal: Asaripuli, Sirupulli, Areepezham
    Tulu: Kampara puli

Habit: Small tree.

Habitat: Degraded forests on lateritic soils.

Status: Frequent.

Description: Large shrub to small tree. Leaves simple, elliptic or obovate, pubescent. Flowers small, pedicellate, in axillary and terminal slender racemes. Calyx 4-lobed. Stamens 2. Fruit ovoid -acute drupe, purplish-red when ripe.

Uses: Leaf paste is applied externally for swellings with pain. *Bark, ghee and gratings of one coconut are ground, egg white from two eggs are mixed with it and is eaten in the late evening for bone fracture. *Roties* prepared from its bark, pepper, fenugreek, gratings of half a coconut and jaggery ground with rice are eaten with ghee before sleeping for body pain due to hard work. *Stem bark, black gram, fenugreek, gratings of one coconut and jaggery are crushed, mixed with ground nut oil and egg white is given to cattle and bull as a tonic.

Etymology: Huli majjige kolu (sour buttermilk stick) is due to the sour taste of its bark and leaves.

Note: Fruits are edible.

77. Antidesma ghaesembilla Gaertn. (Plate 13 E)

Family: Euphorbiaceae

Vernacular Name: Eng: Black currant tree
Kan: Pulipurase, Pullamparase
Mal: Poothuruval
Tulu: Pullampurache, Chauli parandu

Habit: Small tree.

Habitat: Degraded forests.

Status: Frequent.


Uses: Fruits are digestive and tonic. *Eating its preparations and raw fruits is beneficial for cough and phlegm, also acts as a blood purifier. *Fruit extract or leaf juice is used for thrush in tongue.

Etymology: Chauli parandu (sour fruit) indicates the sour taste of the fruits.

Note: Ripe fruits are edible and eaten raw. Leaf is also used as a green vegetable. Fruits fried in ghee are used for preparing sambar*.

78. *Antidesma montanum* Blume (Plate 13 F)

Syn: *Antidesma menasu* (Tul.) Miq.

Family: Euphorbiaceae

Vernacular Name: Kan: Kadiru sappu, Kadivala sappu, Bavina soppu
                     Mal: Putharaval, Thathalamaram
                     Tulu: Kural thappu, Baputha thappu

Habit: Large shrub.

Habitat: Disturbed forests.

Status: Common.
Description: Large shrub. Leaves simple, elliptic-oblong, pubescent. Flowers small, in axillary or terminal, solitary and paniculate racemes. Calyx 4-lobed. Stamens 3–5. Fruit ovoid drupe, purple when ripe.

Uses: *Thick coating with leaf paste is given for bone fracture; coating is changed for every 2 - 3 days. *Leaves ground with egg white into a paste which is applied for shoulder dislocation and bone fracture. *Leaf ground into a paste with raw rice seeds is applied for all kinds of swellings. *To the decoction made of its leaves with leaves of Litsea glutinosa, Litsea coriacea, Cardiospermum halicacabum, Calotropis gigantea, Croton laevigatus, panchavalli* variety Piper betle, Syzygium travancoricum, Justicia gendarussa, Vitex negundo, Aloe vera, Thunbergia mysorensis, Tinospora cordifolia, Strychnos nux-vomica, Sida rhombifolia (whole plant), Xenostegia tridentata var. tridentata, Averrhoa carambola or Citrus aurantium fruit juice, Lepidagathis incurva var. mucronata, Acorus calamus (rhizome and leaf), roots of Ricinus communis, Solanum melongena, Withania somnifera, Cissus quadrangularis stem, Glycyrrhiza glabra rhizome, rakthabola* and pacche karpura*, Plumbago zeylanica root extract is added, boiled with 5 litres of coconut or gingelly oil and one litre of castor oil. The resulting oil is recommended for all types of pains. *Leaf extract is given internally for asthma and biliousness. *Leaf paste is applied for carbuncles. *Leaf along with raw rice and cumin seeds are ground into paste in rice cooked or washed water and is applied for lymph node swellings and tumours. *Leaf paste with raw rice is applied for bone fracture. *Leaf paste is applied for swellings and allergic swellings.

Etymology: Kadiru sappu and Kural thappu (spike bearing plant) indicates the spike inflorescence, while Bavina soppu and Baaputha thappu (leaf for swelling) depicts its medicinal uses.

Note: Leaves are much valued for traditional bonesetters. Ripe fruits are edible.

79. *Aphanamixis polystachya* (Wall.) R. Parker (Plate 14 A)

Syn: *Amoora rohituka* (Roxb.) Wight & Arn.

Family: Meliaceae
Vernacular Name: San: Rohitaka, Raktavrksa

Eng: Tasua, Rohituka tree

Kan: Mullu muttala, Title kaayi, Rohitaka

Mal: Chemmaram, Karagil, Vallikonna

Tulu: Pucche pajje

Habit: Medium-sized tree.

Habitat: Evergreen and semi evergreen forests.

Status: Rare.

Description: Medium-sized evergreen tree, with grey tomentose young shoots. Leaves imparipinnate; leaflets 7 – 10, oblong-lanceolate, oblique at base. Flowers minute; male in panicles of spikes; female in long spikes. Calyx-lobes 5. Petals 3. Stamens 6. Fruit globose, 3-valved capsule, yellow at first, pink or red at maturity.

Uses: Oil extracted from the seed is used for massaging in rheumatic conditions. *Bark decoction is given for urinary disorders, liver, spleen problems and also worms. Seed powder is given to expel worms, for ulcers, eye diseases and myalgia. *Seed paste or bark paste is applied for skin diseases and burning sensation in body. *Plant paste is applied externally and decoction is given internally for breast cancer.

Etymology: Names Rohitaka and Raktavrksa (red tree) are due to blood red colour of the heart wood.

Note: Seed oil is much valued for rheumatic conditions.

80. Aporosa lindleyana (Wight) Baill. (Plate 14 B - 1, B - 2)

Syn: Aporosa cardiosperma (Gaertn.) Merr.

Family: Euphorbiaceae

Vernacular Name: Kan: Salle, Sarali, Salle gida

Mal: Vetti, Aechil, Ponvetti

Tulu: Charoli, Tharoli, Sarali thappu, Bolsaroli
Habit: Moderate-sized tree.

Habitat: Semi evergreen forests.

Status: Common.


Uses: *Plant (nodes) paste is applied on forehead for headache. It has cooling effect. Leaf mucilage is massaged over head for rhinitis and running nose. *Oil prepared using its leaf is applied for burns, and also on head for preventing hair fall. *Young shoot tip boiled in coconut oil is applied for burns, ulcers and bruises. *Young shoot tip ground in milk is given for leucorrhoea. Root decoction is given for jaundice, fever and headache. *Tender shoot tip and cumin seeds crushed and heated with coconut oil are applied for burns. Leaf paste is applied for tennis elbow and joint pain. *35 gm root crushed, boiled in four cup water and reduced to one cup is given two times in case of insanity and sleeplessness. Fruit is an appetizer, cooling and is useful for cold. Plant extract is used to remove the *Strychnos* poisoning. *Tender shoot tip is fried in coconut oil and the residue is applied to remove marks of burn. Root decoction is given internally, while leaf extract in water is applied over head and also as bath for insanity, sleeplessness and anxiety. *Young leaf along with cumin and coriander seeds are made into a decoction which is used with sugar and milk as tea to remove poison that entered through food. Fruit is edible and is useful for rheumatism. *Root decoction is given for jaundice and protein discharge through urine. *Shoot tip along with raw rice ground in water or lime juice is applied for all types of furuncles. *Shoot tip ground with cumin seeds in milk is given for 15 days in case of leucorrhoea and all other types of bleedings. *When oil gets separated while heating its leaf juice and paste with coconut milk, copra gratings and hair ash are added to it and the same is applied for burns. *Leaf and that of *Cucurbita pepo* are ground into paste and is applied immediately after burns.

Etymology: Saroli (shampoo) and Bolsaroli (white shampoo) arose as the leaves of
this plant are used as shampoo and white coloured bark.

Note: Fruits are edible. Tender shoot tip paste is applied to the crushed *Borassus* inflorescences to increase the quantity of toddy during toddy tapping. Plant is used in black magic.

**81. Ardisia solanacea** Roxb. (Plate 14 C)

*Syn: Ardisia humilis* auct. non Vahl.

*Family: Myrsinaceae*

*Vernacular Name: Eng: Spear flower, Elliptic leaved tree*  
*Kan: Bode, Bodina gida, Mitlemani, Havalada gida*  
*Mal: Kaka njara, Kuzhimundan, Molakka*  
*Tulu: Bode*

*Habit: Large shrub.*

*Habitat: Along streams in evergreen forests.*

*Status: Occasional.*


*Uses: Root decoction is recommended for fever, diarrhoea and rheumatism.*

*Etymology: Kaka njara (black *Syzygium*) is due to the resemblance of the fruits to that of *Syzygium caryophyllatum* and black colour.*

*Note: Fruits are edible.*

**82. Areca catechu** L. (Plate 14 D)

*Family: Arecaceae*

*Vernacular Name: San: Kramukah, Pooga, Poogaphalam*
Eng: Betel nut palm, Arecanut palm  
Kan: Adake, Adike, Adikemara, Kaungu  
Mal: Adakka, Adakkamaram, Kavungu  
Tulu: Kamu, Bajjai  

Habit: Erect palm.  

Habitat: Extensively cultivated.  

Status: Common.  

Description: Erect palm, with smooth, annulate stem. Leaves 1-pinnate, crowded at the apex; leaflets linear-lanceolate, upper confluent; petioles with broad clasping base. Spathes compressed, straw-coloured. Spadix infrafoliar; much branched. Male flowers many, minute, on the upper portion of spikes; sepals 3; petals 3; stamens 6. Female flowers few, larger, at the base of the spikes; sepals 3; petals 3; ovary 1-celled. Fruit ovoid to ellipsoid drupe, orange or scarlet when ripe.  

Uses: *Decoction made of its root, *Cocos nucifera* root and salt is used as a gargle for toothache. Young fruit (ground) is given as a sour agent for thrush in tongue. Inflorescence ground in milk along with cumin seeds are given for three days from the 4th day of menses for three cycles in case of irregular menses and infertility. Young arecanut ground in water is applied for skin diseases. Seed powder is recommended to expel worms. Fruit extract has aphrodisiac and nervine tonic property. It has constipating property also. Root decoction is given for biliousness and mouth ulcers. Young arecanut extract is given internally to expel worms. *Ripe fruit rind juice mixed with coconut oil (2:1) is applied on head for chronic running nose. Young leaf decoction is used for preparing an oil used for lumbago. Fruit powder is useful for blood dysentery and controls decay of teeth. Fruit paste is applied for swellings. Cooked fruit extract is given for indigestion and blood dysentery. Dried fruit paste with water is applied for furuncles. *Ashes of dried leaf petiole mixed with honey are applied six times a day for udder swelling in cattle.* Paste prepared from its inflorescence is applied on head for malnutrition in children. *The black algae seen over the stem is crushed with cumin seeds and is
used as eye drop in case of damage to eye or cataract. *Leaf and *Vetiveria zizanioides* root boiled in hot water is given to prevent threatened abortion up to five months of pregnancy. *Ashes of dried leaf petiole paste with coconut oil and neem oil are applied for ulcers and wounds with maggots in cattle. Young fruit extract is applied for skin diseases, while given internally for urinary disorders and phlegm. *Dried fruit ash mixed with salt is used to brush teeth. Crushed fruit decoction is used as gargle for bleeding from gums. *Dried young fruit is ground in rice washed water, applied for urticaria and rashes. Fruit extract is useful for digestive problems, skin diseases, cough, wounds, spleen disorders, mouth ulcers, diabetes, genital diseases, biliousness and phlegm. It is a perspirator, laxative and muscle relaxer. *Dried seeds are kept inside the stem of plantain for one month and then used as aphrodisiac. White inner portion of fruit rind also has aphrodisiac property.

Note: Arecoline, arecaidine, guvaoline, guvacine, arecolidine, catechin and procyanidins form active constituents of the nuts (Kapoor, 1990). Used for preparations like *Pugakhanda, Kameshwara modaka* and *Pippalasava* (Dey, 1994).

83. *Arenga wightii* Griff. (Plate 14 E)

Family: Arecaceae

Vernacular Name: Eng: Wild coconut
   Kan: Kaadu thengu, Dadise
   Mal: Malanthengu, Kattuthengu, Njettippana
   Tulu: Kaaduthare

Habit: Erect palm.

Habitat: Evergreen forests.

Status: Rare.

Description: Erect, stout, monoecious palms. Leaves pinnatisect, 1-pinnate; leaflets alternate, linear-ensiform, unequally auricled at base, white glaucous beneath. Spadices much branched; spathes absent. Male flowers many, minute, on the upper
portion of spikes; sepals 3; petals 3; stamens 3. Female flowers few, larger, at the base of the spikes; sepals 3; petals 3; ovary 3-locular. Fruit subglobose drupe.

Uses: Pith powder is used just like arrowroot powder.

Etymology: Kaadu thengu (wild coconut) and Malanthengu (hill coconut) indicates its wild nature and habitat which is restricted to the evergreen forests.

Note: Toddy is tapped from the inflorescence.

84. Argemone mexicana L. (Plate 15 A)

Family: Papaveraceae

Vernacular Name: San: Brahmadandi, Haimavathi, Svarnakshiri
   Eng: Mexican poppy, Prickly poppy, Yellow Mexican poppy
   Kan: Arasina ummatha, Mullu ummatha, Datturi gida,
   Arasina datturi
   Mal: Kantankattiri, Erumakalli, Ponnummam
   Tulu: Umbuga

Habit: Armed erect herb.

Habitat: Weeds in waste places and road sides at higher altitudes.

Status: Occasional. Exotic, weed and poisonous.

Description: Erect armed annual herb, with yellow latex. Leaves sinuate-pinnatified, semi-amplexicaul, spiny, with whitish nerves. Flowers yellow, showy, solitary, terminal. Sepals 2 or 3. Petals 6, in two whorls, obovate. Stamens many. Fruit oblong, spinous capsule.

Uses: *Petiole or leaf extract is used for eye diseases and urinary disorders. Seed extract is given to induce vomiting. Oil extracted from the seeds is applied for headache. *Seed oil mixed with sugar is given internally in small dose for stomachache. Purified fruit extract is used as aphrodisiac. *Root paste with cow dung extract is applied for millipede bite.
Etymology: Svarnakshiri (yellow latex) depicts the colour of the latex. Arasina ummatha (yellow *Datura*) and Mullu ummatha (spiny *Datura*) are due to the spiny fruits resembling that of *Datura* and yellow coloured latex.

Note: Berberine, protopine, sanguinarine and α-allocryptopine are the major constituents (Kapoor, 1990). Used in *Laghu vishagarva taila* (Dey, 1994).

85. *Argyreia elliptica* (Roth.) Choisy (Plate 15 B)

Syn: *Ipomoea elliptica* Roth.; *Lettsomia elliptica* (Roth.) Wight

Family: Convolvulaceae

Vernacular Name: Kan: Ugani balli, Ugani hambu  
Mal: Adambu valli  
Tulu: Ermekkulavu

Habit: Large climber.

Habitat: Along margins of forests.

Status: Occasional.


Uses: *Whole plant paste or oil prepared using this plant juice is applied for burns.  
*Whole plant along with cumin seeds are ground and the juice is used as eye drop for eye problems.

Etymology: Ermekkulavu (buffalo *Merremia*) is as it belongs to *Merremia* group and used as fodder for buffalos.

Note: Stem is used as rope to tie the rafters.
86. *Argyreia nervosa* (Burm. f.) Bojer (Plate 15 C)

Syn: *Argyreia speciosa* (L. f.) Sweet

Family: Convolvulaceae

Vernacular Name: San: Murva, Vrddhadaruka
Eng: Elephant climber, Wood rose
Kan: Samudra hale, Samudraballi, Samudra paale
Mal: Marututari, Perumkurumba, Samudrapaccha
Tulu: Malla adambu ballu

Habit: Large climber.

Habitat: Open places.

Status: Common. Weed.

Description: Large climber, with white-tomentose branches. Leaves simple, broadly ovate-cordate, white-tomentose beneath. Flowers in long peduncled, few-flowered cymes; bracts large, ovate-lanceolate, white woolly, deciduous. Sepals 5, ovate, white-tomentose. Corolla funnel-shaped, rose-purple. Stamens 5. Fruit subglobose.

Uses: Plant paste is applied for septic wounds, also for pus release from bruises and ulcers. Plant decoction is used for asthma, liver problems and rheumatism.

Etymology: Samudraballi (sea climber) and Samudrapaccha (sea green) are due to its habitat. It usually grows along the coastal areas.

Note: Used for the preparations like *Ayaskrti, Varanadi kashaya, Misraka sneha, Yogarajaguggulu* and *Laghu laksadi taila* as a substitute for *Chonemorpha fragrans* (Sivarajan & Balachandran, 1996; Sharma *et al.*, 1998). Seeds have chanoclavine, ergine, ergonovine and isoergine as active constituents (Kapoor, 1990). Much valued for mental and nervine disorders.
87. *Arisaema tortuosum* (Wall.) Schott (Plate 15 D)

Syn: *Arisaema neglectum* Schott; *Arisaema tortuosum* var. *neglectum* (Schott) Fischer

Family: Araceae

Vernacular Name: Eng: Whipcord cobra lily, Jack in the pulpit  
Kan: Haavumari gida, Kaadu suvarna gadde  
Mal: Pambucholam  
Tulu: Aavumari dai

Habit: Tall herb.

Habitat: Semi evergreen forests and sacred groves.

Status: Frequent.

Description: Tall cormous herb, with subglobose corms. Leaves 2, pedatisect; leaflets 5 – 7, ovate-lanceolate. Peduncle longer than petiole. Spathe long, greenish to purplish, deciduous; tube convolute, sub cylindric, gaping; limb ovate-oblong, incurved. Spadix sigmoid, staminate in smaller specimens, monoecious in larger specimens; appendix long-exerted, tapering. Male flowers many; female crowded. Fruit ovoid berries.

Uses: *Corm paste with lime juice is applied externally and the extract is given internally for snake bite.*

Etymology: Haavumari gida (snake repellent herb) is due to its anti venomous property.

Note: Corms are much valued for poisonous bites.

88. *Aristolochia indica* L. (Plate 15 E)

Family: Aristolochiaceae

Vernacular Name: San: Arkamula, Ishwari, Jata, Nakuli
Eng: Indian birthwort
Kan: Ishwariballi, Ishwaraballi, Iswariberu, Ishwaraberu
Mal: Aaduthinnappala, Eshwaramulla, Garudakkodi,
    Ishwaramooli, Karalakam, Karalayam, Karandavalli,
    Uritookki
Tulu: Isvara ballu

Habit: Climber.

Habitat: In degraded forests and plains, along the hedges.

Status: Population is very small, fast degrading.

Description: Perennial climber with twisted roots. Leaves simple, variable, linear-
oblong to obovate-oblong. Flowers in 2 – 3 flowered axillary racemes. Perianth with
inflated trumpet-shaped mouth and purplish-brown lip, clothed with hairs. Fruit
oblong, 6-valved capsule.

Uses: Root paste with lime juice is used for snake bite and herpes. *Root ground in
rice washed water is given for 3 days in a month for asthma in small children. Root
paste with lime is applied externally and given internally for poisonous bites. Root
paste in lime juice is used for urticaria and rashes. *The plant is tied to the cradle to
ward off evil spirits. Leaf decoction is given for fever, while that of root for
infections after delivery, snake bite, fever and worms. Same is given by adding
honey for leprosy. Leaf juice is externally applied to kill worms from septic
wounds. Leaf decoction is given for burning sensation, stomachache and furuncles,
while its extract in water for snake bite and stomachache. Leaf pounded with castor
oil is applied for septic ulcers and wounds. *Dried leaf decoction is given to expel
worms. *Whole plant or root, roots of Rauvolfia serpentina and Salacia chinensis
are ground into paste and is applied for scorpion and spider bites; while root extract
with lime juice is given internally. *Root along with roots of Croton laevigatus,
Salacia chinensis, Rauvolfia serpentina, sandal wood paste and very tender coconut
are ground into a paste with rice washed water and is applied for urticaria, rashes
and eczema. Root extract with lime juice is given for cobra bite. Plant paste is
applied externally for swellings and ulcers. Root paste is chewed and the juice is swallowed in case of cobra and krait bite. *Root along with the roots of *Ocimum tenuiflorum* and *Rauvolfia serpentina* are ground with lime juice and the extract is recommended for cobra bite. *Root paste with water is applied for tiger spider bite. *Leaf juice is applied over stomach at night after food for expelling intestinal worms. Root extract with rice washed water is taken internally, while leaf paste is applied externally for rat, scorpion, insect and spider bite, menstrual problems, difficulty in delivery, infections after delivery, swellings, pain and diarrhoea. It is a nerve stimulant. *Root, *Solanum torvum* root, *Andrographis paniculata* leaf and neem bark are made into decoction in water and is used for diabetes. *Root along with fresh turmeric and yellow portion of *Strychnos* bark are made into a paste with rice washed water and is applied for septic swellings. *Root and that of *Uvaria narum* are made into a decoction with arrack is used for asthma and bronchitis. Root paste is applied on navel and forehead for stomach ache. *Root and that of *Rauvolfia serpentina* are ground and is applied for ringworm. Crushed root aroma is inhaled by the children who slept due to weakness caused by fever. Root extract in water is given for stomach ache in children due to worms. *Root extract with rice washed water is given once a day in empty stomach for three days for stomach ache due to worm infestation. Root chewed and juice is swallowed for stomach swelling due to indigestion. Root paste with water is applied for scabies. *Root, *Tinospora cordifolia* stem, roots of *Rauvolfia serpentina, Catunaregam spinosa* and *Canthium coromandelicum* are ground with water and is used both externally and internally for warts and allergic swellings. *Root paste with lime juice is given twice a day for loose teeth in cattle. *Root, *Rauvolfia serpentina* and *Cyclea peltata* are ground with tender coconut husk juice and one spoon of it is taken internally for herpes.

Etymology: The names Nakuli (mongoose) and Garudakkodi (eagle twig) are due to its use in the treatment for snake bite. Aaduthinnappala elucidates that this plant is not eaten by the goats just like *Justicia adhatoda* and *Tylophora indica*. Names like Ishwara beru, Iswaraballi, Ishwaramooli and others characterize its roots as god’s gift to treat poisonous bites. In Malayalam it is also known as Uritookki as the
dehisced fruits hanging from the climbing stem give the appearance of traditional waist chain with hanging ornaments.

Notes: Even though it is used in different combinations and purposes, it is much valued for its antivenomous and expectorant properties. It is one of the ingredients of Parantyadi taila, Pathadi vatika, Maha visagarbha taila and Gorocanadi gutika (Sivarajan & Balachandran, 1996; Sharma et al., 1998). Aristochine, ishwarone, ishwarane, aristolochene and ishwarol are the active constituents (Kapoor, 1990). Plant is planted near house in order to repel snakes.

89. *Aristolochia tagala* Cham. (Plate 15 F)

Syn: *Aristolochia acuminata* Roxb.; *Aristolochia roxburghiana* Klotzsch

Family: Aristolochiaceae

Vernacular Name: Eng: Oval leaf Dutchman’s pipe
Kan: Ghattada ishvari, Dodda ishwariballi
Mal: Garudakodi, Eswaramulla
Tulu: Malla isara ballu

Habit: Large climber.

Habitat: Along forest borders.

Status: Rare.

Description: Large climber. Leaves simple, broadly ovate, with deeply cordate base, chartaceous. Flowers in axillary 4 – 6 flowered racemes, dark-purple, limb entire, rolled back, 1-lipped. Fruit subglobose capsule, with winged, cordiform seeds.

Uses: *Root ground in rice washed water is applied externally, while extract is taken internally for urticaria and boils in children.* *Leaf ground in water is applied over navel region for stomachache, stomach swelling, indigestion and worms in children. Plant decoction is recommended for poisonous bites, infections, menstrual disorders, fever and gas trouble.*
Etymology: Dodda ishwariballi (larger *Aristolochia*) is due to its larger habit and resemblance with *Aristolochia indica*.

Note: Use is similar to that of *Aristolochia indica* and usually used in its absence.

90. *Artabotrys hexapetalus* (L. f.) Bhandari (Plate 16 A)


Family: Annonaceae

Vernacular Name: San: Manoranjani

   Eng: Climbing ylang-ylang, Tail grape, Bhandari vine
   Kan: Kandaala sampige, Manoranjani, Manoranjini
   Mal: Manoranjini, Madana kameshwari, Madana poo
   Tulu: Kanthala sampeyi

Habit: Large straggler.

Habitat: Cultivated in gardens and also naturalized.

Status: Occasional.


Uses: *Flower powder or extract is given internally as a tonic for sexual vigour and to improve semen. *Its bark or leaf paste is applied for skin diseases. Flower extract is used as sexual stimulant, scent and pain reliever.

Etymology: Manoranjini (cooling or delighting to mind) arose due to its beautiful flowers. Madana kameshwari (sexual arouser) as the fragrans of the flower and its powder acts as aphrodisiac agents.

Note: Well known for aphrodisiac property.
91. *Artemisia vulgaris* var. *indica* (Willd) Maxim (Plate 16 B)

Family: Asteraceae

Vernacular Name: San: Dhavana, Chauhar  
Eng: Santonin, Worm seed  
Kan: Tirehuluvina maddu, Panchapatre  
Mal: Makkippoovu  
Tulu: Panchapatre

Habit: Erect herb.

Habitat: Cultivated in gardens.

Status: Frequent.

Description: Aromatic herb, with slender stem and villous stem. Leaves pinnatisect, white-tomentose beneath, segments numerous, small, obtuse. Flowers in homogamous heads, 3 – 10 flowered, in spicate fascicles in the axil of a small linear leaf.

Uses: *Plant juice is given to children suffering from stomachache for immediate relief. *Plant juice is given as an antidote for pineapple allergy. *Plant crushed with salt is given to patients with severe stomachache and also to regulate gastrointestinal tract. 1 – 2 spoon of this plant juice is given for stomachache in small children. Leaf paste is applied externally for allergies. *Leaf ground with garlic bulblets is given for vomiting due to worm infestation. Leaf or plant juice is given for phlegm and cough in children. Leaf paste is applied for scabies and itches. It is insecticidal. Plant juice is given to expect phlegm, for fever and indigestion in children. Leaf juice is given for stomachache due to worm infestation. *Plant juice is given to children for *balagraha*. *Tambuli* prepared from its leaves is useful for worms, phlegm, breathing problems, decreases fat, used in summer and rainy seasons (not recommended for pregnant women). *Young leaf and shoot tip ground in butter milk are boiled and taken during night after food for intestinal worms. Leaf ground in water is heated and applied to center of head for cold, headache and other pains.
Plant decoction is used as digestive, wormicidal, for fever, poisonous bites, breathing problem, menstrual disorders, anaemia and skin diseases. *Leaves along with that of *Pogostemon heyneanus, *Piper betle and *Ocimum basilicum are ground in *Citrus aurantium fruit juice and is given for breathing problem and asthma. *Leaf along with garlic and pepper in equal quantity are ground and given with gingelly oil thrice a day for rheumatoid arthritis.

Etymology: Dhavana (taming or subduing) arose as it is used to taming fever and digestive problems. Panchapatre (five leaved) is due to its penta pinnatisect leaves.

Note: Cineole, thujone, camphene, santonin and artemisin are the active constituents, of which santonin is responsible for anthelmintic activity (Kapoor, 1990). Plant is very much used for malaria due to the presence of artemisinin (Chaudhri, 1996).

92. *Artemisia vulgaris* var. *nilagirica* (C. B. Clarke) Pampan (Plate 16 C)

Syn: *Artemisia vulgaris* auct. non L.; *Artemisia indica* auct. non Willd.; *Artemisia vulgaris* L. var. *nilagirica* C. B. Clarke

Family: Asteraceae

Vernacular Name: San: Damanakah, Dhavana, Nagadamani

Eng: Flea bane, Indian worm wood, Mugwort

Kan: Manjipatre

Mal: Karpoora thulasi, Makkippovu, Maasippathri

Tulu: Manjapatre

Habit: Erect undershrub.

Habitat: Cultivated and also naturalized along roadsides.

Status: Frequent. Weed.

Description: Erect, aromatic, pubescent, profusely branched undershrubs, with purplish stem. Leaves oblong-lanceolate, aromatic, green above, white-tomentose
beneath; lower 2-pinnately cleft into lanceolate lobes; upper linear. Flowers yellow in axillary and terminal panicled heterogamous heads. Fruit oblong, achene.

Uses: *Juice of heated leaf is given for malabsorption in children. *One spoon of leaf ground with water is given once a day for constipation in children. *Fresh leaf (crushed) juice is given twice a day as a blood purifier and for stomach swelling in babies. *Leaf paste with water is applied at the navel for expelling worms in children. Plant juice is used for phlegm, fever and indigestion.

Etymology: Dhavana (taming or subduing) arose as it is used to taming fever and digestive problems.

Note: Active constituents are thujone, borneol, artemisinin and santonin (Kapoor, 1990). Plant is very much used for malaria due to the presence of artemisinin (Chaudhri, 1996). Has strong smell.

93. *Artocarpus gomezianus* Wall. ex Trec. ssp. *zeylanicus* Jarrett (Plate 16 D)

Syn: *Artocarpus lakoocha* auct. non Roxb.

Family: Moraceae

Vernacular Name: San: Lakucha

Kan: Esalu huli, Vaate huli, Ote huli

Mal: Chima, Kattu kadalavu, Pulichakka

Tulu: Undeppuli, Onteppuli, Kettheppuli

Habit: Large tree.

Habitat: Near human habitations.

Status: Frequent.

Description: Large deciduous trees, with rusty-tomentose branchlets. Leaves simple, ovate or obovate, densely grey-pubescent beneath. Inflorescence globose, axillary, solitary or in pairs; female heads stouter. Fruit irregularly globose, smooth, syncarp, yellow when ripe.
Uses: *Use of its fruit in place of tamarind is useful for gastritis. *Bark ground with lime juice into a paste is applied for swellings. *The yellow portion seen just below the peeled off bark is made into a paste and is applied for joint pain. *Pickle prepared from its fruit is used for anorexia. Seed decoction has drastic purgative property. Juice prepared from its fruit is recommended for biliousness. *Bark decoction or cooked with rice is highly recommended for jaundice and rheumatism. Fruit is digestive. *Dried fruit powder is used for preparing rasam* which can be used during any disease. *Bark cooked with rice is given with cow milk in the morning for one week in case of jaundice. This results in release of yellow fecal matter. *Fruit, Aegle marmelos and gooseberry fruits are ground and used as anjana* for yellow eyes and vision problems. *The gruel prepared by cooking bark with rice is given internally while the bark paste with rice cooked water is applied over head for diabetes and tuberculosis.

Etymology: Undeppuli (round sour fruit) Kettheppuli (sliced sour fruit) depicts morphology of the fruit. Dried sliced fruit pieces are used as condiment.

Note: Fruits are much valued as condiment. Heartwood is a much valued timber. It is said to have same properties as that of Shilajithu bhasma*.

94. Artocarpus heterophyllus Lam. (Plate 16 E)

Syn: Artocarpus integrifolius auct. non L. f.

Family: Moraceae

Vernacular Name: San: Panasa, Panasah, Kantakiphalah
Eng: Jack tree, Jack fruit tree
Kan: Halasu, Halasina mara
Mal: Plavu, Pilavu
Tulu: Pelattha mara

Habit: Large tree.

Habitat: Planted near human habitations.
Status: Common.

Description: Large evergreen tree, with glabrous branches. Leaves simple, elliptic to obovate; stipules large, lanceolate. Inflorescence cauliflorous, enclosed in spathaceous deciduous sheaths; male heads clavate-oblong; female more massive. Fruit echinate, syncarps, hanging on thick stalks; seeds enclosed in yellow fleshy enlarged perianth.

Uses: *Vein of its mature yellow leaf along with vein of mature leaf of Mangifera indica, ginger, pepper, root of Vetiveria zizanioides and powder of coconut endocarp are made into a decoction and is used for fever. *The yellow portion seen just below the peeled off bark is made into a paste and is used for joint pain. *The decoction prepared using its mature yellow leaf is given to stop vomiting. Fruit is nutritive and it clears excretory system. Seeds are sweet with aphrodisiac action. *Heart wood decoction is recommended for fits. Latex is applied for pharyngitis. *The fungus (Fomes) growing on this tree is ground with lime juice into a paste and is applied for mumps, breast swelling and lymph node enlargement. Root decoction is given for dysentery. *Paste prepared by mixing its root juice with Acorus calamus rhizome paste is applied to eyes for vision problems and eye diseases. Latex is applied for lymph node enlargements and poisonous bites. *Leaf petiole powder mixed with honey is given to expel phlegm. Leaf extract is given internally, while paste is applied externally for piles. Fruit is biliousness reliever. *Root extract with honey is used as eye drop in eye infections.

Note: Latex has caoutchou, steroketon and artostenone, bark morin and cyanomaclurin as active components (Kapoor, 1990). Fruits are edible and used as vegetable. Heart wood is a much valued timber.

95. **Artocarpus hirsutus** Lam. (Plate 16 F)

Family: Moraceae

Vernacular Name: San: Lakucah, Panasah
Eng: Wild jack
Kan: Hebbalasu, Kaadu halasu

164
Mal: Anjili, Ayani, Ayaniplavu
Tulu: Peja, Bajappela

Habit: Large tree.

Habitat: Evergreen and semi evergreen forests.

Status: Frequent.

Description: Large evergreen tree, with strigose branchlets clothed with tawny hairs. Leaves simple, broadly ovate to obovate, rusty-pubescent beneath. Male inflorescence narrow, cylindric; female ovoid. Fruit ovoid, echinate, syncarp, orange when ripe.

Uses: Leaf powder is applied over ulcers. Bark decoction is used to wash septic wounds and indolent ulcers, also to remove maggots from these. Young fruit is given to eat during fever; but it decreases digestive power, sexual vigour and is constipating. Bark paste is applied for pimplies and cracks in feet. Ripe fruit is aphrodisiac but indigestible. Dried mature leaf powder is applied for hydrocoele. Dried leaf powder is made into a paste and applied for joint pain. Bark decoction is recommended for rheumatism. Ripe leaf powder or bark extract is given for whooping cough and dry cough.

Etymology: Hebbalasu (large jack) and Kaadu halasu (wild jack) indicates its gigantic size and wild nature.

Note: Fruits are edible. Heart wood is a much valued timber.

96. *Artocarpus incisus* L. f. (Plate 17 A)

Syn: *Artocarpus communis* J. R. & G. Forst.; *Artocarpus altilis* (Parkinson) Fosberg

Family: Moraceae

Vernacular Name: Eng: Bread fruit
Kan: Deevihalasu, Seemehalasu
Mal: Kadachakka, Kadapilavu, Seemaplavu
Tulu: Deevutha gujje, Jeegujje
Habit: Large tree.

Habitat: Cultivated near human habitations.

Status: Common. Exotic.

Description: Large tree, with hollow branchlets. Leaves leathery, deeply pinnately lobed, pubescent beneath; stipules large, caducous. Male inflorescence cylindric-clavate, yellow, drooping; female globular. Fruit globular to oblong, echinate, syncarp.

Uses: *Plant latex or fruit preparation are given to stop diarrhoea. *Decoction prepared from its mature leaf is given to stop vomiting.

Etymology: Seeme halasu (coastal jack) arose as it is widely cultivated in the coastal areas and midland.

Note: Fruit is used as vegetable.

97. *Arundo donax* L. (Plate 17 B)

Family: Poaceae

Vernacular Name: San: Dhamana, Nala, Sarah
    Eng: Reed, Spanish cane, Giant reed, Wild cane
    Kan: Baalada kaddi, Hulagilu hullu, Hulagila hullu
    Mal: Ama
    Tulu: Divali ote, Peeli ote

Habit: Perennial grass.

Habitat: Naturalized along roadsides and fields.

Status: Frequent. Weed.

Description: Tall, perennial, reed-like grass, with fistular stem. Leaves ensiform, amplexicaul, glabrous, with glabrous sheath and membranous ligule. Spikelets
green or yellowish, 2 – 4 flowered, on terminal large thyrsiform panicle. Glumes oblong-lanceolate. Lemmas 2 – 4, bifid, silky hairy. Fruit oblong caryopsis.

Uses: *Leaf oil is poured into ear in case of ear infection and earache. *Root decoction is given for urinary infections. *Tender shoot extract with cumin seeds is poured into the eye for treating conjunctivitis and burning sensation in eyes.

Etymology: Baalada kaddi (grass with sharp leaves) is due to sharp margin of leaf blade.

Note: Used for preparations like Sukumara lehya, Sukumara kashaya, Sukumara ghrta and Trinapanchamula kvatha (Sivarajan & Balachandran, 1996). It contains denoxarine and gramine as active constituents (Dey, 1994).

98. *Asclepias curassavica* L. (Plate 17 C)

Family: Asclepiadaceae

Vernacular Name: San: Kakanasika, Kakatundi

Eng: Blood flower, Swallow wort, Bastard ipecacuanha

Kan: Hulugilu gida, Kakatundi, Chadurangi gida

Mal: Chemmulli chedi, Kammal chedi

Tulu: Chadurangi

Habit: Erect herb.

Habitat: Cultivated in gardens.

Status: Frequent. Exotic.

Description: Erect herb. Leaves simple, lanceolate, tapering at the ends. Flowers in lateral umbellate cymes. Calyx deeply 5-partite. Corolla deeply 5-lobed, bright orange-red; segments strongly reflexed; corona-scales 5. Stamens inserted at the base of the corolla. Fruit beaked, glabrous follicle.

Uses: *Whole plant paste is applied for warts and whitlow.
Etymology: Kakanasika (crow’s nose) is due to the shape of its beaked fruit which resembles crow’s nose.

Note: Plant has ascleptin, which shows cardiotonic activity (Chaudhri, 1996). As it is highly toxic coming in contact with blood should be avoided.

99. *Asplenium trichomanes* L. (Plate 17 D)

Family: Aspleniaceae

Vernacular Name:  San: Mayoorashikha  
Eng: Peacock’s crest fern, Maiden hair spleenwort  
Kan: Navilubala, Mayoorashikhe  
Mal: Mayoorashikha  
Tulu: Navilu kucchu

Habit: Erect herb.

Habitat: Cultivated in gardens.

Status: Occasional.

Description: Delicate fern. Root stock creeping, densely covered by black scales. Stipes numerous, lustrous, reddish brown. Fronds evergreen, in rosettes; petiole reddish brown or blackish brown; pinnae 15 – 35 pairs, oblong to oval, pinnules absent. Sori 2 – 4 pairs per pinna.

Uses: *Whole plant decoction or extract is given for conception, increase fertility and for leucorrhoea. Leaf extract helps to increase digestive power.

Etymology: Mayoorashikha (peacock’s crest) is due to the sharp ending of the fronds.

Note: It is used as a substitute for *Adiantum caudatum*. It is used also in black magic.
100. *Asystasia dalzelliana* Sant. (Plate 17 E)

Syn: *Asystasia violacea* Dalz. ex Clarke

Family: Acanthaceae

Vernacular Name: Kan: Meddhe soppu, Mooguthi gida  
Mal: Upputhali  
Tulu: Maitha ballu

Habit: Sub scandent herb.

Habitat: Secondary forests of moist lowlands.

Status: Common. Weed.

Description: Erect or sub scandent herb. Leaves simple, elliptic-ob lanceolate, with cuneate base. Flowers in terminal racemes; bracts and bracteoles small. Calyx 5-partite, hairy. Corolla ventricose, lobes 5, lilac or purplish. Stamens didynamous. Fruit elliptic, pubescent capsule.

Uses: *Plant paste is used for bone fracture and shoulder dislocation. *Plant juice mixed with jaggery is recommended for gastritis. *Plant extract is given as a laxative for constipation. Whole plant decoction is given for leucorrhoea. *It’s paste with *Aloe vera* leaf is applied for pain caused by bruises. Plant paste is applied for muscle pain, bone pain, pain due to bruises and watery swelling. Plant juice creates cooling effect in stomach. Plant decoction is used for biliousness and intoxication.  
*Whole plant, pepper seeds, salt and *Citrus aurantium* fruit juice ground and boiled in an iron vessel is applied for ankle twist, muscle torsion, sprains, muscle pain and swelling. Plant juice is given to drink to cause vomiting for relief from biliousness. *One handful plant crushed and cooked with raw rice and green gram dhal (1:1:2) is recommended with buttermilk for 12 days in case of jaundice. *Plant ground with cumin seeds in water is given for vomiting during pregnancy.

Etymology: Upputhali (salt mucilage herb) arose as in the past stem of this plant were used to purify salt.
Note: Plant is much valued for traditional bone setters. *Crushed plant is used in the purification of salt.

101. *Asystasia gangetica* (L.) Anders (Plate 17 F)

Family: Acanthaceae

Vernacular Name: Eng: Creeping foxglove, Chinese violet  
Kan: Meddhe soppu, Mooguthi gida  
Mal: Upputhali, Valli upputhali  
Tulu: Maithal, Maithaballu

Habit: Procumbent herb.

Habitat: Cultivated in gardens.

Status: Common.

Description: Procumbent herb, with grey-pubescent stem. Leaves simple, ovate, with acute tip. Flowers in axillary and terminal racemes, secund; bracts and bracteoles linear-lanceolate. Calyx 5-partite. Corolla funnel-shaped; lobes 5, white, yellow or blue-purple. Stamens didynamous. Fruit elliptic, capsule.

Uses: *Whole plant paste is applied for swelling and pain. *Whole plant decoction is given for rheumatism.

Etymology: Valli upputhali (salt mucilage vine) is due to its procumbent habit and close resemblance with *Asystasia dalzelliana*.

Note: Used as a substitute for *Asystasia dalzelliana*.

102. *Atalantia monophylla* (L.) Corr. (Plate 18 A)

Syn: *Limonia monophylla* L.

Family: Rutaceae

Vernacular Name: San: Atavi jambira  
Eng: Jungle lime
Kan: Kaadu limbe, Adavi limbe, Kanchi  
Mal: Kattunaragam, Malanarakam  
Tulu: Kaipperi puli, Kaippulo  

Habit: Thorny tree.  
Habitat: Scrub forests and plains.  
Status: Occasional.  


Uses: *Pickle prepared from fruit is recommended for inducing appetite after the attack of fever.  *Oil prepared using fruit juice is applied for rheumatoid arthritis.  *5 or 7 or 9 leaves cooked with rice are recommended once in a day in four cycles to clean the ovary for conception.  *Bark decoction is useful for spasm and pain in limbs.  *Oil extracted from leaf is applied for rheumatic and muscular pain, while leaf decoction is used to wash the body for itches.  Root paste is applied as a pain killer and for snake bite.  Bark paste is applied on head for biliousness.  *Leaf decoction is a menses stimulator, used to clean uterus and ovary.  *Leaf paste is applied for poisonous bites.  Root ground with lime juice is applied twice a day for tonsillitis.  

Etymology: Kaadu limbe and Kattunaragam (wild lemon) indicates its wild nature and resemblance of fruits with that of lemon.  

Note: Fruits are used to prepare pickle.  

103. *Averrhoa bilimbi* L. (*Plate 18 B*)  

Family: Oxalidaceae  

Vernacular Name: Eng: Bilimbi, Camais, Cucumber tree  
Kan: Bilimbi, Bimbuli  
Mal: Bilimbi  
Tulu: Bimbuli, Beempuli
Habit: Small tree.

Habitat: Cultivated for their fruits.

Status: Common. Exotic.


Uses: *Oil prepared from the fruit juice is applied externally for body pain, cuts, wounds and rheumatism. *Fruit juice has cooling effect and is useful for fever. *Fruit juice helps to expel intestinal worms.

Note: Fruit is an appetizer and often pickled. Fruit is used to wash utensils.

104. *Averrhoa carambola* L. (Plate 18 C)

Family: Oxalidaceae

Vernacular Name: San: Dhara phala, Brihaddala, Kamarangah  
Eng: Carambola, Star fruit  
Kan: Daare huli, Kamaranga  
Mal: Irumpan puli, Caturappuli  
Tulu: Daareppuli

Habit: Small tree.

Habitat: Cultivated in gardens.

Status: Common. Exotic.

Uses: Fruit juice is used to relieve thirst. Oil prepared from fruit juice is applied externally for rheumatism and pain. *If applied the same on the centre of head, relief from allergic rhinitis can be attained. *Oil prepared by heating equal amount of its fruit juice and coconut oil is applied for body pain. Fruit juice is antipyretic. *Root decoction is recommended to induce vomiting in case of poison infestation. Leaf extract is recommended for fever and beriberi. *Fruit juice mixed with gingelly oil (3:1) is applied externally for pain.

Etymology: Daare huli (acutely angled sour fruit) is due to the shape and taste of its fruits.

Note: Oil extracted from fruits is much valued for pain.

105. *Avicennia marina* (Forssk.) Vierh *(Plate 18 D)*

Syn: *Secura marina* Forssk.

Family: Avicenniaceae

Vernacular Name: San: Sagarodbhutah, Thavara
   Kan: Kaandal, Uppatti
   Mal: Chakka poo, Cheru uppatti
   Tulu: Uppathi

Habit: Small tree.

Habitat: Along backwaters and mangrove forests.

Status: Common.


Uses: *Leaves are fed to goats to increase lactation.

Etymology: Name Kaandal (mangrove) and Uppatti (salt excretor) clearly indicate its habitat and salt excretion through leaves.
Note: Leaves are used as fodder.

106. *Azadirachta indica* A. Juss. (Plate 18 E)

Syn: *Melia azadirachta* L.

Family: Meliaceae

Vernacular Name: San: Arishta, Nimba, Nimbah, Prabhadrah  
Eng: Margosa tree, Neem  
Kan: Kahi bevu, Bevu, Bevina mara  
Mal: Veppu, Aryaveppu  
Tulu: Kaibevu

Habit: Medium-sized tree.

Habitat: Seen only in cultivation.

Status: Very rare in wild.

Description: Medium-sized tree. Leaves imparipinnate; leaflets subopposite, ovate-lanceolate, glabrous. Flowers small, in large axillary panicles. Calyx 5-lobed. Petals 5, white, linear-oblong. Staminal tube cylindric, 10-dentate at apex. Fruit 1-seeded, oblong or ovoid, yellowish-green drupe, darker when ripe.

Uses: Bark powder is recommended for septic wounds. *Dried grapes soaked in leaf or bark decoction is recommended for four days in case of measles. Neem oil is applied for healing wounds and ulcers. Eating young shoot tips daily helps to overcome indigestion, gastritis and albuminuria. Eating leaves daily is beneficial in cases of diabetes. Leaf decoction is used for albuminuria. *Bark decoction is given for one day after delivery. Leaf decoction is given internally and externally as a bath for chicken pox. Leaf decoction is given for burning during urination. Bark decoction is given for rheumatism, rashes, eczema, ring worm, leprosy and fever due to infection during menses. Leaf decoction is a blood purifier and is used for fever. *It is believed that, eating its leaves and jaggery together regularly acts as antidote for snake poisons or nullifies the effect of poison. Leaf paste is applied for scabies
and chicken pox. Oil extracted from seeds is applied for leprosy, rheumatism, stroke and headache. Gum is used as nerve stimulant. * In case of chicken pox, five spoons of leaf juice are recommended three times a day. Also, cooked barley seeds are given as food for nine days followed by the application of its leaf paste with turmeric. Leaf decoction is used to wash the patient body during chicken pox. *Sleeping on its leaves is recommended for small pox. Leaf paste is applied for ring worm. Leaf decoction is used for digestive disorders, biliousness and skin diseases. *Leaf decoction mixed with mucilage of *Sida rhombifolia* is used to wash the body during herpes, while that with *Grewia glabra* in urticaria and rashes. *Leaf along with *Ixora coccinea* plant, tuber of *Lagenandra ovata* and tender coconut husk are made into a decoction and is used to wash body in allergies. Leaf decoction is used to wash septic wounds. *Leaf, ghee, honey, *Pterocarpus santalinus* heart wood, *Glycyrrhiza glabra* rhizome and gingelly seeds are made into a paste and is applied externally for septic wounds and ulcers in feet. *Leaf ground with salt, mixed with ghee is applied for whitlow and ingrowing toe nails. Neem oil is applied for rat bite in snakes and for gangrene caused by poisonous bites. Bark decoction is used for headache and diarrhoea. Leaf powder in hot milk or bark decoction is recommended for expelling worms. *Bark kept in water over night is recommended for stomachache. Neem oil or leaf paste is applied for tinea versicolor. Bark decoction or leaf powder is consumed with sugar and water for scabies. *Paste of leaf with turmeric powder and mustard oil or bark ash and coconut oil are applied for water oozing scabies. Bark decoction is recommended for fever and irregular menses. Plant decoction is used for biliousness, menstrual disorders and ulcers. Neem oil is taken internally and is applied externally for ringworm. *Neem oil is applied to penis during copulation for contraception. *The tambuli* prepared from 4 – 5 fried leaves are used by ladies after delivery and those suffering from diabetes and thrush (not recommended for warming effect type persons). Usually used during *Yugadi*. Washing with neem oil is recommended for leucorrhoea. Leaf or bark decoction is also recommended for the same. *Ashes of burnt bark, arecanut powder, cinnamon powder and camphor powder are used as tooth powder. *Neem oil mixed with sugar is recommended along with hot water to expel intestinal worms. Leaf of
Dendrophthoe falcata (growing on this tree), onion and cumin are ground in rice washed water and are used for three days in case of high blood pressure. *Bark and leaf with Moringa pterygosperma bark and Sida rhombifolia root are made into a decoction and is used for abdominal spasm. *Leaf, Ixora coccinea (whole plant) and gooseberry (dried) are made into a decoction and is used as bath for eczema. *Leaf paste with garlic and jaggery is applied for psoriasis. Leaf decoction is beneficial in case of itches. Leaf paste with turmeric is applied for scabies. *Leaf, Hemidesmus indicus, seeded grapes and Terminalia chebula (fruit rind) are made into a decoction to which four drops of honey is added and given for 6 – 12 days in case of constipation due to measles. Leaf ground and heated with ghee is applied for cracks in heel. *Bark decoction mixed with Calotropis gigantea latex is heated with Nerium oleander flower bud extract in oil and is applied for scabies, itch and herpes. *Leaf powdered with dried gooseberry is recommended with ghee twice a day for 12 – 43 days in case of warts. Leaf powder with ghee is consumed for one week in case of red warts. *Leaf, Curcuma amada, Glycyrrhiza glabra (rhizomes), old ghee and honey are ground and are applied for chronic wounds and ulcers. Neem mixed with lime or alkali is recommended for skin diseases. Gum like substance secreted by the tree is applied for lymph node swellings. * 168 gm leaf juice and 348 gm sugar are heated in a vessel, when it becomes thick, powdered mixture of Plumbago zeylanica, chebulic myrobalan, belleric myrobalan, embelic myrobalan fruit rind, Cyperus rotundus, Nigella sativa, Trachyspermum ammi, mustard, Butea frondosa seed, Murraya koenigii, ginger, pepper, long pepper, Croton tiglium root, neem seed, Psoralea corylifolia seed, navasagara* salt (24 gm each), Embelia ribes and Hemidesmus indicus (48 gm each) are added and heated. 12 gm of this mixture is consumed with water for all types of skin diseases. Leaf juice (480 ml), Jasminum malabaricum leaf juice (480 ml), gingelly oil (5 litre), Vateria indica gum, paper ash, goat bone ash, Aconitum chasmanthum root, Cedrus deodara (12 gm each), musk, turmeric, copper sulphate, saffron rock (4 gm each) are heated and the mixture is applied for leprosy. 5 – 10 drops of neem oil with milk is recommended to prevent skin diseases and blood disorders. Neem oil mixed with sulphur or tin powder is applied for warts. *Goat bone ash mixed with neem oil is applied for
chronic ulcers. Neem oil is applied for septic ulcers with foul smell, ulcers and scabies in children. *Fried leaf (black in colour) ground with ghee is mixed with equal quantity of bee wax and made into an ointment for the treatment of skin cracks during winter. Bark ash is applied for pus releasing wounds. *Leaf is repeatedly beaten over the tip of penis swelling in children. *Half tsp neem oil is recommended with banana for three days or its leaf is eaten daily as a preventive medicine for pneumonia. *Crushed bark or leaf decoction is used twice a day by adding one spoon honey for burning urination, urinary tract infection and protein in urine.

Etymology: Kahi bevu (bitter neem) is due to highly bitter taste of the leaves.

Note: Used for preparations like Durvadi taila, Jatyadi ghṛta, Nimbadi taila, Nimbarista, Nimbadi churna, Tiktaka kashaya, Kasisadi ghṛta, Jatyadi ghṛta, Nimbapatadi upanaha, Arogyavardhini gūtika (Sivarajan & Balachandran, 1996; Dey, 1994; Sharma et al., 1998). B-sitosterol, kempferol, quercetin, myricetin, nimbin, nimbinin, nimbidin, nimboaterin, nimbecetin, nimbosterol, margosine are the active constituents (Kapoor, 1990; Dey, 1994). It is considered as the king of medicinal plants.

107. *Azima tetracantha* Lam. (Plate 18 F)

Family: Salvadoraceae

Vernacular Name: San: Kundali, Trikantajata
Eng: Mistletoe
Kan: Bilee uppina gida, Bilivuppi, Yagachi mullu, Uppi mullu
Mal: Essanku, Yeshenku
Tulu: Uppi mullu

Habit: Scrambling shrub.

Habitat: Cultivated in gardens.

Status: Occasional.

Uses: *Plant decoction is given as uterine tonic after delivery.

Note: Plant is much valued as uterine contractor.

108. *Baccaurea courtallensis* (Wight) Muell.-Arg. (Plate 19 A)

Family: Euphorbiaceae

Vernacular Name: Kan: Koli kukke  
Mal: Mootikkaya, Mootil pazham, Mootil thoori  
Tulu: Kodi kukke

Habit: Small tree.

Habitat: Evergreen forests.

Status: Frequent.

Description: Small deciduous trees. Leaves simple, clustered towards branchlets, obovate to oblanceate, chartaceous. Flowers unisexual, small, in clusters on spike which are in reddish or yellow tufts on tubercles on the trunk and branches. Male: tepals 4; stamens 4 – 6, with pistillode. Female: tepals 5; ovary globose, with 3 stigmas. Fruit globose capsule, crimson in colour.

Uses: *Fruit juice is recommended for indigestion and gastritis.

Etymology: Mootikkaya, Mootil pazham (trunk fruit) arose as fruits are developed at the base or trunk of the tree.) The mass of crimson fruits at the tree trunk give an appearance of tree exudates or excreta and hence the name, Mootil thoori (excreta at the tree trunk).

Note: Ripe fruits are edible.
109. *Bacopa monnieri* (L.) Pennell (Plate 19 B)

Syn: *Herpestis monnieria* (L.) HBK.; *Bacopa monnieria* (L.) Wettst.; *Moniera cuneifolia* Michaux

Family: Scrophulariaceae

Vernacular Name: San: Brahmi, Nira brahmi, Sarasvati
   Eng: Water hyssop
   Kan: Brahmi, Jalabrahmi, Kiru brahmi, Neeru brahmi
   Mal: Brahmi, Nirbrahmi
   Tulu: Nirbrahmi

Habit: Creeping herb.

Habitat: Marshy areas.

Status: Occasional.


Uses: Leaf and stem juice are given as diuretic, laxative and to normalize excretory system. *Plant juice mixed with kerosene oil is applied externally for rheumatism. Crushed juice is given for biliousness. Plant extract with milk is given to increase intellect and memory power. Plant extract is a brain cell regenerator, sleep inducer and is used for biliousness. Oil prepared from plant juice is used as hair oil. *Whole plant extract, cumin seeds, milk and sugarcandy are given at morning in empty stomach for loss of memory, loss of sharpness and for speech clearance. *Hot paste prepared from whole plant, *Ocimum tenuiflorum* leaf and rock salt is applied on the back and chest for asthma in children. Massage with this plant oil is recommended for insanity. *Paste prepared from its leaves, pepper, badam and sugarcandy is preserved in a silver vessel covered by a cloth. This paste dissolved in cow milk is recommended for mental problems.
Etymology: Jalabrahmi, Neeru brahmi (water brahmi) is due to its aquatic or marshy habitat and use as brahmi. Kiru brahmi (smaller brahmi) is due to its relatively smaller size when compared with other plant source of brahmi (*Centella asiatica*).

Note: There are two plants which are known by the name brahmi, *Centella asiatica* and *Bacopa monnieri*. It is used for *Sarasvatarista, Sarasvata churna, Brahmi ghrta, Brahmi vati, Ratnagiri rasa, Smritisagara rasa* and many more. Brahmine, chloroplatinate and herpestine are the major alkaloids (Dey, 1994; Sharma *et al.*, 1998). It is a well known nervine tonic.

110. *Baliospermum montanum* (Willd.) Muell.-Arg. (Plate 19 C)

Syn: *Baliospermum solanifolium* (J. Burm.) Suresh.; *Baliospermum axillare* Bl.; *Croton solanifolius* J. Burm.

Family: Euphorbiaceae

Vernacular Name: San: Naga danti, Erandapatri

Kan: Kaadu haralu, Danti, Naga danti

Mal: Cheriya danti, Naga danti, Kadalavanakku

Tulu: Naga danti

Habit: Shrub.

Habitat: Evergreen forests, also cultivated.

Status: Occasional, rare in wild. Poisonous.


Uses: Leaf decoction is used for dropsy, constipation, jaundice and skin diseases. Root decoction is given as a laxative in constipation, also for gastritis, liver and spleen disorders. Root decoction is used for rheumatism. Seed is poisonous. *Leaf
decoction or powder is given as laxative or mild purgative. Fruit extract is strong purgative and is used in the treatment of rheumatism.

Etymology: Kaadu haralu (wild castor) is due to its resemblance with castor plant. Cheriya danti (smaller tusk) as it is smaller in size when compared with danti \((\textit{Croton tiglium})\). Naga danti (snake tusk) arose as its whitish roots resemble the elephant tusk and plant shows snake like growth pattern.

Note: Used for \textit{Ayurvedic} preparations like \textit{Dantyarista, Dantyadi churna, Danti haritaki, Abhayarista, Chandraprabha vati, Dantyadi lepa, Kaisora guggulu, Dantyadyarista} and \textit{Kalyanaka ksara}. \(\beta\)-sitosterol, triterpenoids, resinous glycosides, phorbol esters are the active constituents (Sharma \textit{et al.}, 1998; Dey, 1994). Seeds are used as drastic purgative.

111. \textit{Bambusa bambos} (L.) Voss. (Plate 19 D)

Syn: \textit{Bambusa arundinacea} (Retz.) Roxb.

Family: Poaceae

Vernacular Name: San: Vamsa, Vamsah, Venu, Vamsalochana  
Eng: Thorny bamboo, Bamboo  
Kan: Bidiru, Andebidiru  
Mal: Mula, Illi  
Tulu: Ande bedru, Bedru

Habit: Large thorny bamboo.

Habitat: In isolated clumps throughout.

Status: Common.

Description: Large thorny bamboo. Culms tufted on a stout root-stock, drooping at the top; internodes hollow; nodes with 2 – 3 recurved spines; culm sheaths broad, triangular, coriaceous, orange-yellow when young. Leaves linear-lanceolate, ciliate, puberulous beneath. Panicles very large, often occupy the whole stem; branchlets bear loose cluster of spikelets. Spikelets pale, suberect, glabrous. Glumes 1 – 2,
ovate-lanceolate, many-nerved. Lemmas 3 – 7, uppermost 1 – 3 male or neuter; palea 2-keeled, ciliate on keels. Fruit oblong caryopsis, beaked by style base.

Uses: *Bark along with Ricinus communis root, Aerva lanata plant and rock salt are made into a decoction which is for chronic backache. *The extract of the crushed green rind of stem with cumin seeds is poured into eyes in eye pain. Stem bark decoction is given for toxemia, leprosy and skin diseases. *Leaf decoction is given for menstrual problems and worms in children. Leaf or bark decoction is highly abortive. Seeds are nutritive. *Decoction of bark or outer skin of stem helps to join broken bones within 21 days. *Root or bark decoction is given internally and externally as a wash for leprosy. The calcium lactate crystals seen inside the bamboo is used for phlegm in children, asthma, in chyavanaprasha* and is a general tonic. Bark decoction is used to wash septic wounds. *Cooked tender shoot is recommended for indigestion as it is rich in iron. *Ashes of stem mixed with honey are applied for alopecia totalis. Leaf extract is given to expel intestinal worms in cattle and children. *Node paste is applied for pain due to gas trouble and damage caused by spines or thorns. *Young shoot tip is given to eat in order to expel placenta in cattle. Leaf decoction is a blood purifier and is used for joint pain. Leaf decoction or cooked tender shoot may cause abortion in pregnant ladies. *Stem peel, Flueggea leucopyrus shoot tip, Dalbergia horrida and Jasminum malabaricum leaf ground in rice washed water are applied for knee joint swelling and urticaria. To the extract of leaf and garlic heated iron rod is placed and one spoon of this extract is given three times in a month for asthma and bronchitis. *Bamboo pith starch powder in honey is given for cough. *Copper sulphate ground in its pith starch dissolved water is applied for tinea versicolor. *Plant ash mixed with gingelly oil is applied for warts. Plant ashes mixed with mustard oil is applied for chronic skin diseases.

Etymology: Name Venu (flute) as its culm is used for preparing flutes. Ande bidiru (hollow bamboo) clearly indicates hollow nature of the internodes.

Note: The siliceous concretion (Vamsalochana) of the plant is used for preparing Sitopaladi churna, Chandraprabha vati, Talisadya churna and Sudarshana churna.
It has cholin and betain as active constituents (Dey, 1994). Seeds are highly nutritious food. Tender shoot tips are used as vegetable. Seeds are used as food.

112. *Barleria cristata* L. (Plate 19 E)

Family: Acanthaceae

Vernacular Name: San: Jhinti, Kurabaka, Sahachara, Sahacharah
   Eng: Crested purple nail dye, Philippine violet
   Kan: Gorante, Gorate, Spatikada hoo
   Mal: Chulli, Kanakambaran
   Tulu: Patikatha pu

Habit: Under shrub.

Habitat: Cultivated in gardens.

Status: Frequent.

Description: Erect unarmed under shrub, with yellowish pubescent branches. Leaves simple, elliptic-oblong, yellowish-pubescent beneath. Flowers 1 – 4 in each axil; bracts and bracteoles linear, sharply pointed. Calyx 4-partite; outer lobes ovate-lanceolate, spinous ciliate, strongly nerv ed; inner lanceolate. Corolla 5-lobed, funnel-shaped, white, purple, pink or violet. Stamens 2, exerted. Fruits usually not formed.

Uses: *Three shoot tips are ground in cold milk and given for 12 days in cases of albuminuria (protein discharge through urine). Root decoction is given for urine block and other urinary disorders. *Root decoction is recommended for fever in children. Root powder is applied for swellings and furuncles. Root decoction is used for rheumatism and arthritis. Whole plant decoction is recommended for cough, asthma and lymph node or glandular swellings. *Oil prepared using plant juice is applied for bone pain and over head for nerve diseases. Plant decoction is used for rheumatism, phlegm. It is also an antifungal agent. *Root decoction with milk is used for leucorrhoea. *White variety root decoction is given for three days from menses for conception.
Note: It is used as a substitute for *Barleria prionitis*. It is used in preparations like *Sahacaradi taila*, *Nilikadya taila*, *Astawarga kvatha*, *Astawarga churna*, *Rasnairandadi kvatha* and *Rasnairandadi churna*. Active constituents of the plant are β-sitosterol, apigenin, naringenin and epigeninglucoronide (Sharma *et al.*, 1998; Jain *et al.*, 1991).

**113. Barleria prionitis** L. (Plate 19 F)

Family: Acanthaceae

Vernacular Name: San: Kurantaka, Kurantakah, Sahachara, Sahacharah  
Eng: Common yellow nail dye, Thorn nails dye  
Kan: Mullu gorate, Mullu gorante, Haladi gorate  
Mal: Chemmulli, Shemmulli, Manjakanakambaram  
Tulu: Gente pu, Manjal goranti

Habit: Undershrub.

Habitat: Often planted as hedge plant.

Status: Common.

Description: Erect undershrub, armed with spines. Leaves simple, elliptic, spine-tipped, pubescent beneath, with 3 divaricate spines in the axils. Flowers solitary in lower axils, spicate above. Bracts and bracteoles lanceolate, spine-tipped. Calyx 4-partite; outer lobes oblong-lanceolate; inner linear-lanceolate. Corolla orange-yellow; limb 2-lipped; upper deeply 4-lobed. Stamens 2, exerted. Fruit 2-seeded capsule.

Uses: *Leaf juice is given with honey for cough in children. Whole plant with cooked rice is recommended for lung diseases. *Young shoot tip is chewed or made into tambuli* for mouth ulcers. Leaf juice mixed with sugar is given for fever and asthma. *Plant ash in rice cooked water is given for cough and swelling. Root is used as tooth brush for toothache and gum problems. Plant decoction is antifungal and is used for expelling phlegm and rheumatism. *Root and leaf decoction is given with cardamom powder, while leaf paste is applied for body pain. Root paste with
rice washed water is applied for lymph node swellings. *Oil prepared using plant juice is applied for bone and nerve diseases. Plant decoction is used for phlegm, rheumatism, fever, toothache, ulcers in fingers, swellings, wounds, urinary stones, urinary block and tumours. *Root and leaf (20 gm each) are made into decoction in water and recommended with cardamom powder twice a day for three days in case of watery swelling and pain all over the body. *Root, *Caesalpinia pulcherrima, *Allamanda cathartica, *Pandanus odorifer and *Lawsonia inermis are made into a decoction and used internally with honey for jaundice.

Etymology: Mullu gorate (spiny *Barleria) indicates spiny nature of the plant, while Haladi gorate (yellow *Barleria) flower colour.


114. *Barringtonia racemosa* (L.) Spreng. (Plate 20 A)

Family: Lecythidaceae

Vernacular Name: San: Samudraphala, Nipa, Vishaya

Eng: Fish-killer tree, Fish poison wood, Fresh water mangrove

Kan: Samudra phala, Samudramapala

Mal: Samudrachampa, Samudrakai

Tulu: Samudraphalo, Samudramapalo

Habit: Small tree.

Habitat: Along banks of streams.

Status: Occasional.

Description: Small tree. Leaves simple, obovate or elliptic-ovate, crowded towards the ends of the branches. Flowers pink, in long pendent racemes. Calyx-tube
turbinate; lobes 2 – 3, unequal. Petals 4, ovate-oblong. Stamens numerous. Fruit globose-ovoid or quadrangular, fibrous berry, crowded by the persistent calyx-limb.

Uses: *Paste prepared from its fruit and butter is massaged on the head to increase digestive power or absorption in children.  *Small quantity of the seeds ground in milk is recommended for three days in the morning to heal bleeding piles.  *Seed paste is applied for mumps swelling and tonsillitis, applied over neck for lymph node swellings and over forehead for headache. Seed decoction is also used for the same purpose. Bark extract is given as a cooling and laxative agent. Seed extract is given for gastro intestinal disorders. Seed pulp extract is poured into nose in the form of nasya* for paralytic stroke and jaundice. Root decoction is cooling and laxative. Bark decoction is recommended for fever and to normalize liver. Fruit powder is given for sound fall and infections. Root has cooling effect and clears excretory system. Seed powder is given for biliousness and piles.  *Seed pulp ground with water is applied to the centre of head for cold and tonsillitis.  *Crushed fruit extract is dissolved in milk and is recommended for three days in case of mouth ulcers and gastric ulcers. Fruit powder is used to remove cataract from eyes of cattle. Fruit cooked with rice is given for three days after head massaging for improving absorption in children. Seed paste is applied externally for scabies.  *Fruit extract in honey is given for speech clearance. Fruit extract is used for biliousness. Fruit paste with honey is applied for mumps. Fruit ground with butter milk is heated and applied for swellings.  *One gram of fruit extract with milk is given once in a day in the morning for one week in case of rectal and anal prolapse due to piles.  *Four drops of extract of dried seeds ground in water are poured into nose for headache due to biliousness, while four drops are poured into eyes for jaundice and yellow colour in eyes. Fruit paste is applied for poisonous bites. Fruit paste in rice washed water is applied for pain in legs. Fruit powder is applied for swelling in ear. Root cooked with rice is consumed while fruit extract with lime juice is applied externally for poisonous bites. *Fruit and Cassytha filiformis juice are ground and applied to eyes for night blindness. Fruit paste with salt water is applied for warts and ringworm. Fruit paste with betel leaf juice is applied for chronic ulcers. Fruit extract with honey is given to expel phlegm.  *Fruit extract
with breast milk is used as *nasya* for hiccough. *Fruit extract with milk is given internally for uterus prolapse during delivery. Fruit ground with lime juice is applied as *anjana* for delirium. The same if applied on forehead gives relief from headache.

Etymology: Samudra phala (sea fruit) and Samudramapala (sea great fruit) names arose due to their occurrence along the streams in the coastal area and highly useful fruits.

Note: Saponins and sapogenins are the active constituents. Used for preparations like *Maha pancagavya ghrta, Laksmi vilasa rasa* and *Nyagrodhadi ghana kvatha* (Sharma et al., 1998). Seed powder has cleaning property. Crushed seeds are used as detergent for washing clothes.

**115. Basella alba** L. (Plate 20 B)

Syn: *Basella rubra* L.

Family: Basellaceae

Vernacular Name:  San: Upodika, Upodaki, Putika  
Eng: Indian spinach, Malabar spinach  
Kan: Basale, Basale soppu  
Mal: Vasalaccheera  
Tulu: Basale

Habit: Fleshy climber.

Habitat: Cultivated as green vegetable.

Status: Common.

Description: Glabrous fleshy climbing herb, with green or purplish stem. Leaves simple, broadly ovate, fleshy, glabrous. Flowers small, whitish or reddish, in axillary spikes. Perianth urceolate; segments 5. Stamens 5, included. Fruit ovoid, dry indehiscent, surrounded by persistent fleshy perianth.
Uses: Plant is applied over furuncles for pus release and quick recovery. *Stem is used like an enema. *Mucilage of this plant is applied over head for dandruff. Leaf paste is applied on head for sleeplessness. Leaf juice is given to expel phlegm. *Plant paste with butter is applied for burning sensation in body. Root decoction is given for vomiting due to biliousness. *Leaf or tender shoot tip is chewed and discarded for getting relief from mouth ulcers. *Plant paste is applied over burnt area to prevent the formation of boils. Plant paste is applied for ulcers. *Leaf paste with milk is applied for ulcers. Leaf is made into a paste with milk and is applied for bone swelling. Plant paste is applied for abscesses and swelling. Leaf paste with milk is applied for swelling due to urticaria, rashes and bone damage. *Tambuli* prepared from its leaves has warming effect and should be used before Yugadi*. It is useful for rheumatism and mouth ulcers (not recommended for ladies after delivery and old people). *Dried leaf is used for preparing a tea which has some properties similar to that of Acacia sinuata. *Mucilage of plant is applied on head before bath for headache and sleeplessness.

Note: It is one of the major ingredients of Sukhaprasavada ghṛta (Sivarajan & Balachandran, 1996). Plant is a well known green vegetable. Plant is nutritious and rich in iron.

116. Bauhinia acuminata L. (Plate 20 C)

Family: Caesalpiniaceae

Vernacular Name:  San: Kanchanarah, Karbhudarah  
Eng: White Bauhinia, Snowy orchid  
Kan: Bili mandara, Battalu mandara  
Mal: Mandaram, Vellamandaram, Veluttamandaram  
Tulu: Battalu mandaro

Habit: Erect shrub.

Habitat: Cultivated in gardens.

Status: Frequent.

Uses: *Flower buds fried in coconut oil are made into a paste and applied over cuts, wounds and septic ulcers. *Root decoction is mixed with gingelly oil and applied for boils. *Bark decoction is given internally and externally to wash septic wounds and ulcers. Bark decoction is recommended for menstrual disorders.

Etymology: Bili mandara and Veluttamandaram (white Bauhinia) are due to the white flowers. Battalu mandara (plate Bauhinia) as the open flowers give an appearance of a plate.

Note: It is used in preparations like Usirasava and Candanasava (Sivarajan & Balachandran, 1996). Plant is considered as sacred.

117. *Bauhinia malabarica* Roxb. (Plate 20 D)

Syn: *Piliostigma malabaricum* (Roxb.) Benth.

Family: Caesalpiniaceae

Vernacular Name: San: Amlapatraka, Ashmantaka  
Eng: Lilac Bauhinia, Malabar Bauhinia, Mountain ebony  
Kan: Kaadu mandara, Basavanapada  
Mal: Arampuli, Vella mandara  
Tulu: Kaattu mandaro

Habit: Moderate-sized tree.

Habitat: Deciduous forests.

Status: Rare.

Description: Medium-sized deciduous tree. Leaves simple, coriaceous, bilobed; lobes rounded. Flowers small, dioecious; male in densely flowered corymbose
panicles or racemes; female in short racemes. Calyx turbinate; limb 5-lobed. Petals 5, white, obovate-spathulate. Stamens 10, alternately long and short. Fruit straight, turgid pod.

Uses: *Bark paste is applied externally for lymph node or nodal inflammation. Bark decoction is given internally for same purpose. Bark decoction is used as digestive, for goiter and rheumatism. *Bark paste is applied for swellings.

Etymology: Kaadu mandara and Kaattu mandaro (wild Bauhinia) clearly indicate the wild nature of this plant.

Note: Wood is hard and is used for furniture. The root has the capacity to break rocks.

118. *Bauhinia phoenicea* Heyne ex Wight & Arn. (Plate 20 E)

Family: Caesalpiniaceae

Vernacular Name: Kan: Kembattu balli, Balli mandara
Mal: Valli mandaram, Thukarakalli
Tulu: Ballu mandaro

Habit: Scandent shrub.

Habitat: Along the borders of evergreen forests.

Status: Frequent.

Description: Large scandent shrub. Leaves simple, deeply 2-lobed at apex, broadly ovate, lower surface thinly pubescent, 8-nerved, thin-coriaceous. Flowers in axillary and terminal brownish tomentose panicles. Calyx-tube cylindric; lobes 5, spathaceous. Petals 5, reddish, long-clawed. Stamens 4 – 5. Fruit flat, oblanceolate, beaked, reddish-tomentose pod.

Uses: *Stem bark decoction is used for stomachache and dysentery. *Seed powder with hot water is consumed at bed time for intestinal worms.
Etymology: Balli mandara and Ballu mandaro (climbing Bauhinia) represents the climbing habit of the plant.

Note: Stem is used as thread to tie and preserve the paddy seeds.

119. Bauhinia purpurea L. (Plate 20 F)

Syn: Phanera purpurea (L.) Benth.

Family: Caesalpiniaceae

Vernacular Name: San: Kovidarah, Raktakovidara, Tamrapushpa, Sweta kanchanara
Eng: Purple Bauhinia, Butterfly tree, Camel’s foot tree
Kan: Kanchivala, Kempu mandara
Mal: Chuvanna mandaram
Tulu: Kempu mandaro

Habit: Moderate-sized tree.

Habitat: Cultivated as ornamental tree.

Status: Frequent. Exotic.


Uses: Stem bark decoction is given for diarrhoea, ulcers, swellings, leprosy, cough and menstrual irregularities. *One hand full leaf and equal quantity of rice are made into roties* and are consumed in the next morning for ringworm.

Etymology: Kempu mandara and Chuvanna mandaram (red Bauhinia) are due to the deep pink flowers.

Note: Quercetin, isoquercitrin, astragalin, pelargonidin, chalcone, butein are the active components (Jain et al., 1991). It is used in preparations like Usirasava and Candanasava (Sivarajan & Balachandran, 1996).
120. *Bauhinia racemosa* Lam. (Plate 21 A)

Syn: *Piliostigma racemosa* (Lam.) Benth.

Family: Caesalpiniaceae

Vernacular Name: San: Ashmantaka, Svetakanchana  
Eng: Wild Bauhinia  
Kan: Aralu kaadu mandara, Aralu mandara, Kaadu mandara  
Mal: Aathi, Arampuli, Malamandaram, Malayathi  
Tulu: Katarthi, Kaattu mandaro

Habit: Small tree.

Habitat: Foot hills of forests.

Status: Rare.


Uses: *Bark is chewed in mouth and is spitted into the eye of cattle in case of eye cataract. *Bark decoction is given internally for leucorrhoea. *Bark decoction is used as gargle for cracks in tongue.

Etymology: Malamandaram (hill *Bauhinia*) clearly indicates the habitat of the tree.

Note: Much valued by the veterinary healers.

121. *Bauhinia scandens* L. var. *anguina* (Roxb.) Ohashi (Plate 21 B)

Syn: *Bauhinia anguina* Roxb.; *Lasiobema scandens* (L.) de Wit.

Family: Caesalpiniaceae

Vernacular Name: San: Nagavalli  
Eng: Climbing Bauhinia
Habit: Large climber.

Habitat: Disturbed forests.

Status: Frequent.

Description: Large woody lianas. Branches cylindric when young, applanate when old, forms ladders; tendrils in pairs. Leaves simple, ovate to broadly ovate, papery, glabrous, entire on flowering branches, bifid in juvenile. Flowers in terminal elongated panicked racemes. Calyx 5-lobed, pubescent outside. Petals 5, white, oblanceolate, shortly clawed. Fertile stamens 3. Fruit oblong, indehiscent pod.

Uses: Bark decoction is used internally for dysentery and stomachache. *Seed powder is given at night to expel intestinal worms. Seed decoction has aphrodisiac property.

Etymology: Naga balli, Nagavalli and Pambuvalli (serpent climber) are due to its applanate older branches which form ladders and give the appearance of serpent.

Note: It is often used by the black magicians.

122. Bauhinia tomentosa L. (Plate 21 C)

Family: Caesalpiniaceae

Vernacular Name: San: Ashmantaka, Kovidara, Pitakanchanarah
Eng: St. Thomas tree, Yellow orchid tree, Yellow bell Bauhinia
Kan: Mandara, Arasina mandara
Mal: Manja mandaram, Kanjanam
Tulu: Manjal mandaro, Mandaro

Habit: Small tree.

Habitat: Cultivated in gardens.
Status: Frequent.

Description: Small evergreen tree. Leaves simple, with 2 rounded lobes, pubescent beneath. Flowers in pairs on short axillary or leaf-opposed cymes. Calyx-tube pubescent; limb spathaceous. Petals 5, obovate-spathulate, yellow, one with a dark spot near the base. Stamens 10. Fruit flat, pointed, 8 – 10 seeded pod.

Uses: *Dried leaf or fresh flower extract is given for indigestion. Root bark decoction is recommended for biliousness, cough and worms. *Bark powder is applied for wounds.

Etymology: Arasina mandara and Manja mandaram (yellow Bauhinia) represents the flower colour.

Note: Rutin and tannin constitute the major constituents (Kapoor, 1990). It is used in preparations like Usirasava and Candanasava (Sivarajan & Balachandran, 1996). It is a sacred tree.

123. Bauhinia variegata L. (Plate 21 D)

Syn: Phanera variegata (L.) Benth.

Family: Caesalpiniaceae

Vernacular Name: San: Kovidara, Kanchanarah, Rakta kanchanarah
Eng: Variegated Bauhinia, Purple orchid tree, Mountain ebony
Kan: Kempu mandara, Kempu kanjivala, Deva mandara
Mal: Chuvanna mandaram, Kovidaram, Mandaram
Tulu: Kempu mandaro, Deva mandaro

Habit: Moderate-sized tree.

Habitat: Cultivated in gardens.

Status: Common. Exotic.

Uses: Flower powder is given for dysentery, diarrhoea, worms and bleeding piles. Bark decoction is given for fever and goiter. Root decoction is recommended for reducing obesity. *Dried bud extract is given for dysentery and worms.

Etymology: Kempu mandara and Chuvanna mandaram (red Bauhinia) arose due the dark purple or pink flowers.

Note: Quercitroside, isoquercitroside, astragalin and rutoside are the active components (Kapoor, 1990; Jain et al., 1991). It is used in the preparations like Usirasava, Kanchanara guggulu, Kanchanaradi kvatha and Candanasava (Sivarajan & Balachandran, 1996; Dey, 1994). It is considered sacred.

124. *Begonia malabarica* Lam. (Plate 21 E)

Family: Begoniaceae

Vernacular Name: Kan: Kempu uttarakaddi
Mal: Tsjieria-narinampuli, Kayyala-puliyan, Kalpuli, Muthalminukki
Tulu: Kempu uttarakaddi

Habit: Succulent herbs.

Habitat: Rocky crevices and dripping rocky hillsides.

Status: Occasional.

Description: Succulent herbs, with reddish stem; stem nodes swollen with persistent leaf scars. Leaves simple, ovate-lanceate, inequilateral, base very oblique-cordate, hairy. Flowers rose coloured, monoecious, in axillary dichasial corymbs. Tepals 2, orbicular-lunate. Stamens many. Fruit obovoid, broadly winged capsule.
Uses: *Plant paste is applied over head for biliousness. *Nodes are broken and are rubbed for joint swelling.

Etymology: Tsjieria narinampuli (smaller *Cissus repens*) is due to its smaller size and acidic smell when crushed. Kayyala puli (wall acidic plant) and Kalpuli (rock acidic plant) clearly indicate the habitat preference of the plant. It usually grows on the side walls and rock crevices and has an acidic smell and taste.

Note: It is found only in Kerala portion of *Tulunadu*.

125. *Benincasa hispida* (Thunb.) Cogn. (Plate 21 F)

Syn: *Benincasa cerifera* Savi.

Family: Cucurbitaceae

Vernacular Name: San: Brhatphala, Kushmanda, Kushmandaka, Kushmandi
   Eng: Ash gourd, Ash pumpkin, Wax gourd
   Kan: Kaggumbala, Boodukumbala, Kumbala kaayi
   Mal: Kumbalam, Kumpalam
   Tulu: Kumbudo

Habit: Climbing herb.

Habitat: Cultivated for fruits.

Status: Common.

Description: Annual climbing herb, with hirsute, long-running, angular stem; tendrils branched. Leaves simple, broadly ovate to reniform-ovate, 5 – 7 angled, upper surface scabrous, lower hispid. Flowers monoecious, solitary, large, yellow and showy. Male flowers long-pedicelled; female short-pedicelled. Calyx-tube broadly campanulate; lobes 5. Corolla 5-parted from base. Stamens 3, free. Fruit large, nearly spherical to oblong, densely hispid when young and with a thick white-waxy deposit when mature.
Uses: Fruit juice is used as a diuretic agent. Fruit juice is the best for gastritis, obesity control, urinary disorders and giddiness. *Fruit juice is given in large doses to cause vomiting in persons who have consumed poison. *Lehyam prepared from its fruit is consumed as a health tonic during tuberculosis attack. Leaf juice is applied for itches in skin. *Leaf juice paste with honey or leaf paste alone is applied for mastitis in cattle. *Daily use of fruits as vegetable is useful for fits. *Leaf juice is poured (immediately) over the burnt area for relieving burning sensation and to prevent appearance of boils. *Leaf and salt fried in earthen pot are made into a paste, applied and tied for warts. Fruit juice is recommended for kidney stone and rheumatism. *Fruit juice mixed with sugarcandy is used for blood purification. *Whole plant ashes mixed with cow urine are applied for tinea versicolor. *Root decoction is taken to prevent blood clotting in ovary and uterus. Leaf juice is applied for burns. *Fruit rind paste is applied for piles, cuts and wounds. Seed extract is a mild laxative, diuretic, used for phlegm and fever. *Seed paste with rice cooked water is applied over the forehead and fruit preparations are eaten for fits. Fruit extract is a nervine tonic. *Tambuli prepared from its leaf is useful for tridoshas, poison infestation and raktapitta (not recommended for people of cold type). *Leaf juice is used as dhara immediately after burn to prevent burning sensation of burns. *Fruit juice is taken with sugar for raktapitta. *One glass fruit juice is given for 12 days in case of food poisoning. *Fruit and seed juice or oil prepared from its fruit rind is applied on the head for proper growth of hair, burning sensation in forearm and sweating in palms. *Fruit juice mixed with gooseberry juice is used for bleeding from the nose. Fruit juice is used to increase semen, intellect, as a cooling agent, for burning during urination and over menstrual bleeding. *Seeds, Amorphophallus corms and white Abrus precatorius seeds (in equal quantity) powder paste smeared to a cloth is inserted into anus daily for a period of three weeks in case of piles. *Shoot tip powder dissolved in hot water is consumed for asthma and bronchitis. *Shade dried leaf ash paste with butter is applied to ulcers or infections in between the fingers. *Seed extract with water is taken for uninterrupted urine passage. Shoot tip extract with hot water is recommended for asthma. *Whole plant ashes mixed with cow urine are applied for
itchy tinea versicolor and cracks in feet. *Whole plant ash paste (heated) with turmeric in cow urine gives greater results for tinea versicolor. *Fruit juice is used by adding a little sulphur for scabies.

Note: Fruit is a well known vegetable and is rich in cucurbitine and vitamin B1. Used for many important formulations like Kusmanda khanda, Kusmanda ghrta, Kusmanda churna, Kusmanda rasayana, Dhatryadi ghrta and Vastyamayanaka ghrta (Sharma et al., 1998; Dey, 1994).

126. *Benkara malabarica* (Lam.) Tirveng. (Plate 22 A)

Syn: *Randia malabarica* Lam.

Family: Rubiaceae

Vernacular Name: Kan: Sanna kaare, Bili-kaare
            Mal: Cholakara
            Tulu: Boldu kaare

Habit: Shrub.

Habitat: Laterite plains.

Status: Common.


Uses: *Root bark decoction is usually used for stomachache in children. *Leaf paste is applied externally for cuts and wounds.

Etymology: Sanna kaare (smaller *Canthium*) and Bili kaare (white *Canthium*) arose due to its resemblance with *Canthium coromandelicum*, but differs from it by having whitish stem and short spines.
Note: Ripe fruits are edible. In some areas it is used as a substitute for *Canthium coromandelicum.*

**127. *Bidens biternata* (Lour.) Merr. & Sherff (Plate 22 B)**

Syn: *Bidens pilosa* var. *bipinnata* (L.) Hook. f.

Family: Asteraceae

Vernacular Name: Eng: Spanish needle  
Kan: Hommugulu  
Mal: Kandavarekuthi, Snehappullu

Habit: Erect herb.

Habitat: Along waysides and open hill areas.

Status: Occasional. Weed.

Description: An erect herb. Leaves 3 – 5 foliolate; lateral leaflets ovate, deeply dentate or pinnatifid; terminal leaflet larger than the lateral ones, with 3 – 5 pinnatifid lobes on each side. Heads heterogamous, several, borne on dichotomously branched peduncles; outer involucral bracts linear-oblanceolate, herbaceous, ciliate; inner ovate-lanceolate, membranous. Ray florets usually 3; ligules whitish or yellow. Disc florets yellow, 5-lobed. Fruit long, linear, quadrangular, blackish achene.

Uses: *Whole plant decoction is recommended for cough and cold. *Leaf extract is used as eye drop for sore eyes. *Flower buds are chewed to get relief from toothache.

Note: It is often used as a substitute for *Spilanthes calva.*

**128. *Biophytum reinwardtii* (Zucc.) Klotz. (Plate 22 C)**

Family: Oxalidaceae

Vernacular Name: San: Alambusa, Lajjalu, Jhullapushpa, Viparita lajjalu  
Eng: Biophytum
Kan: Horamuni, Nela thengu, Hora mucchala  
Mal: Mukkutti  
Tulu: Nelachare

Habit: Erect herb.

Habitat: Shady places and walls.

Status: Common.

Description: Erect annual herb. Leaves pinnate, crowded at the ends of the stem, even pinnate; leaflets 3 – 12 pairs, oblique, membranous, sensitive to touch. Flowers in terminal umbels. Sepals 5, lanceolate. Petals 5, yellow, with a median reddish streak, narrowed at base. Stamens 10. Fruit subglobose, glandular hairy capsule.

Uses: Whole plant decoction is given for fever. *Plant juice or plant extract in milk is given internally for leucorrhoea, menstrual disorders, venereal diseases, urinary disorders, kidney stone, bladder stone, biliousness, fever, snake bite and phlegm. Use of this preparation helps to conceive as it increases fertility. It is used as a health tonic. Whole plant decoction is given for rheumatism. Plant extract is given to regulate menses and as tonic after delivery. *One spoon of crushed plant juice with honey is recommended in empty stomach for phlegm, cough and asthma. Whole plant extract in water is given at morning in empty stomach for chest pain and abdominal spasm. *Crushed whole plant mixed with sugarcandy powder is used in empty stomach in morning for uterine or ovarian purification.

Etymology: Nela thengu (ground coconut) arose due to its resemblance with coconut tree and minute size. Hora mucchala (one that folds backwards or towards outside) is due the property of leaflets, which are sensitive to touch and get folded outwards.

Note: It is used for preparing Cemparutyadi taila (Sivarajan & Balachandran, 1996). It is one among the Dasapushpa* and used in preparing Karkataka kanji*. Plant is used for worshiping (Hostilu pooja*) during the month of Sona*. Plant is used in Lakshmi pooja* and black magic.
129. *Bixa orellana* L. (Plate 22 D)

Family: Bixaceae

Vernacular Name: San: Sinduri, Sindurapushpi, Raktabijah, Shonapushpi  
Eng: Anatto, Arnatto  
Kan: Bangara kaayi, Rangumaale  
Mal: Kurangumanjal, Kuppamanjal  
Tulu: Arnatu, Kesri

Habit: Small tree.

Habitat: Grown as ornamental plant.

Status: Common. Exotic.

Description: Large shrub or small evergreen tree. Leaves simple, ovate-acuminate, cordate at base. Flowers large, white or purplish, in terminal panicles. Sepals 5. Petals 5, obovate. Stamens numerous. Fruit ovoid, reddish-brown capsule, covered with soft prickles. Seeds covered with red pulp.

Uses: Fruit decoction is given as a blood purifier, for fever and gonorrhoea. Fruit pulp is used as mosquito repellent. Fruit pulp is given for dysentery and kidney disorders. *Seed extract is given for fever. *Fruit or seed juice is given for biliousness. Bark decoction is used for diabetes.

Etymology: Bangara kaayi (gold fruit) is due to the deep reddish-brown fruits. Rangumaale (colourful garland) arose as its fruit bunches gives an appearance of colourful garland.

Note: Bixin, the colouring matter from seeds is much valued by the cosmetic and food industry.

130. *Blepharis asperrima* Nees. (Plate 22 E)

Family: Acanthaceae

Vernacular Name: Kan: Elu kootti  
Tulu: Ellu kootti
Habit: Diffuse herb.

Habitat: Shaded places and gravelly soil.

Status: Frequent. Weed.

Description: Diffuse or prostrate herb, with hairy stem. Leaves simple, ovate-lanceolate, hairy. Flowers solitary in the upper axils; bracts of 4 pairs; third pair membranous, tridentate; fourth pair spatulate. Calyx 4-partite; outer lobes oblong-spathulate; inner linear. Corolla 2-lipped, blue or purple. Stamens didynamous. Fruit oblong, 2-seeded capsule.

Uses: *Whole plant decoction with fenugreek and garlic is given internally for quick recovery or heal in case of bone fracture. Plant paste is applied on forehead for headache. *After massaging with gingelly oil, its leaves are pasted in case of ankle twist or sprain. *Whole plant cooked with raw rice is given to cattle for a week; after three weeks it is again recommended for seven days to prevent abortion. Plant decoction has cooling and is a sleep inducer. It is used for clearing marks on skin, bleeding from nose, phlegm, pain, cuts and bone fracture.

Etymology: Elu kootti (bone binder) clearly indicates its therapeutic efficacy in healing bone fracture.

Note: It is found only in Karnataka part of Tulunadu.

131. *Blepharis repens* (Vahl.) Roth. (Plate 22 F)


Family: Acanthaceae

Vernacular Name: Kan: Gadimaddu, Kodalisoppu
Mal: Elumbotti, Hemakandi, Murikootipaccha
Tulu: Gadimardu

Habit: Prostrate herb.

Habitat: Wastelands and cultivated.
Status: Rare in wild.


Uses: Paste of aerial part is applied for wounds in cattle. *Paste of aerial part with egg white is applied for bone fracture. *Whole plant cooked with rice and jaggery is given for one week for easy healing of bone fracture. Root extract is diuretic and is used for oedema. Seed decoction is used for rheumatism, cuts, spleen disorders, leucoderma, throat problems, asthma, diabetes and menstrual problems. It is a sexual stimulant tonic and sperm increasing agent. *Whole plant paste is applied to stop bleeding and for quick healing of cuts and bruises. *Plant extract is given internally while its paste is applied externally in cases of damage to spinal cord.

Etymology: Gadimaddu and Gadimardu (medicine for wound); Elumbotti (bone fracture); Murikootipaccha (herb for cuts and wounds) indicate the therapeutic efficacy of this plant. Kodalisoppu (leaf for wound caused by axe) arose as it is used to heal wounds due to iron objects.

Note: Much valued herb for the traditional bone setters. Leaf and seeds are edible.

132. *Boehmeria glomerulifera* Miq. (Plate 23 A)

Syn: *Boehmeria malabarica* Wedd.

Family: Urticaceae

Vernacular Name: Kan: Dodda turache, Ane turache

Mal: Thannikkuringi

Tulu: Ane aakire

Habit: Large shrub.

Habitat: Evergreen forests.
Status: Occasional.


Uses: Whole plant decoction is given for fever. *Same with milk is used for malabsorption in children.

Etymology: Dodda turache (larger itchier) is due to its large size and property to cause skin irritation just like *Laportea interrupta*.

Note: Mostly used for treating the diseases of children.

133. *Boerhavia diffusa* L. (Plate 23 B)

Syn: *Boerhavia repens* L.; *Boerhavia procumbens* Banks ex Roxb.

Family: Nyctaginaceae

Vernacular Name: San: Punarnava, Punarnavah, Raktapunarnava, Sophagni
- Eng: Hog weed, Pig weed, Spreading Hog weed
- Kan: Komme gida, Teglame, Ganajali
- Mal: Thazhuthama, Thavizhama
- Tulu: Teglame

Habit: Diffuse herb.

Habitat: Wastelands.

Status: Common. Weed.

Description: Diffuse herb with prostrate or ascending branches. Leaves simple, in unequal pairs, elliptic-lanceolate, subcordate at base, undulate along margins. Flowers in panicles of subcapitate umbels; umbels 4 – 8 flowered. Perianth 5-lobed, red or pink. Stamens 2 – 3, sometimes 1. Fruit 5-ribbed, glandular anthocarp.
Uses: Plant decoction is a diuretic and is used for urinary diseases. Root decoction is given as a laxative and for worms, asthma and bronchitis. Root decoction is also recommended for menstrual problems. Root powder is given to stop diarrhoea, while decoction to expel worms and for asthma (overdose may cause vomiting). Whole plant decoction is used as a kidney reconditionor. Whole plant decoction is given for rheumatism and kidney stones. *Whole plant along with seeds of *Tribulus terrestris* and *Hordeum vulgare* are made into a decoction and given internally for urinary disorders. *Four drops of the juice of leaf heated in charcoal are poured into eye in case of vision problems. Crushed root decoction is given with sugar and milk at night after food for increased body heat, decreased urine production, sleeplessness, backache and constipation. It is rich in potassium nitrate and hence diuretic. *Plant decoction with *Tribulus terrestris* and *Aerva lanata* is used for burning urination.

Root and *Cedrus deodara* heart wood are made into decoction and is taken with long pepper powder for swellings during pregnancy. *Root, that of *Sida rhombifolia*, *Alpinia galanga*, *Cedrus deodara*, *Pongamia pinnata* bark and gingelly seeds are made into decoction and given with sugar and cumin powder for blood clotting.

*This along with *Semecarpus anacardium* kernels and *Jatropha curcas* root are crushed, made into a decoction and then into a thick paste by adding *Commiphora myrrha* gum resin. This is recommended twice a day for rheumatism and nervine pain. Root paste with fresh milk or breast milk is applied for eye diseases.

Etymology: Punarnava (becoming young or new again) clearly indicate its rejuvenating property. Raktapunarnava (red punarnava) is due to its reddish colored stem.

Note: Sveta punarnava (white punarnava) is *Trianthema portulacastrum*. Punarnavin is the active constituent, while it also has hentriacontane, β-sitosterol, ursolic acid and allantonin (Jain et al., 1991). *Punarnavastaka kvatha, Punarnavastaka churna, Punarnava sara, Punarnavadi modaka, Sukumara ghrita, Sothaghna lepa, Punarnavadyarista, Dadhika ghrita, Dhanvantara ghrita* and *Rasnasaptaka kvatha* are the important formulations (Sharma et al., 1998; Dey, 1994). Whole plant is used for preparing *sambar*.
134. *Boerhavia erecta* L. (Plate 23 C)

Syn: *Boerhavia punarnava* Saha & Krish.

Family: Nyctaginaceae

Vernacular Name: San: Punarnava, Punarnavah, Raktapunarnava, Sophagni

Eng: Hog weed, Pig weed, Spreading Hog weed

Kan: Komme gida, Teglame, Ganajali

Mal: Thazhuthama, Thavizhama

Tulu: Teglame

Habit: Erect herb.

Habitat: Wastelands.

Status: Occasional. Exotic and weed.

Description: Erect herbs. Leaves simple, in unequal pairs, elliptic-ovate, chartaceous. Flowers white, with pink stripes, in axillary or terminal slender panicles. Perianth tubular, 5-lobed. Stamens 1 or 3. Fruit obconical, glabrous anthocarp.

Uses: Same as *Boerhavia diffusa*.

Etymology: *Punarnava* (becoming young or new again) clearly indicate its rejuvenating property. Raktapunarnava (red punarnava) is due to its reddish coloured stem.

Note: Sveta punarnava (white punarnava) is *Trianthema portulacastrum*. It is used as synonymous with *Boerhavia diffusa*.

135. *Bombax ceiba* L. (Plate 23 D)

Syn: *Bombax malabaricum* DC.; *Salmalia malabarica* (DC.) Schott

Family: Bombacaceae

Vernacular Name: San: Shalmali, Kantakadruma
Eng: Silk cotton tree  
Kan: Kempu booruga, Mullu booruga, Mullelava, Elava  
Mal: Elavu, Ilavu, Mullilavu  
Tulu: Aalo, Mullalo, Kempalo

Habit: Large deciduous tree.

Habitat: Deciduous forests.

Status: Common.

Description: Large buttressed soft wooded tree, stem and branches covered with prickles. Leaves digitate, 5 – 7 foliolate; leaflets 8 – 20, elliptic, narrowed below. Flowers large, showy, fascicled at or near the ends of branches. Calyx 3-lobed, white-silky within. Petals 5, scarlet, oblong, hairy externally. Stamens numerous, connate in 5 – 6 bundles. Ovary 5-celled; style 5-branched, longer than the stamens. Fruit oblong to ovoid capsule. Seeds many, covered with cottony hairs.

Uses: Flower boiled in milk is given for leucorrhoea. Bark paste in rice washed water is used for ulcers and blisters. Bark paste is applied for skin diseases. Flower powder is used to treat various skin diseases. *Bark decoction is given for infertility due to increased body heat in ladies. Root bark extract is given to induce vomiting. Flower powder has cooling effect. Resin or latex is given for gastro intestinal disorders. Latex dissolved in milk is given for constipation and biliousness. Root bark decoction causes vomiting. Bark extract is given internally to cause abortion. Bark decoction is a blood purifier, tonic, aphrodisiac and is useful for rheumatism. *Bark juice is poured as dhara* for wounds, ulcers and burns.

Etymology: Kantakadruma (tree with thorns or prickles) and Mullu booruga (prickly silk cotton tree) arose due to the prickly nature of the stem.

Note: Tannin, gallic acid, lupeol, β-sitosterol, hentriacontane, hentriacontanol and quercetin are the active components (Kapoor, 1990). Much valued for urinary and gynecological problems. Cottony hairs covering the seeds are used to stuff pillows. It is one of the ingredients of Patrangasava.
136. *Bombax insigne* Wall. (Plate 23 E)

Syn: *Salmalia insignis* (Wall.) Schott & Endl.

Family: Bombacaceae

Vernacular Name: San: Kutashalmali  
Eng: Silk cotton tree  
Kan: Elavu, Aaala, Bugari  
Mal: Kallilavu, Ilavu, Parei-ilavu  
Tulu: Aalo

Habit: Medium-sized tree.

Habitat: Stony areas.

Status: Occasional.

Description: Medium-sized tree with buttressed trunk. Leaves digitate, 5 – 7 foliolate; leaflets 5 – 9, obovate to oblanceolate. Flowers large, showy, fascicled at or near the ends of branches. Calyx 3-lobed, urceolate, dense woolly within. Petals 5, red, orange or yellow, oblong, boat-shaped, incurved, fleshy. Stamens numerous, connate in 5 bundles. Ovary 5-celled. Fruit cylindric, angular, brown capsule.

Uses: Bark paste or flower powder is applied for skin diseases. Gum is given for indigestion and gastric disorders. *Gum dissolved in milk is used for biliousness. Root bark decoction has emetic property. Bark decoction is used for spleen disorders.

Etymology: Kallilavu (silk cotton tree growing in stony or rocky areas) clearly indicates its habitat preference. This tree usually grows in stony areas and areas with limestone depositions.

Note: Soft wooded stem is used for plywood. Gum is aphrodisiac. The fertility or germination rate of arecanut increases if it is kept over the gum of this tree.
137. *Borassus flabellifer* L. (Plate 23 F)

Family: Arecaceae

Vernacular Name: San: Tala, Taladrumah
  Eng: Palmyra palm, Toddy palm
  Kan: Taali mara, Taale mara
  Mal: Karimbana, Karimpana
  Tulu: Taari

Habit: Tall palm.

Habitat: Coastal areas and plains.

Status: Common.

Description: Tall dioecious palm, with stout stem; stem when young covered with the bases of petioles. Leaves palmately fan-shaped; segments 60 – 80; linear-lanceolate, margins spinulose; petiole edges armed with hard spinescent serratures. Spadix large, interfoliar, sheathed with numerous, open sheaths. Male spadix branched, clothed with closely imbricating bracts. Female spadix simple, with a few scattered flowers. Male flowers: small, biseriate; sepals and petals 3 each; stamens 6; pistillode of 3 bristles. Female flowers: Larger, globose; perianth fleshy; staminodes 6 – 9. Fruit large, subglobose drupe, with 1 – 3 obcordate compressed pyrenes.

Uses: Leaf decoction is used as a gargle for toothache. Bark ash is used as tooth powder and is good for teeth. Liquor from inflorescence is used as a cooling and diuretic agent. Fruit juice or its nut extract is used for biliousness, jaundice and burning sensation in body due to its diuretic as well as cooling property. Ashes of inflorescence are recommended for dropsy and oedema. Bark ash is used to brush teeth. *Bark decoction mixed with salt is used as gargle for toothache, also to strengthen teeth and gums. *Juice of heated petiole is poured into ear in case of earache. *Root extract in tender coconut water is recommended for jaundice. *Jaggery prepared from its inflorescence juice along with black gingelly seeds,
asafoetida and *Euphorbia hirta* are made into a decoction and is used to induce menses in ladies.

Etymology: Karimpana (black palm) is due to the dark blackish stem.

Note: Galactomannan is the major constituent of kernels (Kapoor, 1990). It is used in the preparations like *Avittoladi bhasma*, *Punaviraladi bhasma* and *Guda pippali* (Sharma *et al.*, 1998). Young kernels are used as nutritious food. Inflorescence tapped for toddy which is used for preparing jaggery.

138. *Bougainvillea spectabilis* Willd. (Plate 24 A)

Family: Nyctaginaceae

Vernacular Name: Eng: Bougainvillea, Paper flower
Kan: Kaagadada hoovina gida
Mal: Kadalasupoovu chedi, Kadalasupoovu
Tulu: Kakaji pootha dai

Habit: Climbing shrub.

Habitat: Widely grown in gardens.

Status: Common. Exotic.

Description: Climbing shrubs, armed with spines. Leaves simple, ovate or elliptic-lanceolate. Flowers small, 3 together, enclosed by large showy purple, red, orange or white bracts; flower clusters arranged in terminal and axillary panicles. Perianth tubular, hairy, rose or yellow, pentagonal in section; limb 5 – 6 lobed. Stamens 5 – 10, included. Fruit 5-ribbed anthocarp.

Uses: Bark decoction is used internally for diabetes.

Etymology: Kaagadada hoovina gida, Kadalasupoovu chedi and Kakaji pootha dai (plant with papery flowers) are due to the papery colourful bracts of the flowers.

Note: Pinitol, the active constituent is responsible for anti-diabetic activity of the plant (Chaudhri, 1996).
139. *Brassica juncea* (L.) Czern. *(Plate 24 B)*

Family: Brassicaceae

Vernacular Name: San: Rajika, Sarshapa, Sarshapah
Eng: Mustard, Brown mustard
Kan: Saasive
Mal: Kadugu, Cherukadugu
Tulu: Daasime, Daasemi

Habit: Erect herb.

Habitat: Weed near habitations.

Status: Occasional.

Description: Erect branched herb. Leaves simple; basal lyrate-pinnatifid, petioled; upper smaller, more or less sessile. Flowers in terminal, many-flowered racemes. Flowers yellow. Sepals 4, spreading. Petals 4, obovate, clawed. Stamens tetradsynamous. Fruit suberect, torulose siliqua, with long seedless beak. Seeds globose, reddish-brown.

Uses: Oil extracted from seeds is used as an application for rheumatism, pain and arthritis. Use of seeds in curries make them appetizer. Consuming seeds is useful during gastric irritation. Seed paste is applied over body parts for pain during typhoid fever, lymph node swelling, headache and mumps (it may cause burns in some). Seed paste is applied on forehead for running nose. Seed paste is given internally for indigestion and uterine disorders after delivery. *Seeds with grey soil (from inner portion of termite house) are ground in honey into a paste and applied for rheumatic problems. This is especially recommended for rheumatism of body parts below waist. Seed paste is a wound healer and is useful for bone pain. Seeds have warming effect. It can remove metallic poison and toxins entered through food. Seed oil mixed with badam oil is massaged for paralysis. Seeds along with coriander seeds are ground, heated and applied for head ache. *Seeds along with termite shelter soil and impure sodium chloride are made into a paste. This paste is applied
for swelling and pain due to rheumatism. During winter oil is applied in the evening for cracks in hands and feet. Seed paste is applied over head for headache and migraine. *Ground seed kept on an earthen plate is heated in burning charcoal (by stirring with stem of *Euphorbia nivulia*) is applied for septic ulcers. *Seed paste filled inside *Euphorbia nivulia* stem is heated in charcoal and crushed into paste so as to treat septic ulcers. *Mustard seeds and cumin seeds in equal quantity are fried separately and powdered. This powder mixed with ghee and jaggery is consumed for dry cough.

Etymology: Rajika (arranged in rows) arose as the seeds are arranged in rows in the fruit.

Note: Oil has allyl cyanides and dimethyl sulfide (Kapoor, 1990). It is one of the important ingredients of *Sarsapadi pralepa*, *Karanjadi yoga*, *Yogaraja guggulu*, *Vidangadi lepa*, *Maha yogaraja guggulu*, *Karpasasthyadi taila*, *Kunkumadi taila*, *Prabhanjana vimardana taila* and *Vajraka taila* (Sharma *et al*., 1998; Dey, 1994). Seeds are used as seasoning agent.

140. *Breynia retusa* (Dennst.) Alston (Plate 24 C)

Syn: *Breynia patens* (Roxb.) Rolfe; *Phyllanthus retuses* Dennst.; *Phyllanthus patens* Roxb.

Family: Euphorbiaceae

Vernacular Name: San: Bahupraja, Bahupushpa, Kamboji
                    Kan: Kamboji
                    Mal: Aattacherukola, Ekdania
                    Tulu: Kamboji

Habit: Spreading shrub.

Habitat: Open hill slopes and plains.

Status: Occasional.

Uses: *Leaf extract is used once a day for piles. *Leaf ground with milk and is given once in the morning for one week in case of protein discharge through urine. Tender shoot and leaf ground with milk and used once a day for skin diseases. Leaf, *Clerodendrum viscosum* and *Acacia sinuata* leaves taken in equal quantity are fried, powdered and applied to wounds caused by tiger in cattle.

Etymology: Name Bahupraja (plant that produces seedlings in abundance) and Bahupushpa (abundant flowers) are due to its higher regeneration capacity and large number of flowers in axillary fascicles.

Note: Often used as a substitute for *Breynia vitis-idaea*.

141. *Breynia vitis-idaea* (Burm. f.) C. Fischer *(Plate 24 D)*

Syn: *Breynia rhamnoides* (Willd.) Muell.-Arg.; *Melanthesa rhamnoides* (Willd.) Wight

Family: Euphorbiaceae

Vernacular Name: Eng: Indian snowberry, Coral berry

Kan: Baamari, Bilisuli, Kempu hooli

Mal: Chuvannaniruri, Kattuniruri, Pavilapoola

Tulu: Palli thappu

Habit: Large shrub.

Habitat: Open places.

Status: Common.

Description: Large shrub. Leaves simple, elliptic to ovate, glaucous beneath. Flowers greenish-yellow; male in few-flowered fascicles; female solitary on short
recurved pedicels. Calyx in male turbinate, in female 6-lobed. Stamens 3. Fruit globose, succulent, pale reddish, black when ripe.

Uses: Leaf paste is applied for skin diseases, urticaria, rashes and measles. Decoction prepared from its leaves is used as bath for patients suffering from chicken pox. Plant paste is applied for chicken pox, herpes and measles. Leaf after smearing with castor oil is applied for furuncles. *Root bark, long pepper and ginger are made into a decoction and is used for tonsillitis. Leaf paste is applied for itches. *Leaf paste with Plectranthus amboinicus leaves is applied externally for urticaria and rashes. Paste prepared from its leaf, rhizome of Curcuma longa and seeds of Vernonia anthelmintica are applied externally for urticaria and rashes. *Leaf paste with salt is applied for ulcers in shoulders after washing it with salt water in cattle. Leaf paste with Plectranthus amboinicus and turmeric is applied for urticaria, rashes and allergy. Leaf juice is applied before bath to remove marks of chicken pox attack. Leaf paste is applied for ulcers. Leaf has similar properties to that of neem and is used for viral infections. *Leaf along with turmeric and neem leaves are made into a paste and are applied for chicken pox, measles and urticaria. Decoction prepared from its leaf and Cynodon dactylon is used for urticaria. Leaf paste with turmeric is applied for measles. *Paste prepared from its leaf with Vernonia anthelmintica seeds and fresh turmeric is applied for measles; while that with neem leaf and Vernonia anthelmintica seeds are applied for chicken pox. Leaf paste with turmeric is applied after three days of chicken pox attack.

Etymology: Chuvannaniruri (red Phyllanthus) and Kattuniruri (wild Phyllanthus) arose due to the reddish coloured fruit, young stem and also resemblance with Phyllanthus. Palli thappu (house lizard leaf) is due to its efficacy in the treatment of lizard poison. Fruit is edible.

Note: Much valued for treating skin diseases. Fruits are edible.
142. *Briedelia retusa* (L.) Spreng. (Plate 24 E)

Syn: *Clutia retusa* L.; *Briedelia spinosa* (Roxb.) Willd.; *Briedelia crenulata* Roxb.; *Briedelia airy-shawii* P. T. Li.

Family: Euphorbiaceae

Vernacular Name: San: Ekavira, Mahavira, Suvarika  
Eng: Spinous Kino tree  
Kan: Mullu benga, Mullu honne, Koyamarwa  
Mal: Komanji, Mulluvenga  
Tulu: Koya marwa, Mullu bengo

Habit: Moderate-sized tree.

Habitat: Deciduous forests.

Status: Common.

Description: Medium-sized tree, spinous when young. Leaves simple, elliptic-oblong or obovate, chartaceous, puberulous beneath. Flowers greenish to purplish, in axillary or terminal paniculate spikes. Calyx 5-lobed. Petals 5. Stamens 5, on a gynandrophiore bearing a pistillode at top. Fruit globose drupe, with enlarged calyx, purplish-black when ripe.

Uses: Bark decoction is given for liver problems, asthma, diarrhoea, dysentery, indigestion, infections and skin diseases. Bark decoction is consumed internally to expel phlegm through vomiting. *Bark ground to paste in rice washed water is applied to expel spines or thorns or waste particles from cuts and wounds. Bark decoction is used for dry cough and whooping cough. Bark decoction is given for breathing or lung problems.* Leaf juice is taken in empty stomach and applied on head for three days in case of jaundice.

Etymology: Mullu benga and Mulluvenga (spiny Indian Kino tree) arose due to the resemblance with Indian Kino tree (*Pterocarpus marsupium*) and spiny nature of the trunk. Koyamarva (whooping cough flowering murdah) clearly indicates its
therapeutic efficacy against whooping cough and similarity with flowering murdah 
(*Terminalia paniculata*).

Note: Heart wood is hard and is used as timber. Ripe fruits are edible.

**143. Briedelia scandens** (Roxb.) Willd. *(Plate 24 F)*

*Syn: Briedelia stipularis* (L.) Blume.; *Clutia stipularis* L.; *Clutia scandens* Roxb.*

Family: Euphorbiaceae

Vernacular Name: Eng: Feather foil

Kan: Akshate balli, Bisila balli

Mal: Cheruka, Cherukapanachi, Cherupanachi, Kanjikottam

Tulu: Bandada booru, Banda naar

Habit: Scandent shrub.

Habitat: Along hedges in exposed forest areas.

Status: Common.

Description: Large scandent shrub, with thorny stem and branches. Leaves simple, elliptic, pubescent beneath. Flowers greenish to purplish, in long axillary and terminal interrupted false spikes with small leaves. Calyx 5-lobed. Petals 5. Stamens 5, on a gynandrophore bearing a pistillode at top. Fruit globose drupe, bluish-black when ripe, seated on the enlarged calyx.

Uses: Decoction prepared from bark is used to wash septic ulcers and scabies. *The skin or rind of branch is used for preparing decoction which is used as an alternative to breast milk. If the same prepared by adding jaggery gives more effective results. Stem bark decoction is used as a gargle for dental cavities and tooth decay. *Paste prepared from its leaf, cloves and garlic in lime juice is applied externally while stem bark juice along with honey is given internally for paralysis. Bark decoction in milk is given to prevent digestive disorders in children. *Bark decoction with cumin, coriander and pepper seeds is given for diarrhoea and stomachache in children. Paste prepared from its leaves, clove and garlic is applied all over the body for nervous debility and paralytic stroke. Stem peel decoction is given with sugarcandy...*
as a substitute to breast milk. Root decoction is given with jaggery for paralytic stroke and numbness. *Young stem peel extract is given with sugarcandy for increasing breast milk and intellect in children. Bark decoction or that cooked with rice is given for mouth ulcers. Root decoction is given internally for neural pain. Bark decoction is given for allergy and rheumatism. *Chewing twigs or gargle with its decoction is recommended for toothache, while plant decoction is given for liver disorders in children. *Shoot tip ground with gingelly oil is poured into ear in case of lung spasm. Extract of its leaves, Syzygium caryophyllatum and cumin seeds is used as nasya* for leucorrhoea. *Leaf along with clove (9), pepper (9), garlic (9), turmeric (9) and mustard seeds (4 spoons) ground in cold water are applied externally and the extract is taken internally for paralysis. Bark peel along with cumin seeds are made into a decoction and are used for stomachache. *Tender shoot tip along with Boerhavia diffusa root are ground in butter milk and is given for eczema and erysipelas. *Shoot tip along with Boerhavia diffusa root ground with butter milk is heated by adding nutmeg powder and is given internally for urticaria and rashes. *Stem bark with that of Syzygium cumini are ground with milk and is recommended in empty stomach for three days in case of amoebiasis. Decoction prepared from its stem bark, coriander, cumin and pepper seeds are consumed with milk for urine block. Bark decoction is also recommended for diarrhoea. *Stem bark and that of Eleaegnus conferta are crushed and the extract with rice washed water is given for weakness of legs in cattle. Bark decoction is recommended internally for stomatitis and ulcers.

Etymology: Stem peel extract is used as a substitute to breast milk, resulting in a close bond with this plant just like that between mother and baby, hence the name Banda naar (bond fibre).

Note: Fruits are edible.

144. Buchanania lanzan Spreng (Plate 25 A)

Syn: Buchanania latifolia Roxb.

Family: Anacardiaceae

Vernacular Name: San: Priyala, Priyalah, Piyala
Eng: Almondette, Cuddapah almond  
Kan: Kolamavu, Kolageru, Erpa, Nurkal mara, Morante  
Mal: Kalamavu, Moongapezhu, Naruvei, Padacheru, Priyalam  
Tulu: Erappe, Erppe

Habit: Small tree.

Habitat: Moist deciduous forests.

Status: Common.

Description: Small tree, with densely pubescent young parts. Leaves simple, broadly oblong, glabrous and shining above, densely villous beneath. Flowers greenish-white, in terminal pubescent panicles. Calyx 5-lobed; lobes broadly ovate, ciliate. Petals 5, ovate-oblong. Disc thick, villous. Stamens 10. Carpels 5 – 6, only one fertile. Fruit small drupe, with a stony seed, black when ripe.

Uses: *Bark cooked with rice is recommended for three days for getting relief from recurrent furuncles through blood purification and also for skin diseases. *Leaf mucilage in water is used as a shampoo so as to provide cooling effect to the body. Bark decoction is given for leucorrhoea and amenorrhoea. *Bark is cooked with rice and is given for conception in cattle. Bark decoction is used for controlling bleeding in ladies. It is also useful for skin diseases and rheumatism. Bark decoction or its *lehyam* is used for complete expulsion of phlegm. Bark is cooked with rice and eaten for urticaria, rashes and furuncles in the waist. It is also useful for gastritis. *Decoction prepared from fresh inner bark is used for cooking rice and gruel is given by adding coconut milk or milk for 3 – 6 days in case of repeated attack of furuncles.

Note: Albuminoides, glycosides, saponins and tannin form the major constituents (Kapoor, 1990). Used for preparations like *Pugakhanda, Priyala taila, Nyagrodhadi kvatha, Nyagrodhadi churna* and *Ashoka ghṛta* (Sharma *et al.*, 1998). Kernels are eaten. Leaf mucilage is used as shampoo.
145. *Bulbophyllum sterile* (Lam.) Suresh (Plate 25 B)

Syn: *Bulbophyllum neilgherrense* Wight; *Epidendrum sterile* Lam.

Family: Orchidaceae

Vernacular Name: Kan: Pottlekai, Polekai
Mal: Mookittakaya
Tulu: Polekai

Habit: Epiphyte.

Habitat: Forests.

Status: Common.

Description: Epiphytic orchid, with 1-leaved pseudobulbs on stout rhizome; pseudobulbs ovoid. Leaves elliptic to broadly oblong, with narrowed base. Scapes shorter than the leaves; flowers in racemes, greenish-yellow turning purple. Sepals 3, oblong; dorsal broad-ovate. Petals 3, very small; lip fleshy, red with 2 basal auricles. Pollinia 4.

Uses: Plant extract is used as an abortifacient. *The pulp of split opened bulb mixed with sugarcandy is eaten to increase sexual vigour, semen quality and count. Tuber extract is given for diabetes. *Tuber decoction in milk is given to prevent threatened abortion. *Bulb decoction with milk is recommended for vomiting in pregnant ladies.

Etymology: Polekai (fruit used for preparing pole*, a fermented dish) is due to the fruit like appearance of the pseudobulbs and their palatability.

Note: Some physicians use it as the source of drug Lakshmana. *It is used as a substitute for black gram for making iddis*.

146. *Butea frondosa* Roxb. ex Willd (Plate 25 C)

Syn: *Butea monosperma* (Lam.) Taub.

Family: Papilionaceae

Vernacular Name: San: Palasha, Raktapushpaka, Yajnika, Samidvara, Putadaru
Eng: Flame of the forest, Bastard teak  
Kan: Paalasha, Mutthuga, Brahmavrksha  
Mal: Camata, Chamata, Plash  
Tulu: Palaso

Habit: Large tree.

Habitat: Deciduous forests, often cultivated.

Status: Rare in wild.

Description: Deciduous tree. Leaves pinnately 3-foliolate; leaflets coriaceous, adpressed hairy, nerves raised beneath; terminal leaflet broad, obovate; lateral leaflets smaller, obliquely ovate. Flowers large, showy, densely fascicled in axillary and terminal racemes. Calyx campanulate, 2-lipped, velvety outside, silky-hairy within. Petals 5, orange-red, tomentose outside. Stamens diadelphous (9 + 1). Fruit oblong, pendulous, tomentose, stalked pod.

Uses: Bark decoction is used to increase breast milk. *Seed powder in small doses is given to expel worms. Overdose may result in fainting. Bark decoction is given for cold, fever and cough. Flower poultice is recommended for joint pain. Flower extract or decoction is given as blood purifier, for clear urine, menstrual problems and leucorrhoea. Powdered seed (after removing seed coat) is given to expel worms including tape worm. Gum powder is given for diarrhoea due to indigestion. Paste of seed powder with ghee is applied for leucoderma. Whole plant decoction or extract is given to increase intellect or memory power. Bark decoction is given for menstrual problems. Seed oil is applied for reappearance of hairs. Leaves are used as plates for meals, which removes toxic effects of the food. *Seed paste with lime juice is applied for mumps and tinea versicolor. Ghee is applied as antidote for burning sensation. *Leaf powder mixed with honey and ghee is recommended for 40 days to increase memory power. *Leaf ground in milk is taken up to 7th month of pregnancy for the birth of a healthy child. Seed ground into paste with latex of Calotropis gigantea is applied for scorpion bite. *Crushed flower juice is given for three days for complete sterility in females. *Latex dissolved in milk is given with ghee at morning for worms, gas trouble, indigestion and acidity. Bark decoction is
given with turmeric powder during night after food for skin diseases. For the same purpose, leaf paste with rice washed water is also applied. Seed along with Embelia ribes and Hyoscyamus niger seed powder are mixed with honey and recommended to expel intestinal worms. *Dried seed powder is taken with hot water in the morning and night (one hour before food) to expel phlegm. Seed paste is applied over head for three days in case of baldness. *Seed paste with lime juice is applied to head for reappearance of hairs in one week. Root paste with rice washed water is applied for goiter and swellings at the base of ear. *Seed ground with honey, applied to a cloth is inserted into the vagina to expel dead baby. Seed is burnt, ground with honey and given internally to expel dead baby. Seed paste with lime juice is applied for itchy tinea versicolor and ringworm. Root paste with rice washed water is applied for tumours at the base of ear. Seed kernel paste with Madhuca neriifolia fruit juice is applied for warts. *Its bark, that of Saraca asoca, Erythrina variegata, roots of Melastoma malabathricum and Clerodendrum serratum are made into a decoction and is used for stomachache during menses.

Etymology: Brahnavrksha (tree of gods) is due to its use in various religious rituals and is considered sacred. Yajnika (plant that used in Yajna*, the traditional Indian ritual) arose as it is an integral part of all types of Yajnas*.

Note: Palastrin, Palasonin, α-amyrin, β-sitosterol, jalaric esters, butin, butein, butrin and isobutrin are the major constituents (Jain et al., 1991). Palasonin has good anthelmintic property Kapoor, 1990). Important formulations using this plant are Palasa ksara, Nyagrodhadi kvatha, Nyagrodhadi churna, Mahanarayana taila, Kunkumadi taila, Vanga bhasma, Bala taila, Ayaskriti, Palasa bija churna and Palasa arka (Sharma et al., 1998). Leaves are used as plate. Inner bark peelings are used in panchakarma*.

147. Caesalpinia bonduc (L.) Roxb. (Plate 25 D)

Syn: Caesalpinia bonducella (L.) Flem.

Family: Caesalpiniaceae

Vernacular Name: San: Kuberakshi, Latakaranjah, Kantakikaranjah
Eng: Bonduc nut, Nicker bean  
Kan: Gajjugaa, Gajjigekaayi  
Mal: Kalanchikuru, Kalanchi  
Tulu: Kalanjikaayi, Kalanji

Habit: Scandent shrub.

Habitat: Hedges and waste places near the coast.

Status: Common.

Description: Large scandent shrub, armed with recurved prickles. Leaves bipinnate; petioles and rachis prickly; pinnae 6 – 8 pairs; leaflets 6 – 9 pairs, elliptic-oblong, puberulous beneath. Flowers in long-peduncled branched racemes. Sepals 5. Petals 5, yellow to greenish yellow. Stamens 10. Fruit obovoid, pod, densely covered with straight spines. Seeds 1 or 2, subglobose.

Uses: *Fried or burnt seed powder pills or leaf decoction (60 ml, twice a day) are given for hernia and testicle infections.  *Root and fruit decoction is used as a blood purifier for fever. Seed extract is recommended for digestive problems and to expel worms. Root extract is an appetizer and tonic. *Seed paste with asafoetida and salt in ghee is taken to expel worms. *Root powder decoction in hot water is used for shivering and sweating during fever. *Seed and Glycyrrhiza glabra rhizome powder dissolved in hot water is given in empty stomach for asthma. *Fruit ash ground with Euphorbia nivulia latex is applied for corms. *Leaf along with that of Memecylon randerianum and neem made into a decoction and is used for eczema and urticaria. *Seed ashes are applied for ulcers.

Etymology: The name Latakaranjah (climbing Pongamia) arose due to its climbing nature and obovoid fruits resembling that of Pongamia pinnata. Kantakikaranjah (prickly Pongamia) clearly indicates prickly nature of the plant.

Note: It is used for the preparations like Cangeryadi gutika, Ponkaradi gutika, Laghu aantrakutara gutika, Paphanadi taila, Aragvadhadi kvatha, Aragvadhadi churna and Kuberaksadi vati (Sivarajan & Balachandran, 1996; Sharma et al.,
Active constituents of the plant are sitosterol, heptacosane, phytosterenin, saponins, α, β, γ, δ and ε caesalpins and bonducin responsible for antiperiodic and antispasmodic activities (Kapoor, 1990; Sharma et al., 1998).

148. *Caesalpinia coriaria* (Jacq.) Willd. (Plate 25 E)

Family: Caesalpiniaceae

Vernacular Name: Eng: Divi-divi, American sumac
Kan: Aldekayi, Seeme aldemara, Dividivi
Mal: Dividivi
Tulu: Dividivi maro

Habit: Small tree.

Habitat: Planted along roadsides.

Status: Common. Exotic.


Uses: *Fruit decoction is recommended for piles.

Note: It is usually planted as an ornamental tree.

149. *Caesalpinia crista* L. (Plate 25 F)

Syn: *Caesalpinia nuga* (L.) Ait. f.

Family: Caesalpiniaceae

Vernacular Name: San: Karanjah, Kuberakshi, Putikaranjah
Eng: Fever nut
Kan: Kiri gejjuga, Sanna gejjuga
Mal: Aattuparanda, Kakamullu
Tulu: Kalanjikaayi
Habit: Scandent shrub.

Habitat: Along coastal estuaries.

Status: Common.

Description: Large scandent shrub, armed with black recurved prickles. Leaves bipinnate; rachis armed with recurved prickles; pinnae 2 – 5 pairs; leaflets 2 – 3 pairs, ovate-elliptic. Flowers fragrant, in long axillary and terminal panicles. Sepals 5, lowest one cucullate. Petals 5, yellow; standard with red markings. Stamens 10. Fruit ellipsoid, glabrous, 1-seeded pod.

Uses: *Fruit or tender shoot tip decoction is used for scrotal swelling. *Fruit decoction is given for one day to women after delivery. *Fruit or shoot tip decoction is taken for infection towards the testicles after the onset of hernia. Fruit ground in buttermilk is recommended for hydrocele. *Tender shoot tip decoction (1/4 tsp) is given for persons suffering from severe vomiting (vomiting stops within one hour). *Fruit or kernel decoction is used after delivery to prevent uterine infections. About 60 ml of its leaf decoction is consumed for hernia, fever and to expel worms. *Kernel (of burnt fruit) ground in buttermilk is taken for hernia and scrotal swelling. Fruit paste is applied for testicle swellings. *Fruit, tea powder and human hair boiled in coconut oil are applied externally for burns. *Oil extracted from the seed kernel is used as hair oil. Root decoction is recommended for hernia. Fruit extract is used for backache and digestive disorders. *Extract of one burnt fruit and one fresh fruit ground in water is given for hernia. *Root decoction with cumin seeds is used for hernia and testicle infections. *Dried seed paste with lime juice is applied for scrotal swelling. *Half spoon of seed kernel extract mixed with milk is given once a day for four days in case of stomachache due to worm infestation. Seed extract with water is taken internally for a week to get relief from scabies and other skin diseases. *Fruit decoction is used as a bath for septic wounds and itches in cattle.

Etymology: The names Kiri gejjuga and Sanna gejjuga (small bonduc nut) clearly indicate its close resemblance with Caesalpinia bonduc.
Note: It is used for the preparations like *Cangeryadi gutika*, *Ponkaradi gutika*, *Laghu aantrakutara gutika*, *Paphanadi taila*, *Indukantha ghṛta*, *Visnu taila*, *Pramehamihira taila* and *Vishamajwaraghni vati* (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma *et al*., 1998). Active constituents of the plant are sitosterol, heptocosane, phytosterinin, saponins and bonducin responsible for antiperiodic and antispasmodic activities (Dey, 1994; Kapoor, 1990; Sharma *et al*., 1998). It is used in synonymous with *Caesalpinia bonduc*.

150. *Caesalpinia mimosoides* Lam. (Plate 26 A)

Family: Caesalpiniaceae

Vernacular Name:  Kan: Eejimullu, Kenchige, Ganajilu, Seemullu, Humullu  
Mal: Kalthottavadi, Komullu, Theemullu  
Tulu: Cheemullu, Theemullu

Habit: Scandent shrub.

Habitat: Wastelands.

Status: Common. Weed.


Uses: *Tender shoot tip tambuli* is used to improve the gastrointestinal system. *Oil prepared from tender shoot tip is applied for burns. *Tender shoot tip paste with turmeric is applied for wasp sting and all types of insect bites. *Tender shoot tip is chewed for mouth ulcers. Plant paste is applied for rheumatism and swellings. *One handful shoot tip ground with two spoons of cumin seeds are boiled with coconut oil and resulting oil is applied for burns. *Root extract (white flowered variety) in lime juice is given to decrease high blood pressure within 15 days. *Root (white flowered variety) decoction is used for diabetes. Plant decoction is recommended for piles.
*Plant ashes are applied for cuts, wounds and burns. Root decoction is used for rheumatoid arthritis. *Tender shoot tip decoction is recommended for indigestion, gas trouble and its paste is applied externally for swelling and rheumatoid arthritis. *Root paste with lime juice is applied for whitlow. *Tender shoot tip decoction with Hyoscyamus niger seeds is given for rheumatism. *Oil prepared from plant juice or shoot tip paste is applied for whitlow and recto vaginal fistula. *Tender shoot tip ground in rice washed water is heated by adding fried asafoetida, cumin and Hyoscyamus niger seed powder and is given for abnormality in legs, indigestion and breathing problems in cattle. *Tambuli of tender shoot is used for indigestion, diarrhoea and ulcers due to burns. *White flowered variety is used for treating eye diseases. *Tender shoot tip fried in ghee and ground in milk is given for six days in case of blood in stool. Root decoction is used for piles. *Shoot tip with that of Pothos scandens ground with cumin seeds into a chutney and is used to correct digestive tract. *Oil prepared from its shoot tip juice is used as ear drop for pus release from the ear.

Etymology: Kenchige (red plant) arose due to the reddish plant body and Humullu (flower prickle or soft prickle) due to its delicate glandular bristles.

Note: Even though it forms impenetrable thickets, it is much valued as a medicine for digestive disorders and skin diseases. *Stem decoction is used as an insecticidal agent. Rhizome is a rich source of stored food.

151. Caesalpinia pulcherrima (L.) Swartz. (Plate 26 B)

Family: Caesalpiniaceae

Vernacular Name:  San: Krishnachuda, Ratnagandhi
               Eng: Barbados pride, Peacock flower
               Kan: Kenjige, Ratnagandhi
               Mal: Chethimandaram, Rajamalli
               Tulu: Ratnagandhi, Ratnagentige

Habit: Small tree.
Habitat: Cultivated in gardens.

Status: Common. Exotic.

Description: Small tree; branches armed with small prickles. Leaves bipinnate; pinnae 6 – 12 pairs; leaflets 5 – 13 pairs, oblong-elliptic. Flowers in long terminal racemes. Sepals 5, outer one cucullate. Petals 5, scarlet, red or yellow. Stamens 10, long exerted. Fruit obliquely oblong, compressed, 8 – 10 seeded pod.

Uses: *Oil prepared from leaf juice is used for burns and rheumatism. *Flower extract decoction is used as a blood purifier for menstrual irregularities. Leaf decoction is used as a laxative. *Seed powder is taken internally for stomachache. Leaf or flower decoction is recommended for fever and menstrual disorders. *Leaf paste is applied for scabies. *Root extract is used to arrest diarrhoea in children.

Etymology: Ratnagentige (precious Barleria) as its flowers are considered precious and are used for worship. Flowers resemble that of Barleria in having exerted stamens.

Note: Myricitrin, brazilin, oscimene, α-phellandrene, gallic acid, leucodelphinidin, ellagitannin, caesalpins, β-sitosterol, lupeol and quercetin are the active constituents (Jain et al., 1991). Flower is used in the preparation of gold bhasma*. Flower is used for worship. Seeds are edible.

152. Caesalpinia sappan L. (Plate 26 C)

Family: Caesalpiniaaceae

Vernacular Name: San: Patanga, Patranga, Patrangah, Raktaka
Eng: Brazil wood, Sappan wood
Kan: Chappanga, Patanga, Patranga, Sappanga
Mal: Chappangam, Pathimukham
Tulu: Padimukho

Habit: Small tree.

Habitat: Cultivated.
Status: Common.


Uses: *Bark decoction is used for six days in case of jaundice and bile disorders. *Bark cooked with rice is given to eat after the attack of herpes for quick recovery. Bark decoction is taken to improve renal functions. *Heart wood decoction is recommended for fever, biliousness and increased body heat. It is a blood purifier. *Heart wood cooked with rice and is consumed for jaundice. *Heart wood paste with coconut milk is applied externally and extract in water is taken internally for repeated itches, urticaria and rashes in children. *Heart wood decoction is used at bed time for thirst and urinary disorders due to diabetes.

Etymology: Raktaka (red wood) is due to the dark red colour of its heart wood.

Note: Brasilin and saponins are the active constituents. Used for the preparations like Arimedadi taila, Karpuradyarka and Kunkumadi taila (Sharma et al., 1998).

153. *Caesalpinia spicata* Dalz. (Plate 26 D)

Syn: Moullava spicata (Dalz.) Nicolson; Wagatea spicata (Dalz.) Wight

Family: Caesalpiniaceae

Vernacular Name: Kan: Kodanji, Vagate, Huliganji, Gajjiga balli
  Mal: Poomullu
  Tulu: Vaagati

Habit: Large prickly climber.

Habitat: Forests and sacred groves.

Status: Frequent.

Description: Large woody climber, armed with prickles. Leaves bipinnate; rachis armed with recurved prickles; pinnae 4 – 6 pairs; leaflets 5 – 7 pairs, ovate-oblong.

Uses: *Seed ash is applied externally to heal ulcers.

Etymology: Gajjiga balli (climbing bonduc nut) is due to its resemblance with *Caesalpinia bonduc*.

Note: It is sometimes used as a substitute for *Caesalpinia bonduc* and *Caesalpinia crista*.

154. *Cajanus cajan* (L.) Millsp. (Plate 26 E)

**Syn:** *Cajanus indicus* Spreng.

**Family:** Papilionaceae

**Vernacular Name:** San: Adhaki

Eng: Pigeon pea, Red gram, Dahl, Congo pea

Kan: Thogari, Thogari bele

Mal: Tuvara, Thuvara, Thuvaraparippu

Tulu: Chibari, Thogri

**Habit:** Erect shrub.

**Habitat:** Cultivated.

**Status:** Frequent.

**Description:** Erect shrub; stem and branches densely pubescent and striate. Leaves pinnately trifoliolate; leaflets elliptic to lanceolate, grey-canescent beneath. Flowers in axillary paniculate racemes. Calyx campanulate; lobes 5, glandular, pubescent. Petals 5, yellow. Stamens diadelphous. Fruit oblong, turgid, 1 – 5 seeded, pubescent, glandular pod.

**Uses:** *Fried seed (until they become black) powder is given with honey for vomiting during fever.* *Hot leaf decoction is used as a gargle for toothache.*
Note: Seeds are much valued as pulse. Also, used in rituals. Saponins form the active constituents and are used in the preparations like Mahapanchagavya ghrta and Kankayana gutika (Sharma et al., 1998).

155. *Cajanus scarabaeoides* (L.) Thouars (Plate 26 F)

Syn: *Atylosia scarabaeoides* (L.) Benth.; *Dolichos scarabaeoides* L.

Family: Papilionaceae

Vernacular Name:  
San: Masaparni  
Kan: Kaaduthogari  
Mal: Kattumuthira  
Tulu: Kattuthogari

Habit: Trailing herb.

Habitat: Along scrubs and hedges.

Status: Common. Weed.

Description: Slender twining or trailing herb; stem and branches clothed with pale or grey pubescence. Leaves trifoliolate; leaflets elliptic-obovate, densely grey-pubescent beneath. Flowers 2 – 6, on densely pubescent axillary cymes. Calyx 5-lobed, fulvous-pubescent. Petals 5, yellow. Stamens 9 + 1. Fruit oblong, 4 – 6 seeded pod, covered with brownish spreading hairs.

Uses: *Leaf decoction is used for dental disorders, stomatitis and diabetes.*

Etymology: Kaaduthogari (wild pigeon pea) is due to its resemblance with *Cajanus cajan* while Kattumuthira (wild horse gram) is due to the trailing plant body showing similarity with *Macrotyloma uniflorum*.

Note: Seeds are edible.

156. *Calacanthus grandiflorus* (Dalz.) Radlk. (Plate 27 A)

Family: Acanthaceae
Vernacular Name: San: Sahacarah  
   Kan: Bili gorante  
   Mal: Vellakurunni  
   Tulu: Boldu gorate

Habit: Erect shrub.

Habitat: Tracts of evergreen forests.

Status: Occasional.

Description: Profusely branched, gregarious shrub, with prominently swollen nodes and obtusely 4-angled stem. Leaf simple, elliptic-lanceolate. Flowers purple, in terminal spikes; bracts large, ovate. Calyx 5-partite. Corolla purple, deeply 2-lipped; upper lip narrow, 2-lobed; lower large, shortly 3-lobed, with 2 lines of bright yellow hairs. Stamens 4, didynamous. Fruit obovoid, pubescent, 2-seeded capsule.

Uses: *Root decoction is used for nervous debility and rheumatic complaints.

Etymology: Bili gorante (white *Barleria*) is due to its whitish plant body and resemblance with *Barleria*. Vellakurunni (white *Strobilanthes*) arose as it resembles *Strobilanthes* in appearance.

Note: It is mostly used as a substitute for *Strobilanthes ciliatus*. It is used for preparations like *Sahacaradi taila*, *Sahacaradi kashaya* and *Brhat rasnadi kashaya* (Sivarajan & Balachandran, 1996).

157. *Calamus rotang* L. (Plate 27 B)

Family: Arecaceae

Vernacular Name: San: Vetasa, Vetasah, Sushena, Vanjula, Latavamsa  
   Eng: Slender rattan, Rattan cane palm, Chair-bottom cane  
   Kan: Bettha, Betthada balli, Naga bettha, Nagar bettha  
   Mal: Chural, Cural  
   Tulu: Nagara bettho, Surol
Habit: Scrambling shrub.

Habitat: Evergreen forests and sacred groves.

Status: Frequent.

Description: Dioecious scrambling shrub; stem covered by leaf sheaths; sheaths green, spinescent; spines needle-like, yellow with black tip. Leaves pinnatisect; leaflets narrowly lanceolate, margin ciliate; rachis apically trigonous with recurved spines. Flowers small, yellow, polygamo-dioecious, in axillary scorpioid spikelets. Sepals 3. Petals 3. Stamens 6, connate at base. Fruit subglobose capsule, with appressed imbricating scales.

Uses: *Bark paste is applied for snake and other poisonous bites while its decoction is taken for urinary disorders. *Tender shoot tip decoction is used for urinary disorders.

Etymology: Latavamsa (climbing bamboo) is due to its scrambling nature and uses similar to that of bamboo. Bettha (stick) arose as the stem is used for making walking sticks.

Note: Tender shoot tip is used for preparing upperr. Fruits are edible.

158. Callicarpa tomentosa (L.) Murr. (Plate 27 C)

Syn: Callicarpa lanata L.

Family: Verbenaceae

Vernacular Name: San: Priyangu

Eng: Great woolly Malayan lilac
Kan: Aarathi soppu, Ibane, Dodda nathada gida,
    Pandavara batthi
Mal: Kattuthekku, Naikumbil, Puliyanthekku, Thiriperivelam
Tulu: Aarathida thappu

Habit: Small tree.
Habitat: Evergreen and semi evergreen forests.

Status: Common.

Description: Large shrub or small tree, with stellately hairy young branches. Leaves simple, elliptic-ovate, densely white-tomentose beneath. Flowers small, tetramerous, in axillary divaricately branched, densely tomentose cymes. Calyx cupular, tomentose. Corolla 4-lobed, purplish-red. Stamens 4, much exerted. Fruit globose drupe, dark purple when ripe.

Uses: Seed extract or decoction is given as a tonic for general weakness, dysentery, diarrhoea and diabetes. *Oil prepared from tender shoot tip juice is applied for burns. *Flower paste is applied or its decoction is used as a wash for skin diseases.

Etymology: Pandavara batthi (Pandava’s candle) arose as its shoot tip and leaves soaked in oil were used as candle in the past. Kattuthekku (wild teak) is due to its resemblance with teak.

Note: It is one of the ingredients of Draksharishta, Khadiradi gutika, Eladi churna, Kanaka taila, Kunkumadi taila, Nilikadya taila, Jirakadi modaka, Brhatphala ghrta and Vyaghri taila (Sharma et al., 1998). Leaf burns like a torch when burnt after dipping in oil. Maslinic acid, oleanolic acid, ursolic acid, lupeol, β-amyрин, β-sitosterol, hydrocyanic acid, calliterpenone and calliterpenone monoacetate are the major constituents (Jain et al., 1991; Kapoor, 1990).

159. *Calophyllum calaba* L. (Plate 27 D)

Syn: Calophyllum apetalum Willd.; Calophyllum decipiens Wight.; Calophyllum wightianum Wall. ex Planch. & Triana

Family: Clusiaceae

Vernacular Name: San: Tunga, Punnaga
Eng: Poon spar of Travancore
Kan: Sirihonne, Kirihonne, Kiriponne, Kalponne
Mal: Aattupunna, Cherupunna, Porapunna
Tulu: Siriponne, Siriponne
Habit: Large tree.
Habitat: Along banks of rivers and streams.
Status: Occasional.


Uses: *Seed oil is applied externally for rheumatism and arthritis. *Oil extracted from the fruits is applied for leprosy and septic wounds.

Etymology: Sirihonne (precious *Calophyllum*) arose as this plant is a much valued timber. Kirihonne and Kiriponne (smaller *Calophyllum*) are due their leaves which are smaller than that of *Calophyllum inophyllum*.

Note: Seeds are edible.

160. *Calophyllum inophyllum* L. (Plate 27 E)

Syn: *Calophyllum blumei* Wight.

Family: Clusiaceae

Vernacular Name: San: Tunga, Punnaga, Punnagah, Punnagavriksha
 Eng: Alexandrian laurel, Beauty leaf, Indian laurel
 Kan: Honne, Ponne, Surahonne
 Mal: Punna, Suramponna
 Tulu: Ponne, Ponnetha maro

Habit: Medium-sized tree.
Habitat: Along coastal regions.
Status: Common.

Uses: *The fruit ash is applied over old wounds and lesions. *Decoction prepared from leaves is used as an eye wash during conjunctivitis. *Leaf ash is used as mascara for conjunctivitis and eye pain. *Oil from seeds and leaf is poured into eyes or smeared over eyelids for conjunctivitis. Leaf extract in water is used as an eye wash during eye infections. *Bark decoction is used to wash septic wounds and ulcers. Oil extracted from the seeds is applied for rheumatoid arthritis. Bark decoction is hot in nature and is recommended for dysentery. *Gum obtained from the tree is applied as a wound healer. *Bark, barks of Holigarna arnottiana, white Anacardium occidentale and sour Mangifera indica cooked with rice is given for ulcers due to hair fall in dogs. Seed oil is applied to repel flies from wounds and ulcers, also applied to expel worms from wounds. *Seed oil is applied all over the body of the women after delivery. *Turmeric powder mixed with this oil is applied for the ulcers due to hair fall in calves. *Bark extract is applied for allergies and its decoction is taken during pregnancy. Bark decoction is consumed for jaundice and dysentery. *Oil extracted from the seeds is applied externally for piles. *Seed oil, mustard seeds, garlic and turmeric paste is applied for rheumatism. *Tender shoot tip juice is used as ear drop for earache. Seed oil application helps for proper growth of hairs.

Etymology: Honne (golden tree) arose as this tree is the source of highly durable timber. Surahonne (god’s Calophyllum) as the flowers are used for worship.

Note: Calophyllolide, calophylic acid, inophylic acid, mesuaxanthone B, calophyllin B, myricetin, quercetin and leukocynidin are the active constituents (Kapoor, 1990). Wood is used to make spoons in which medicines are given.

161. Calotropis gigantea (L.) R. Br. (Plate 27 - F, 28 - A)

Family: Asclepiadaceae

Vernacular Name: San: Arka, Arkah

Eng: Bowstring hemp, Swallow wort, Milk weed, Giant calotrope
Kan: Ekke, Ekka, Bili ekke
Mal: Eriku, Vella-erikku
Tulu: Ekkamale, Ekkammale

235
Habit: Erect shrub.

Habitat: Wastelands and along road sides.

Status: Common. Poisonous.

Description: Large shrub; branches, leaves and inflorescence covered with white adpressed cottony tomentum. Leaves simple, elliptic-oblong. Flowers large, in long-peduncled umbellate cymes. Calyx 5-lobed. Corolla pale-violet, purplish or white; lobes 5. Corona in one series of five fleshy appendages radiating from the staminal column. Pollinia solitary, in each anther sac, pendulous. Fruit ventricose, boat-shaped follicle.

Uses: *Heated leaves are kept and pressed over bruises. *Leaf juice and that of *Asclepias curassavica are made into oil used for treating ringworm in the head. Latex is applied for penis ulcer or swelling in children. *Extract of its leaf hairs (from mature yellow leaf) mixed with rock salt and ghee is poured into ear in case of pus release from the ear. *Root paste with coconut oil is applied for chronic skin diseases. Leaf powder is dusted over bruises with itches. *Tender shoot tip juice along with salt is applied for toothache. *Leaf, coconut gratings, *Vitex negundo leaf and gingelly oil are heated and applied for arthritis and rheumatism. *Root (collected during summer and dried in shade) powder mixed with coconut oil is applied for chronic septic wounds and ulcers. *Latex from young shoot tip is poured into ear for earache. Root and bark latex is a strong purgative. *Latex mixed with salt is applied for toothache, leprosy and worms. *Leaf juice along with that of *Leucas aspera, *Vitex negundo and *Averrhoa carambola fruit juice are boiled with coconut oil and is applied for vitiated rheumatic pains. Latex is applied for 3 – 4 days in case of corns. *A hot white rock is placed over the leaf pieces tied in a cloth along with coconut gratings and after sometimes it is pressed for sprain and ankle twist. *Juice of 7 – 9 heated preserved in a bottle after heating it with coconut milk is used as an external application for ankle twist, sprains and shoulder dislocation. Oil extracted from the leaves is applied for rheumatism. *Tender shoot tip extract is taken for pit viper bite. *Flower extract along with honey is consumed for asthma and bronchitis. *Leaf extract with neem juice is used internally for asthma and
bronchitis. *Leaf, neem leaves and *Chromolaena odorata* leaf boiled in water is given for body pain after fever. *Root paste with butter milk is applied for lymph node enlargement and hardened tumours. *Flower extract with jaggery or seed powder with jaggery is recommended to stimulate menstruation. *The supernatant water collected from its root gruel with rice is mixed with jaggery and given to drink in empty stomach for three days in a month in case of piles. *4 – 6 shoot tips are chewed and eaten in case of viper bite. *Leaf and of *Moringa pterygosperma* leaf paste is applied for bleeding piles. *Root powder mixed with *Catunaregam spinosa* fruit powder in honey is given to cause vomiting in case of *Strychnos* poisoning (detoxification). *Root paste with neem oil is applied for leprosy, ringworm and elephantiasis. *An ointment prepared using its latex along with *Euphorbia nivulia* latex, butter, bee wax and rock salt is applied for three days in case of cracks in feet or heel. *Leaf paste is applied externally for bone fracture and rheumatism. *Root paste with buttermilk is applied for tumours and lymph node swellings. *Juice of full ripe leaf (heated) mixed with honey is used for chronic rhinitis. *One cup of leaf (yellow) juice is taken for snake bite. *Latex mixed with gingelly oil is applied for malnutrition in cattle. *Juice of heated leaf ground with dried ginger is half boiled, mixed with coconut flower extract and boiled. After heating, one fresh egg is added to it and applied for bruised pain. *Stem peel is tied to children in case of vomiting. *Leaf, that of *Tamarindus indica, Leucas aspera, Datura metel* and *Cynodon dactylon* juice (in equal quantity) are boiled with gingelly oil and garlic paste. To this a little *Nigella sativa* seed powder is added and is applied for rheumatism. *Ripe leaf smeared with ghee is heated in fire and the extract is poured into ear in case of wounds or swellings in the ear. *Root paste with *Vitex negundo* juice is applied for anal prolapse. *4 – 6 flowers ground with jaggery are given with water for 2 – 3 days to induce menses even in aged women. *Small pills are prepared by grinding fully grown root bark with equal quantity of ginger in onion juice and are taken at a rate of one per ½ hour (in hot water or honey) for cholera. *Shade dried root bark powder is taken with honey twice a day for cough. *Fully grown root ash mixed with salt is consumed with honey two times a day for 20 days in case of asthma. *Leaf coated with dried ginger paste is pressed over joints for rheumatic pain.
*Shade dried leaf powder mixed with neem oil is applied for leucoderma and leprosy. *5 – 6 flowers are ground with jaggery and made into pills (three pills a day are given for 2 – 3 days to inducing menses in women suffering from early menopause). *Heated leaf is tied to breast in case of breast pain in pregnant women. *Latex mixed with turmeric powder is applied for bleeding piles. *Leaf juice mixed with mustard oil (2:1) and turmeric paste (1/8th of oil) is heated and is used for skin diseases. *Latex, *Euphorbia nivulia* latex, *Lagenaria siceraria* leaf and *Pongamia pinnata* stem fibre ground with goat milk is applied for bleeding piles. *Latex (one spoon) latex mixed with 100 gm raw rice are ground, covered with banana leaf and cooked in charcoal. Roties* prepared from the above are eaten with coconut oil once a day for asthma. *Latex, mustard oil and turmeric power (1:1:2) are heated and are applied for scabies and white tinea versicolor. *One pill prepared by mixing fried leaf powder with equal quantity of sugar is taken with turmeric powder and honey at night for rickets. *Juice of heated leaf (coated with coconut oil) is used as ear drop for earache. Plant ash is applied for bruises. *Latex is applied at the base of horn and to wounds in case of foot and mouth disease in cattle. *Crushed leaf heated with water is given with fodder for diarrhoea in cattle. *Root cooked with one handful rice is mixed with jaggery and is given in empty stomach for three days in a month for piles. *50 ml of decoction prepared from its root, cumin seeds, garlic, dried ginger and *Trachyspermum ammi* seeds is taken half an hour before meals for three days as a preventive remedy for fever.

**Etymology:** Arka (sun) arose due to its hot nature and also as it is considered sacred to sun.

**Note:** Used in rituals. Flowers are used for worship. Akuandarin, calotropin, taraxasterol, β-amyrin, α-amyrin, β-sitosterol, calotoxin, calactin, α-calotropeol, β-calotropeol, gigantin, uscharin, mudarine, glutathione, giganteol and iso-giganteol are the active constituents (Jain et al., 1991; Dey, 1994; Kapoor, 1990). It is used for preparing *Kaccoradi taila*, *Dhanvantara ghrta*, *Vajraka taila*, *Nagaradi taila* and *Aviltoladi bhasma* (Sivarajan & Balachandran, 1996). Stem pieces are placed in the water channel to prevent insect attack in paddy fields. Root is detoxified by drying it in sunlight.
162. *Calycopteris floribunda* Lam. (Plate 28 B)

Family: Combretaceae

Vernacular Name:  
San: Susavi, Pullani, Sitapaki  
Kan: Kuksada balli, Kumasalu, Baguli balli, Kukkusana  
Mal: Pullani, Pullanji, Varavalli  
Tulu: Enjiru, Enjiru thappu

Habit: Scandent shrub.

Habitat: Forests.

Status: Common.

Description: Large scandent shrub, with villous branches. Leaves simple, ovate-lanceolate, tomentose beneath. Flowers yellowish-green, in dense terminal pubescent panicles. Calyx 5-striate, constricted above the ovary; limb 5-fid, much enlarged in fruit. Petals absent. Stamens 10, in two whorls. Fruit 5-ribbed, 1-seeded, ellipsoid, crowned by the calyx lobes.

Uses:  
* Bath with whole plant or leaf decoction is recommended for skin rashes, allergies, scabies and septic wounds.  
* Tender shoot tips boiled in milk are given internally or their paste is applied on the head for improving liver and digestive tract functions.  
* Paste of its tender shoot tip or tumourous growths seen on the plant is applied for bruises, blisters on ear, rashes, ulcers and urticaria.  
* Tender shoot tip ground in butter milk is recommended for malabsorption in children. Leaf juice has constipating action in diarrhoea, also used for dysentery, colic and dyspepsia. Fruit extract is a carminative.  
* Shoot tip, *Jasminum malabaricum* shoot tip and *Ixora coccinea* extract (2 spoons) are given for foul smell of urine in small children.  
* Tender shoot tip, which of *Melastoma malabathricum, Osbeckia muralis, Hedyotis auricularea, Holigarna arnottiana, Psidium guajava, Dalbergia volubilis, Anacardium occidentale, Syzygium caryophyllatum, Syzygium cumini, Barleria cristata, Loeseneriella arnottiana, Careya arborea, Mangifera indica, Memecylon randerianum* and *Ixora coccinea* flower are cooked by adding salt and tamarind,
ground by adding coconut gratings, boiled in an earthen pot by mixing with butter milk. This preparation is recommended as a curry for meal especially during the month of Karkataka and at least thrice in a month to prevent about 70% of diseases.

*Decoction prepared from its leaves is used to wash burns, wounds and ulcers.
*Tender shoot tip paste with cumin seeds and Citrus aurantium fruit juice is applied for carbuncle and starting stage of cancerous ulcers. *About 10 tender shoot tips are chewed for immediate stoppage of bleeding from body parts. Plant paste is applied for swellings and pain. Leaf extract is taken internally for dysentery and is externally applied for skin diseases. Tumourous growths seen on this plant are ground along with the same seen on Uvaria narum and soil of termite shelter is applied for cancerous ulcers. *Tender shoot tip extract with milk is used as a tonic.
*Tender shoot tip extract with butter milk is used for amoebiasis. *7 – 8 tender shoot tips ground with butter milk are given for 4 – 6 weeks in case of amoebiasis and septic wounds. *Decoction prepared from its leaves, which of Jasminum malabaricum and Tamarindus indica is used to wash swellings. *Shade dried leaf powder is dusted over wounds caused by thorns, insect or animal bite, septic wounds and water oozing ulcers. Fresh leaf decoction is used to wash wounds. Leaf juice is used as an insecticide, for jaundice, digestive disorders and liver problems. *Root extracts is the antidote for insect poisons. Leaf decoction is used as a bath for skin diseases. *Tender shoot tip and that of Aporosa lindleyana ground in tender coconut husk juice is given with honey for leucorrhoea. *Shoot tip, Ixora coccinea flowers (stamen removed), Jatropha curcas leaf and 10 seeds of Sesamum orientale cooked in fresh milk are given by adding sugarcandy in case of diarrhoea in children. *Leaf and Ixora coccinea leaf decoction is used as a bath in case of boils and scabies in children. *Extract of shoot tip cooked in milk is consumed for sleeplessness in children. *Decoction of its leaf, those of Bambusa bambos, Clerodendrum viscosum and Ixora coccinea is used as bath for itches due to allergy. *Feet are immersed in the decoction prepared from its leaf, leaves of Ixora coccinea, Ficus benghalensis and Ficus racemosa for cracks in heel. *Root bark and that of Ixora coccinea (in equal quantity) ground in milk are heated in sour buttermilk. To this mixture, jaggery, sugar, pepper and ghee are added, heated and taken twice a day for 12 days
in case of rickets. *Leaf paste is applied or dhara* with its decoction is recommended for wounds and skin diseases in children. *Water oozing out from the cut stem is poured into the eyes for eye pain, dust in eye and injury to eyes. *Plant tumour powder is dusted over vitiated wounds and ulcers. Leaf is used to beat the patient to ward off evil spirits.

Etymology: Baaguli balli (bending vine) arose due to its scrambling stem, while Kuksada balli (beating vine) as twigs are used to beat the patient to ward off evil spirits.

Note: Octacesanol, sitosterol, calycoterpin, methyl calycoterpin, ellagic acid, quercetin, proanthocyanidin and gossoypol are the active constituents. It is used in the preparation *Marma gutika* (Sharma et al., 1998). Leaf is used in black magic. Flower is worn all over their body by the jokers of *Balesaya* folk dance. This is also used as flag in bullock cart. Stem is used in basketry. Tender shoot is edible.

163. *Camellia sinensis* (L.) O. Ktze. *(Plate 28 C)*

Syn: *Thea sinensis* L.

Family: Theaceae

Vernacular Name: San: Caha, Syamaparni
Eng: Tea plant, Common tea
Kan: Chaha soppu, Tea ele
Mal: Chaya, Teyila
Tulu: Chayo

Habit: Erect shrub.

Habitat: Cultivated as plantation crop.

Status: Common. Exotic.

Description: Shrubs, with purplish red tender branches; terminal buds silvery grey. Leaves simple, oblong-elliptic, leathery, dark green above, shiny. Flowers solitary or in axillary cluster of three; pedicel recurved. Sepals 5, suborbicular, white pubescent
outside, white inside, margin ciliolate. Petals 6 – 8, white; outer 1 – 3 sepaloid; inner obovate. Stamens many. Fruit globose to oblate capsule.

Uses: Black tea is rich in antioxidants, zinc; it has digestive, diuretic, appetizer, cardiac stimulator and nervine tonic action. It is used for diarrhoea, gastroenteritis and weakness. *Oil prepared using tea powder is applied for ticks and hair fall in cattle.

Etymology: Syamaparni (dark coloured leaf) is due to its purplish red tender leaves and dark green mature leaves.

Note: Epigallocatechin, caffeine, carotene, kaempferol, quercetin, theophyllene, theobromine, xanthine, hypoxanthine, dextrin and inositol are the active constituents (Dey, 1994; Chaudhri, 1996).

164. *Cananga odorata* (Lam.) Hook. f. & Thoms. (Plate 28 D)

Syn: *Uvaria odorata* Lam.

Family: Annonaceae

Vernacular Name: San: Madanakameshwari
Eng: Malayan custard apple, Perfume tree
Kan: Madanakameshwari, Kananga hoo, Katthe sampige
Mal: Kattuchempakam, Kanangamaram, Pachachempakam
Tulu: Kattusampai

Habit: Tree.

Habitat: Cultivated in gardens.

Status: Frequent.

Description: Tree, with puberulous young branchlets. Leaves simple, elliptic or oblong-lanceolate, glabrescent beneath. Flowers in axillary cymes, yellowish green, fragrant. Sepals 3, ovate, reflexed at apex. Petals 6, in two whorls, strap-shaped;
outer oblong-lanceolate, grey-pubescent; inner narrower. Stamens many. Carpels many, oblong. Fruitlets ovoid, glabrous, with 2 – 12 yellowish brown seeds.

Uses: *Flower extract is used as scent and sexual stimulant.

Etymology: Madanakameshwari (sexual stimulant) is due to its characteristic fragrance. Kattuchempakam (wild champak) as it is used as a substitute for *Michelia champaca* and Pachachempakam (green champak) due to its yellowish green flowers resembling that of *Michelia*.

Note: Flowers are highly fragrant and sexual stimulant.

165. *Canavalia cathartica* Thouars (Plate 28 E)


Family: Papilionaceae

Vernacular Name: Eng: Maunaloa  
Kan: Kaadavare, Tamateballi, Kaadatamate  
Mal: Cheruvalanga  
Tulu: Kaattabare

Habit: Large climber.

Habitat: Along the hedges.

Status: Frequent.

Description: Large climber. Leaves 3-foliolate; leaflets ovate, abruptly acuminate at apex. Flowers large, in long axillary racemes. Calyx 2-lipped, sparsely pubescent. Corolla pink, exerted; petals 5, standard reflexed. Stamens monadelphous. Fruit oblong, inflated, 4 – 8 seeded pod.

Uses: *Cooked fruits are rich in protein. *Whole plant decoction is recommended for rheumatism. *Plant paste is applied for ulcers.
Etymology: Kaadavare and Kattabare (wild butter bean) arose due to the resemblance of fruits with that of *Lablab purpureus*.

Note: Fruits are used as vegetable.

166. *Canna indica* L. (Plate 28 F)

Syn: *Canna orientalis* Rosc.

Family: Cannaceae

Vernacular Name: San: Kamakshi, Devakili, Sarvajaya, Vanakadali  
Eng: Canna, Indian-shot, Poloke, Queensland arrowroot  
Kan: Kabale, Cyanagida, Sarvajaya, Devabale  
Mal: Kandamani-valai, Vazhachedi  
Tulu: Devabare, Kelapula

Habit: Erect herb.

Habitat: Grown in gardens.

Status: Common. Exotic.

Description: Erect rhizomatous herb. Leaves simple, broad, oblong or elliptic-lanceolate, with sheathing petiole. Flowers showy, two together, in terminal loose spike; bracts orbicular. Sepals 3, herbeaceous, persistent. Petals 3, shorter than petaloid staminodes. Androecium highly modified, with 3 – 5 bright red, ob lanceolate petaloid staminodes; fertile stamen one; lip orange, spotted red. Fruit globose or ellipsoid loculicidal capsule. Seeds globose, hard, black.

Uses: *Rhizome juice is taken internally to increase urine. *Heated seed extract is poured into ear for earache. *Pepper seeds are added to the rhizome or whole plant cooked in rice cooked and given to cattle which has swallowed poison.

Etymology: Devabale and Devabare (god’s plantain) arose as the flowers are used for worship and its resemblance with plantain.

Note: Cooked rhizome is edible.
167. *Cannabis sativa* L. ssp. *indica* (Lam.) Small & Cronq. *(Plate 29 A)*

Syn: *Cannabis indica* Lam.; *Cannabis sativa* sensu Roxb.

Family: Cannabaceae

Vernacular Name:  
San: Bhanga, Bhringi, Bhangi, Dhutapatri, Ganjika  
Eng: Gallow grass, Indian hemp, Marijuana, Mary jane  
Kan: Bhangi gida, Gaanjaagida  
Mal: Kanchavu, Sivamooli  
Tulu: Ganja, Bhangi

Habit: Erect shrub.

Habitat: Illegally cultivated in forests.

Status: Occasional. Poisonous.

Description: Dioecious aromatic shrubs, with sparsely pubescent, angled branchlets. Leaves opposite below, alternate above, 7 – 9 fid below, 3 – 5 fid above; leaflets lanceolate, chartaceous, scabrid above, pubescent with sessile glands below. Flowers unisexual, in short axillary clusters. Perianth-lobes 5. Stamens 5, with sessile orange glands along the groves. Fruit globose achene.

Uses: Leaf smoke is inhaled for swellings and throat pain. *Juice extracted from leaf is given for blood dysentery, amoebiasis, indigestion and muscle sprains.*

Etymology: Bhanga and Bhangi (destroy or ruin) is due to its narcotic activity which destroys the mental peace.

Note: Tetrahydro cannabinol, cannabidiol, cannabidiolic acid, cannabigerol, pseudo cannabino1, cannabinin and cannin are the active constituents responsible for antispasmodic, intoxicating, sedative and analgesic properties (Dey, 1994; Kapoor, 1990; Sharma et al., 1998). It is used in the preparations like *Jatiphaladi churna, Madanananda modaka, Vijaya vatika, Vedanantaka rasa, Kameswara modaka* and *Jwalanalar rasa* (Dey, 1994; Sharma et al., 1998).
168. *Canthium coromandelicum* (Burm. f.) Alston (Plate 29 B)

Syn: *Canthium parviflorum* Lam.; *Plectronia parviflora* (Lam.) Bedd.

Family: Rubiaceae

Vernacular Name:  
San: Chayatinisah, Gangeruki, Kari  
Eng: Wild Jessamine, Carray cheddie  
Kan: Kare, Karemullu, Achachumullu  
Mal: Kandakara, Karamullu, Madhakara  
Tulu: Karemullu, Kakkendel

Habit: Stout shrub.

Habitat: Rocky areas and lateritic hills.

Status: Common.


Uses: *Spine paste itself is the remedy for injury from its spines. *Oil prepared from the plant juice is also used for the same purpose. *Bark cooked with rice or young leaf *tambuli* is given for dysentery and gastritis. Fruit powder in small dose is beneficial for gastritis. Root extract is consumed to expel worms. Bark or tender shoot decoction is recommended for constipation. *Root paste is applied externally for headache and swelling in the neck. Root decoction is recommended for rheumatism. *Bark and fruit paste is applied for poisonous bites. *Root extract with lime juice is taken for cobra bite. Bark or root paste is applied for all types of wounds and ulcers. *About 4 gm of its root (collected without using any iron objects and dried by exposing to smoke for 3 days) ground with fresh milk is taken with 200 ml fresh milk in the morning followed by application of gingelly oil boiled with *Gymnostachyum febrifugum* tuber is done for a period of 12 days in case of warts and ulcers in legs. *Root paste with salt water is applied for warts and ringworm.
Note: Seed is poisonous to fish and dogs. Ripe fruit is edible. Fruit or seed powder is given in large dose in order to induce vomiting in Panchakarma. *Tender shoot tip is used to prepare tambuli.

169. *Canthium rheedei* DC. (Plate 29 C)

Syn: *Plectronia rheedei* (DC.) Bedd.

Family: Rubiaceae

Vernacular Name: Kan: Sanna kare, Madimmal kare  
Mal: Edalimaram  
Tulu: Madimalkare

Habit: Scandent shrub.

Habitat: Lateritic plains.

Status: Occasional.

Description: Scandent shrubs, with supra-axillary, curved spines. Leaves simple, ovate to elliptic. Flowers pentamerous, small, green, in axillary fascicles. Calyx turbinate; lobes 5, triangular. Corolla-tube densely hairy within; lobes 5, ovate, reflexed. Stamens 5. Fruit obcordate drupe, black when ripe.

Uses: *Oil extracted or prepared using its leaf is applied for burns. *Tender shoot tip extract with cumin seeds is taken for excess bleeding during menses and also for other menstrual irregularities.

Etymology: Sanna kare (smaller *Canthium*) arose due to its habit which is a miniature of *Canthium coromandelicum*. Madimalkare (bride *Canthium*) is due to its recurved spines.

Note: It is used as a substitute for *Canthium coromandelicum*.

170. *Capparis floribunda* Wight (Plate 29 D)

Syn: *Capparis andamanica* King.

Family: Capparaceae
Vernacular Name: San: Rudanti  
   Kan: Karthoti, Thottla gida  
   Mal: Karthoti  
   Tulu: Karthoti

Habit: Woody climber.

Habitat: Sacred groves and lateritic plains.

Status: Rare.

Description: Large woody climbing shrub, armed with recurved stipular spines at the base. Leaves simple, elliptic, coriaceous. Flowers white, in terminal panicled umbels. Sepals 4, reflexed. Petals 4, oblong. Stamens many, inserted at the base of gynophore. Fruit globose berry, orange when ripe.

Uses: *Fruit paste is applied for itches, psoriasis, cracks in hands and foot. Oil prepared from fruit is applied externally and its decoction is given internally for same purpose. *Fruit paste with lime juice is applied for septic wounds. *Fruit cooked with rice or its powder is taken by mixing with honey for tuberculosis. Oil prepared using leaf juice or leaf paste is applied for various skin diseases and venereal diseases.

Etymology: Thottla gida (cradle plant) is due to its climbing stem which is used as cradle by the children while playing.

Note: Plant is much valued as a wound healer.

171. *Capsicum annuum* L. (Plate 29 E)

Family: Solanaceae

Vernacular Name: San: Katuvira, Marichiphalam, Raktamarica  
   Eng: Chilly, Red pepper, Red chilly, Long chilly  
   Kan: Menasu, Kempu menasu, Holada menasu, Parangi menasu  
   Mal: Chuvannamulagu, Kappal mulagu, Mulagu  
   Tulu: Munchi, Parangimunchi
Habit: Erect herb.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Annual or biennial herb. Leaves simple, ovate-lanceolate. Flowers solitary, axillary. Calyx truncate, with 5 minute teeth, enlarging in the fruit. Corolla rotate-campanulate, white or purplish. Stamens 5. Fruit pendent berry, very variable in form and size, red when ripe.

Uses: Use of fruit as condiment increases digestive power (over use may result in ulcers). *Fruits, mustard and cumin seeds paste with rice cooked water is applied externally for relieving pain. Decoction prepared from its leaves is used for expelling cough and for skin diseases. *Bark decoction is used as a gargle for tonsillitis. Fruit extract is useful in various types of fever. *Oil extracted from the fruit is applied for joint pain. *Coconut oil is poured into the fruit, boiled and is used as ear drop for earache. *Fresh leaf fried with ghee is ground with butter milk after adding coconut gratings, salt and fried pepper seeds. This preparation is used along with the rice to overcome mouth ulcers. *Dried fruits and salt are added to coconut oil, heated and applied for bruises. *Fruit (after removal of seeds) is filled with coconut oil, heated over a lamp and the hot oil is applied for pain due to ear or nose piercing.

Etymology: Holada menasu (paddy field chilly) arose as this is commonly cultivated in paddy fields. The name Parangi menasu (foreign chilly) clearly indicates its exotic nature.

Note: Fruits are used as condiment. Capsaicin, solanine, solanidine, solasodine and capsicin are the active ingredients. Used for the preparation of Visamajwaraghni vati (Kapoor, 1990; Dey, 1994).

172. Capsicum frutescens L. (Plate 29 F)

Syn: Capsicum minimum Clarke.; Capsicum annuum L. var. frutescens (L.) O. Ktze.

Family: Solanaceae
Vernacular Name: San: Katuvira, Marichipalam, Raktamarica, Tiksha, Ujjvala
Eng: Bird chilly, Bird’s-eye chilly
Kan: Geerige menasu, Gaandhari menasu
Mal: Kantharimulaku
Tulu: Gaandharimunchi

Habit: Shrub.

Habitat: Grown in homestead gardens.

Status: Common.


Uses: *Tambuli* prepared from its leaves is used for mouth ulcers. *Fruits are heated along with salt and are pressed over twisted ankle. *Oil extracted from the fruit is used for whitlow, old skin diseases and tumours. Leaf decoction is taken for phlegm and skin diseases. *Leaf and fruit crushed with salt is heated in an iron vessel and is applied for ankle twist and spasms. *Fruit, paddy seeds of second crop, ginger and petiole of Alocasia macrorrhiza are used for rubbing the throat of cattle in case of infections. *6 drops of fruit extract mixed with tamarind juice are poured into nose in case of migraine. Fruit extract is a digestive. *Fruit juice mixed with white onion juice is poured into nose for migraine. *Juice of four leaves crushed with one ripe Capsicum fruit is poured into the opposite side ear in case of toothache and dental decay or cavities. *Ripe fruit crushed with tamarind pulp is boiled either in gingelly or coconut oil and is applied for pain, spasms and rheumatoid arthritis. *Fruit extract along with asafoetida and camphor is taken for cholera. *Fruit juice boiled with mustard oil is applied for skin diseases. *Oil extracted from the seeds is applied for dog bite. *Over use may cause gastric ulcers due to biliousness (antidote for it is Cynodon dactylon juice mixed with ghee).
Etymology: Katuvira (strongly pungent) and Gaandhari menasu (Gandhari’s chilly) are the indicators of its highly pungent fruits.

Note: Fruits are used as condiment. Capsaicin, solanine, solanidine, solasodine and capsicin are the active constituents. Used for the preparation of Visamajwaraghni vati (Kapoor, 1990; Dey, 1994).

173. *Carallia brachiata* (Lour.) Merr. (Plate 30 A)

Syn: *Carallia integerrima* DC.

Family: Rhizophoraceae

Vernacular Name: San: Vallabha
Eng: Common inland tree
Kan: Balgane, Andipunaru
Mal: Vankana, Vallabham
Tulu: Balgane, Andippunar

Habit: Large tree.

Habitat: Moist areas.

Status: Common.

Description: Large tree, with aerial roots from the base of the stem. Leaves simple, obovate, with revolute margins. Flowers small, yellowish-white, in small heads arranged in axillary peduncled cymes; flower buds usually covered with resin. Calyx-tube campanulate; lobes 7 – 8. Petals 7 – 8, clawed; limb irregularly fimbriate at apex. Stamens 14 – 16. Fruit globose, 1-seeded, berry-like, red when ripe.

Uses: *Cooked fruit ground with butter is applied for ulcers, chicken pox, small pox, carbuncles, septic wounds and skin diseases. *Bark decoction is used for kidney and bladder stones, also recommended for jaundice. *Bark paste is applied for carbuncles and rheumatism. *Bark decoction prepared in a copper vessel is used to wash chronic ulcers and wounds.
Etymology: Vallabha (beloved) clearly suggests that this tree is close to the hearts of the people due to the diverse uses.

Note: Wood is rich in tannin and is used to prepare khaki dye. Light timber. Bark is used in leather tanning. Bark ash is widely used to wash clothes. Seeds and fruits are edible.

174. Cardiospermum halicacabum L. (Plate 30 B)

Family: Sapindaceae

Vernacular Name: San: Indravalli, Kapolavalli, Karavi, Karnasphota  
Eng: Balloon vine, Blister creeper  
Kan: Bekkina budde gida, Bekkina tharadu gida, Erumballi,  
      Oora sebu  
Mal: Karavi, Ulincha, Uzhinja, Valliuzhinja  
Tulu: Urunde booru

Habit: Climbing herb.

Habitat: Along hedges and wastelands.

Status: Common.


Uses: Whole plant decoction is used for rheumatism and arthritis. *Whole plant paste with cumin seeds is applied for rheumatoid arthritis and arthritis. Plant extract is daily taken for arthritis or rheumatism of ankle and knee. *Oil prepared from plant juice is applied for burns, hair fall, sleeplessness and proper growth of hair. *Plant paste with water is applied for joint spasm and rheumatism. Leaf decoction is used for phlegm and diarrhoea. *Root boiled in oil is applied on the head for biliousness.
*Leaf boiled with jaggery in coconut oil is applied for conjunctivitis. Whole plant ground in milk is taken internally and also applied externally for swellings. *Oil prepared from its leaf juice or leaf juice alone is applied for scabies in children. *Dried leaf powder is used to set bones after bone fracture. *Whole plant paste with *Ventilago maderaspatana* root in ghee is applied for scabies and other contagious skin diseases. Plant decoction is used as a pain reliever. *Leaf juice is poured into the ear in case of earache. Whole plant paste is applied for swellings. *Dashapushpa* ground in milk is boiled with coconut oil and the resulting oil is used as hair oil. *Leaf paste with raw rice and cumin seeds is used for bone setting. *6 – 8 drops of heated leaf juice are used as ear drop and leaf paste is applied for earache and swelling. Leaf or whole plant paste with water is applied for joint pain and muscle spasm. Whole plant decoction is used for swellings, rheumatism, nerve diseases, phlegm, asthma and eye diseases. *Root decoction is recommended for biliousness and fever (it is perspirator and diuretic). *Dosa* prepared using leaf extract is eaten for 2 months in case of knee pain.

Etymology: Bekkina tharadu gida (cat’s testicle) and Oora sebu (village apple) are due to the resemblance of its fruit with testicle of cat and apple.

Note: It is one of the major ingredients of *Nilibhrngadi taila, Arukaladi taila, Amatisaranasaka yoga, Vasadi lepa, Nagaradi taila, Lasunadi kashaya, Aragvadhadi kvatha* and *Aragvadhadi churna* (Sivarajan & Balachandran, 1996; Sharma et al., 1998). Leaf is ground with rice for making *dosa*. Leaf is used to prepare *tambuli*. It is one among the *Dashapushpa*.

175. *Careya arborea* Roxb. (Plate 30 C)

Family: Lecythidaceae

Vernacular Name: San: Katabhi, Kumbhi, Kumbi, Pilu
Eng: Ceylon oak, Patana oak
Kan: Kavalumara, Guddada ippe, Goujala mara, Daddala
Mal: Peelam, Pelou, Pezhu, Ukamaram
Tulu: Daddala, Daddalo
Habit: Medium-sized tree.

Habitat: Lateritic plains and moist deciduous forests.

Status: Common.

Description: Medium-sized deciduous tree. Leaves simple, crowded towards the ends of the branches, broadly obovate. Flowers yellowish-white, crowded at the ends of the branches; bracts 3, one central elliptical and 2 linear laterals. Calyx-tube adnate to the ovary; lobes 4. Petals 4, ovate, with revolute margins. Stamens many. Fruit globose, green, fleshy berry, crowned with persistent calyx-lobes and style.

Uses: *Bark decoction is given in a single dose for cholera. This decoction is also used to wash septic wounds and cuts. *Fruit or leaf paste is applied for chronic ulcers and septic wounds. Leaf decoction is used to wash septic ulcers and wounds. *Tender shoot tip tambuli* is taken for liver problems and indigestion while decoction to wash burns, abrasions and bruises. Bark decoction is used for stomachache, liver problems, indigestion and heart burn. *Tender shoot tip extract is recommended for chronic amoebiasis. *Bark decoction is given as a blood purifier for IBS, rheumatism and blood dysentery. *Bark paste is applied in the treatment of bone fracture. *Fruit paste is applied to remove marks of burn, skin diseases and for poisonous bites. Washing with its bark or fruit decoction is useful for swellings. *Bark paste is applied for boils due to burn caused by crackers. *Leaf paste with salt is applied for septic wounds and ulcers. *Bark and Calycopteris floribunda leaf decoction is used for washing gangrene and wounds. *Bark paste is applied externally and that cooked with rice is consumed in case of viper bite. *Flower and dried flower stalk decoction is used for menstrual problems. *Tender shoot tip is chewed for mouth ulcers. *Oil prepared from bark juice is applied for burns. *Juice of its tender shoot tip heated along with that of Syzygium caryophyllatum, Psidium guajava, Ziziphus oenoplia, Ixora coccinea and Memecylon randerianum is given by adding garlic, onion and pepper extract for proper functioning of all systems in children. *Dried fruit decoction is used with honey for obesity. *Thick poultice of leaf paste with salt is given for ringworm. *Bark juice boiled with coconut oil is applied for burns. *Bark, Citrus medica leaf,
Syzygium cumini bark and Macaranga peltata bark decoction is used for leucorrhoea.

Etymology: Kumbhi (pot) arose due to its characteristic fruit which resembles pot. Kavalumara (bifurcated or forked branched tree) indicates branching pattern of this tree.

Note: Barringtogenol C, 16-deoxybarringtogenol C, barringtogenol D, careyagenol A, B, C, D & E, sapogenol A, lupeol, betulin, β-sitosterol, α-spinosterol and α-spinasterone are the active constituents. It is used in the preparation of Marma gutika (Jain et al., 1991; Sharma et al., 1998). Seed is poisonous.

176. Carica papaya L. (Plate 30 D)

Family: Caricaceae

Vernacular Name: San: Brahmairandah, Erandakarkati, Madhukarkati
Eng: Melon tree, Papaya, Pawpaw
Kan: Parangi hannu, Pappangayi, Pappaya
Mal: Kappakka, Pappaya
Tulu: Bappangayi, Boppangayi

Habit: Soft-wooded tree.

Habitat: Cultivated.

Status: Common. Exotic and poisonous.

Description: Rapidly growing, soft-wooded, dioecious or monoecious trees, with milky juice. Trunk usually unbranched, with a crown of large palmately lobed leaves. Leaves orbicular in outline, palmately and deeply 7-lobed; each lobe pinnately lobed; petioles hollow. Flowers greenish yellow, unisexual or bisexual. Male flowers in long drooping panicles or in short clusters. Female and bisexual flowers solitary or in clusters. Calyx very small, 5-fid. Petals 5, connate in male flowers and free in female. Stamens 10, in two series. Fruit large, oblong berry, yellow or orange when ripe. Seeds black.
Uses: Fruit is a mild laxative, it controls liver functions and is useful for jaundice. Latex of young fruit is highly abortive. Latex is applied to expel worms and to heal wounds. *Seed powder is applied externally for scabies with itch and ringworm. *Latex is locally applied (very carefully) for allergies. Eating fruits is beneficial in cold and rhinitis. *One piece of green papaya pieces preserved with salt in a jar is eaten daily for getting relief from malaria. *Young fruit pieces are cooked in water in which horse gram was cooked. One cup pineapple juice is added to the above liquid and drunk after eating toddy jaggery to induce abortion (up to 3 – 4 months of pregnancy). Latex has insecticidal property. Young fruit is crushed and applied for corns. Latex is applied for worms, swellings and skin diseases. *Seed powder mixed with honey is taken for convolution due to worm infestation. *Crushed seeds are swallowed with hot water to expel almost all types of intestinal worms. *Dried seed powder is taken with honey to expel intestinal worms. *Leaf and Jatropha curcas leaf paste is applied (after smearing the knee joint with gingelly oil) and kept it there for 2 hrs in case of knee pain.

Etymology: Erandakarkati (castor melon) arose as the fruit resembles melon in its shape and has properties similar to that of castor while Madhukarkati (sweet melon) is due to the sweet taste of ripe fruit. Parangi hannu (foreign fruit) clearly indicate its foreign origin.

Note: It has papain, papayotin, carpaine, carposide, carpassamine, cryptoxanthene and pseudocarpaine as active constituents responsible for digestive, anthelmintic and emmenagogue properties (Jain et al., 1991). Fruits are edible.

177. *Carissa carandas* L. Mant. (Plate 30 E)

Family: Apocynaceae

Vernacular Name: San: Avighna, Kantaki, Karamarda, Karamardaka
      Eng: Christ’s thorn, Karanda, Jasmine flowered carissa
      Kan: Karande, Kavalikaayi gida, Kavali gida
      Mal: Karakka, Karanda, Klavu
      Tulu: Karande, Karande kaayi

256
Habit: Thorny shrub.

Habitat: Scrub forests and lateritic hills.

Status: Occasional.

Description: Large thorny shrub. Leaves simple, oblanceolate. Flowers white, in bi- or trichotomous terminal or axillary cymes. Calyx 5-lobed. Corolla salver-shaped; lobes 5. Stamens 5. Fruit ellipsoid berry, purple or black when ripe.

Uses: *Fruits pickle is a digestive and appetizer.

Etymology: Kantaki (prickly) arose due to the thorny nature of the plant.

Note: Cardiac glycosides and α-sitosterol are the active components. It is one of the major ingredients of *Marma gutika* (Sharma *et al*., 1998). Fruits are edible.

178. *Carissa congesta* Wight (Plate 30 F)

Syn: *Carissa spinarum* L.; *Carissa diffusa* Roxb.

Family: Apocynaceae

Vernacular Name: San: Avighna, Kantaki, Karamarda, Karamardaka  
Eng: Christ’s thorn, Karanda, Jasmine flowered carissa  
Kan: Karande, Kavalikaayi gida, Kavali gida  
Mal: Cherumully, Mully  
Tulu: Karande, Karande kaayi

Habit: Scandent shrub.

Habitat: Rocky degraded slopes and hedges.

Status: Common.

Description: Large suberect or scandent thorny shrub, with zigzag branchlets. Leaves simple, broadly ovate. Flowers white, in axillary and terminal dichotomous cymes. Calyx 5-lobed. Corolla white, often tinged with pink, salver-shaped; lobes 5. Stamens 5. Fruit globose or ellipsoid berry, black-purple when ripe.
Uses: *Root is taken internally to expel worms. *Fruits pickle increases appetite, is useful for indigestion and gas trouble. *Dried flower extract is used for jaundice. *Oil prepared using its root and leaf is applied for itches, painful joints, nasal catarrh and measles. *Seed paste is applied for rheumatism. *Fruit extract is a digestive and liver stimulant.

Etymology: Kantaki (prickly) arose due to the thorny nature of the plant.

Note: Cardiac glycosides and \(\alpha\)-sitosterol are the active constituents. It is one of the major ingredients of *Marma gutika* (Sharma *et al.*, 1998). Fruits are edible.

179. *Caryota urens* L. (Plate 31 A)

Family: Arecaceae

Vernacular Name:  San: Dirgha, Madadruma, Madyadruma, Sritalah
Eng: Ceylon piassava, Kittool, Toddy palm, Fish-tail palm
Kan: Eendina mara, Paine, Bagani mara, Baini mara
Mal: Anappana, Chundappana, Irampana
Tulu: Eendu

Habit: Tall palm.

Habitat: Near human inhabitations and forests.

Status: Common.


Uses: *Bark powder boiled in oil is made into a paste and is applied for pain, to heal wounds and cuts (if cut is from any iron object, then bark should be collected using
stone and vice versa). Pith powder is a nutritive tonic and is usually given after recovery from a disease. *Extract of its root (50 gm) is given in tender coconut water for jaundice and recovery from coma stage. Pith powder in milk is taken for weakness, seminal weakness and leucorrhoea. *Seed powder mixed with jaggery is swallowed to expel round worm. *Bark decoction is used as a gargle for toothache. *Root decoction is recommended for inducing heat in cattle. Root extract mixed with sugar is taken for biliousness. *Fruit paste is applied externally for piles. Fruit paste is applied over the stomach for gas trouble. *Juice of its fruit (10 kg) and Ixora brachiata bark (10 kg) is mixed with 10 liters each of Borassus flabellifer toddy and brandy, stored for 100 days and is recommended for cancer. Pith powder is taken with water for dysentery. *Juice of bark of root towards west (collected using stone) is boiled with gingelly oil and used for immediate delivery. *Rind of three fruits ground with butter milk is given with salt to expel all kinds of intestinal worms, especially pin worms. Root is chewed or gargle with its root decoction is recommended for toothache. *Bark (cleaned) ground with turmeric, cumin and Trachyspermum ammi seeds are boiled with gingelly oil (3:6) and one drop of this oil is applied for any type of septic wounds. *Crushed bark (collected either by using stone or iron object) heated with coconut oil is applied for cuts, wounds and bruises.

Etymology: Madyadruma (toddy tree) arose as inflorescence of this tree is tapped for toddy. Its leaves are the favourite food of elephants and hence the name Anappana (elephant palm).

Note: Pith powder is a nutritive food. Inflorescence axis is used as thread for tying rafters. Jaggery is prepared from the toddy obtained from its inflorescence axis.

180. *Casearia ovata* (Lam.) Willd. (Plate 31 B)

Syn: Casearia esculenta Roxb.; Anavinga ovata Lam.

Family: Flacourtiaceae

Vernacular Name: San: Kampillaka
Kan: Dodda haniche, Ekanathana beru, Ekanayaka
Mal: Malampavatta, Vellakunnan  
Tulu: Ekanayake

Habit: Small tree.

Habitat: Evergreen and semi evergreen forests.

Status: Rare.

Description: Small tree or large shrub. Leaves simple, elliptic-lanceolate. Flowers small, in clusters in the axils of past and present leaves. Calyx 4-lobed, persistent. Petals absent. Stamens 8; staminodes pilose at tip. Fruit ellipsoid, succulent, 2 – 3-valved capsule, orange-yellow when ripe.

Uses: *Root, Syzygium cumini bark, Acacia catechu bark, Tinospora cordifolia stem and Elaeocarpus serratus bark decoction is used for diabetes. *Root decoction is used as a blood purifier. *Root decoction is taken with honey for flue and related body pain. *Root ground with lime juice is used once in the morning for constipation. *Root decoction is used twice a day to expel worms.

Etymology: Malampavatta (hill Pavetta) is due to its resemblance with Pavetta indica.

Note: It is usually used as a substitute for the drug Ekanayaka (Salacia chinensis). Ripe fruits are edible.

**181. Cassia fistula L. (Plate 31 C)**

Family: Caesalpiniaceae

Vernacular Name: San: Aragvadha, Dirghaphala, Nrpadruma, Rajataru, Rajavrksha  
Eng: Indian laburnum, Golden shower, Purging cassia  
Kan: Kakke mara, Konde mara, Konne  
Mal: Kanikonna, Konna, Swarnaviram  
Tulu: Konde, Kakke maro

Habit: Medium-sized tree.

Habitat: Scattered, usually near habitations.
Status: Common.


Uses: Bark paste is applied for skin diseases. *Juice collected from heated fruit is taken to expel intestinal worms. Bark decoction is used for lymph node enlargement, intestinal problems, skin diseases and also as a laxative. *Seed oil is given as a laxative for small children. Leaf paste is applied for alopecia totalis, lymph node enlargement, mouth ulcers, rheumatic body parts, ascites, jaundice, leprosy, itches and urticaria. *Fruit pulp is consumed by mixing it with honey for asthma. Root decoction is recommended for fever and diarrhoea. Bark and leaf decoction is given for swellings, jaundice and liver disorders. Fruit pulp is used as a popular laxative. *Bark or leaf ground with salt or honey is applied for ringworm. *Bark paste with heartwood of Pterocarpus santalinus, roots of Ixora coccinea, Rauvolfia serpentina and Aristolochia indica is applied for herpes. Bark decoction is used to wash the body during scabies. *Latex is applied externally for piles. *Bark paste with turmeric in coconut oil is applied for ulcers due to hair fall in cattle. *Paste of its tender shoot tip with Leucas aspera leaf, Ocimum tenuiflorum leaf and Vernonia anthelmintica seeds are applied for ring worm. Bark decoction is recommended for skin diseases. *Tambuli* prepared from its tender shoot is useful for rheumatism, fever, body pain and constipation (it is used during summer and rainy season). *Paste of its leaf and buds of Hibiscus rosa-sinensis fried in ghee is applied for alopecia totalis. *Whole plant juice with lime or their decoction is used for backache, stomachache during menses and also for conception. Fruit latex is applied for tinea versicolor. *Leaf and turmeric paste is applied for ring worm. *Leaf paste with buttermilk is applied for tinea versicolor. *Tender shoot tip ground in buffalo buttermilk is given in empty stomach in the morning for three days and paste is applied on the head for jaundice. *Bark, Terminalia chebula bark, Hemidesmus indicus root, Jasminum malabaricum bark and Trichosanthes cucumerina root decoction is given with 4 – 6 drops of honey for cracks in hands.
and feet. *Shoot tip along with that of *Citrus aurantium or lime juice ground in *Calotropis gigantea latex is applied for ringworm. *Leaf paste with buttermilk or tender shoot tip, gingelly seeds and turmeric paste with water or tender shoot tip and borax paste with lime juice are applied for tinea versicolor. *Bark and turmeric paste is applied for ulcers in penis. *Flower and silk cloth ash ground with cheese are applied for septic wounds and ulcers. *Flower with *Cucurbita pepo fruit (peduncle) ashes ground with cheese is applied for septic wounds and ulcers. *Bark ground with sour buttermilk is given when the cattle fails to excrete dung. *Tender shoot tip, *Calotropis gigantea latex and lemon juice (in equal quantity) paste is applied externally for warts and itches. Flower or young fruit extract is used as a laxative agent.

Etymology: Dirghaphala (long fruit) is due to its long cylindrical fruits. Nrpadruma, Rajataru and Rajavrksa (king of trees) arose due to its diverse uses.


182. *Cassytha filiformis* L. (Plate 31 D)

Family: Lauraceae

Vernacular Name: San: Akasavalli, Amaravela
          Eng: Green thread creeper, Moss creeper, Sita’s yam, Princess hair
          Kan: Amaru balli, Akasa balli, Mangana udidara
          Mal: Akasavalli, Moodillathali
          Tulu: Mudelidyanthi booru

Habit: Twining herb.
Habitat: Along hedges.

Status: Common.

Description: Parasitic, slender, twining herb; stem filiform, green, attached to the host by suckers. Leaves reduced to minute scales or absent. Flowers small, white, in spikes; bracts deciduous. Perianth-tube turbinate; lobes 6. Stamens 9, in 3 whorls. Fruit globose drupe, enclosed in the enlarged perianth-tube.

Uses: *Whole plant paste with ginger ground in butter is applied for wounds, cuts and ulcers. *Oil prepared from this plant juice in gingelly oil is applied for hair growth and colour. *Leaf juice along with sugar is poured into eye in case of conjunctivitis or burning in eyes. *Whole plant paste is applied over the head for alopecia erotica. Plant decoction or extract in milk is used internally for leucorrhoea, over menstrual discharge, rheumatism and also as a hepatic tonic in small children. *Plant paste is applied over the head for insanity and mental problems. *Whole plant along with Nervilia aragoana, Phyllanthus airy-shawii, Sida acuta and Phyllanthus emblica fruits are heated in gingelly oil and the resulting oil is applied for reappearance of hairs in ladies and for burning sensation in the face (if Evolvulus alsinoides is added to it, it acts as a preventive of rakapitta). *Plant extract in tender coconut water is used for leucorrhoea and burning during urination.

Etymology: Akasavalli and Akasa balli (sky climber), Moodillathali and Mudelidyanthi booru (climber without trunk) clearly depict its parasitic nature. Plant gets attached to the host body by suckers and grows, thus true roots are lacking.

Note: It is usually used in synonymous with Cuscuta reflexa.

183. *Casuarina litorea* L. (Plate 31 E)

Syn: Casuarina equisetifolia L.

Family: Casuarinaceae

Vernacular Name: Eng: Australian pine, Beefwood tree, Beach she-oak, Casuarina tree
Kan: Kasarike, Galimara, Chabaku, Sarvemara
Mal: Chavukku, Kattadi, Choola
Tulu: Chabuku, Galimaro

Habit: Large tree.

Habitat: Planted as wind breaker and fire wood tree.

Status: Common. Exotic.

Description: Large tree; branchlets filiform, jointed, deciduous; internodes 6 – 8 angled. Leaves reduced to scales, 6 – 8 per whorl, connate at base to form short sheath at nodes. Flowers minute, unisexual, monoecious or dioecious, without perianth, subtended by a bract and 2 bracteoles. Male flowers in terminal spikes formed of short toothed cups. Stamen 1. Female in ovoid heads. Fruit 1-seeded, flattened, terminally winged nut, enclosed in the woody bracteoles, which separate at maturity, the whole female head becomes a dry, woody, cone-like multiple fruit.

Uses: *Bark decoction is recommended for diarrhoea and dysentery. *Leaf decoction is a digestive agent.

Etymology: Galimara (wind tree) and Kattadi (moving with wind) arose as it is usually planted along the coast as wind breaker and it makes whistling sound as the wind blows. It is also planted along the boundary of a field to demark it from the rest hence the name Sarvemara (survey tree).

Note: Much valued firewood.

184. *Catharanthus pusillus* (Murr.) G. Don. (Plate 31 F)


Family: Apocynaceae

Vernacular Name: Kan: Vishakanigala soppu, Sanna bilikaskanagilu
Mal: Kapavila, Cupa-vela
Tulu: Ellya kanagilo, Boldu kanagilo
Habit: Annual herb.

Habitat: Along wastelands and roadsides.

Status: Common. Weed.


Uses: *Whole plant decoction is widely used for rheumatism and skin diseases while its paste is recommended for external application.

Etymology: Sanna bilikasikanagilu (small Catharanthus roseus) is due to its habit which is the miniature form of Catharanthus roseus.

Note: It is less used.

185. Catharanthus roseus (L.) G. Don. (Plate 32 A)

Syn: Vinca rosea L.; Lochnera rosea (L.) Reichb.

Family: Apocynaceae

Vernacular Name: San: Sadapushpi, Nityakalyani
    Eng: Periwinkle, Vinca, Madagascar periwinkle
    Kan: Kempu kasikanagilu, Sadapushpa, Nithyapushpa
    Mal: Nithyakallyani, Shavanari, Savakottappacha
    Tulu: Nithyapushpo

Habit: Perennial undershrub.

Habitat: Cultivated in gardens.

Status: Common. Exotic and poisonous.

Uses: Root decoction is recommended to lower the high blood pressure. Root bark or whole plant decoction is a hypotensive and sedative. Flower or leaf extract is taken for diabetes and high blood pressure. Leaf decoction is recommended for diabetes. *Five leaves are chewed daily and the juice is swallowed early in the morning for diabetes. Whole plant decoction is recommended for leukemia. *Two spoon of crushed leaf extract in water is used twice a day for stomachache due to worms in small children.

Etymology: Sadapushpi and Nithyapushpa (everyday flowering) arose as it flowers in all seasons.

Note: Vincristine and vinblastine are the major alkaloids of this plant which are injected in case of blood cancer (Chaudhri, 1996).

186. *Catunaregam spinosa* (Thunb.) Tirveng. (Plate 32 B)

Syn: *Randia dumetorum* (Retz.) Poir.; *Xeromphis spinosa* (Thunb.) Keay

Family: Rubiaceae

Vernacular Name: San: Madanah, Madanaphala
                      Eng: Emetic nut, Common emetic
                      Kan: Aremaphala, Aremadalu, Maggaare, Doddakaare,
                           Meenakaare
                      Mal: Kara, Karachulli, Malankkara
                      Tulu: Aremapalo, Kadukaare

Habit: Large shrub.

Habitat: Dry forest areas.

Status: Common. Poisonous.

Description: Large shrub or small deciduous tree, armed with stout axillary spines. Leaves simple, ovate or spatulate; stipules triangular. Flowers pale yellow, solitary or 2 – 3 together at the ends of short shoots. Calyx densely hairy; lobes 5, rounded.
Corolla salver-shaped; limb 5-lobed; lobes oblong, spreading. Stamens 5. Fruit ovoid or subglobose, obscurely ribbed berry, yellow when ripe.

Uses: *Fruit extract is given to drink in order to remove poison from stomach by vomiting while in small dose is useful for rheumatism and asthma. *Fruit paste is applied over the head for biliousness. *Root, *Canthium coromandelicum root and fruit of *Barringtonia racemosa ground in salt water is applied for septic wounds and ulcers. *Root ground in milk is taken internally and its paste is applied around the navel for foul smell of urine in children. *Fruit, bee wax and salt ground in buffalo butter are applied for cracks in feet. *Fruit and sugar ground in cow milk is used as *nasya* (before sunrise) for a week in case of giddiness and epilepsy.

Etymology: Madanaphala (intoxicating fruit) is due to the emetic nature of its fruit. Maggaare and Doddakaare (large *Canthium*) arose due to its close resemblance with *Canthium coromandelicum* and tree form.

Note: Fruit is used in *panchakarma*. Saponin, scopoletin, β-sitosterol and triterpenes are the active constituents. It is used in the preparation of *Pippalyadi taila* (Kapoor, 1990; Sharma *et al.*, 1998).

187. *Cayratia mollissima* (Wall.) Gagn. *(Plate 32 C)*

Syn: *Vitis mollissima* Wall. in Roxb.

Family: Vitaceae

Vernacular Name: Kan: Kaanakallate

Tulu: Kaanakallate

Habit: Large climber.

Habitat: Along hedges.

Status: Rare. Poisonous.

Description: Climbing shrub, with tendrils opposite to the leaves. Leaves 3-foliolate; leaflets oblong or elliptic, lateral leaflets subcordate at base, terminal one rounded,

Uses: *Fruit poultice is given for swelling and pain. *Fruit extract is used for digestive disorders.

Note: Fruit is used as vegetable.

188. *Ceiba pentandra* (L.) Gaertn. (Plate 32 D)

Syn: *Eriodendron anfractuosum* DC.; *Eriodendron pentandrum* (L.) Kurz.

Family: Bombacaceae

Vernacular Name: San: Kutashalmali, Salmali, Shvetasalmali  
Eng: Kapok tree, White cotton tree, Silk cotton tree  
Kan: Apurani, Bili booruga, Haasige hatthi mara, Aala  
Mal: Panjimaram, Poola  
Tulu: Aalo

Habit: Tall tree.

Habitat: Often cultivated.

Status: Common. Exotic.

Description: Tall deciduous tree; branches horizontal, in whorls; trunk prickly when young. Leaves digitate; leaflets 5 – 9, lanceolate, glaucous beneath. Flowers in axillary fascicles or tufted at the ends of the branches. Calyx cup-shaped, 5-lobed, hairy at the base within. Corolla creamy white; petals 5, villous outside. Staminal tube 5-branched, each 2-anthered at apex. Fruit ovoid-oblong, 5-valved capsule, silky within. Seeds covered with abundant silky hairs.

Uses: *Root bark decoction is given to induce vomiting. *Gum extract is used for digestive disorders.
Etymology: Shvetasalmali and Bili booruga (white Bombax) are due to the white flowers and resemblance of the tree with Bombax. Haasige hatthi mara (bed cotton tree) and Panjimaram (cotton tree) arose as its seeds and their silky hairs are used to stuff pillows and bed.

Note: It is often used as a substitute for Bombax ceiba.

189. *Celastrus paniculatus* Willd. (Plate 32 E)

Family: Celastraceae

Vernacular Name: San: Agnidipta, Jyotishmati, Paravatanghri
Eng: Black oil plant, Climbing staff plant, Intellect plant
Kan: Karigavane, Gangunde kaayi, Bhavangabeeja, Jyothishmathi
Mal: Cherupunna, Jyothishmathi, Paluzham, Valuzham
Tulu: Kangli ballu

Habit: Straggling shrub.

Habitat: Ghats and moist deciduous forests.

Status: Occasional.

Description: Straggling shrub, with puberulous branchlets. Leaves simple, ovate or orbicular, dentate. Flowers polygamous, greenish-white, in terminal paniculate cymes. Sepals 5, tubular. Petals 5, ovate. Stamens 5; staminodes 5. Fruit obovoid capsule, orange when ripe.

Uses: *Root, roots of Gardenia resinifera, Flueggea leucopyrus, Azima tetracantha, Cyclea peltata, Flacourtia montana, Ixora coccinea, Melastoma malabathricum and Erythrina variegata* bark (in equal quantity) ground with rice washed water is taken once a day for 40 days from the 4th day of menses in case of DUB and infertility problems. *Root extract with lime juice is used as a blood purifier. *Oil (1/4 spoon) extracted from dried seed is given with banana in the morning in empty stomach for two days in case of DUB in cattle. *Stem bark, garlic and Trachyspermum ammi seeds decoction is given for stomach swelling due to constipation in cattle.
Etymology: Jyothismathi (brightens intellect) is due to its therapeutic efficacy. It is a well known nervine tonic and intellect enhancing drug.

Note: Tetracasanol, sterol, celastrine, paniculatine and celastrol are the active constituents (Kapoor, 1990). It is used for preparations like Smritisagara rasa, Jyotismati taila, Jyotismati kalpa, Karanjadi yoga and Laghu visagarva taila (Dey, 1994; Sharma et al., 1998).

190. *Celosia argentea* L. (Plate 32 F)

Syn: *Celosia argentea* L. var. *argentea*

Family: Amaranthaceae

Vernacular Name: San: Kurandika, Sikih, Sitivarah, Tanduliyah
Eng: Quail grass, Silver spiked cockcomb
Kan: Anne soppu, Hanne soppu, Mayurashikhe
Mal: Cheruchira, Kozhipullu
Tulu: Korijottu, Korikottu

Habit: Erect herb.

Habitat: Weed in wastelands and road sides.

Status: Common. Exotic and weed.

Description: Erect annual herb. Leaves simple, linear-lanceolate to elliptic-lanceolate, narrowed at the base. Flowers minute, in terminal cylindrical, dense, silvery to pink spike, on long sulcate peduncle. Perianth 5-lobed; lobes elliptic-oblong. Stamens 5. Fruit ovoid utricle.

Uses: *Plant is used as vegetable to increase the quantity of muscle in the body. *Rotics* prepared from its seeds are nutritive and tonic.

Etymology: Sikih (tuft of hair), Mayurashikhe (peacock’s comb) and Korijottu (cock’s comb) are due to its characteristic inflorescence.

Note: Young plant is used as vegetable.
191. *Celtis timorensis* Span. (Plate 33 A)

Syn: *Celtis cinnamomea* Lindl. ex. Planch.; *Celtis trinervia* sensu Bedd.

Family: Ulmaceae

Vernacular Name: San: Shvetakakamusthi
Eng: Ceylon stick wood
Kan: Bili kalamushti, Peenari, Bhutali, Palle
Mal: Butha, Butha-onatthi, Poochakkurumaram
Tulu: Pillsappu, Peenari

Habit: Medium-sized tree.

Habitat: Dry deciduous forests.

Status: Occasional.

Description: Medium-sized evergreen tree, with pubescent tender parts. Leaves simple, ovate-elliptic, chartaceous, 3-veined, black when dry. Flowers small, whitish, in axillary dichotomous panicles. Perianth 5-lobed. Stamens 5. Fruit ovoid-globose drupe, orange when ripe.

Uses: *Bark or wood oil is applied for sleeplessness, headache and mental disorders. *Twig is tied to the neck or heart wood smoke is applied for children suffering from malnutrition. *Twig is tied to the cradle to ward off the fear in children.

Etymology: Shvetakakamusthi and Bili kalamushti (white *Strychnos*) are due to its resemblance with *Strychnos nux-vomica* and whitish plant body. While burning its wood it emits smell of stool and hence the name Peenari (stool smell).

Note: It is one of the major ingredients of *Himasagara taila* (Dey, 1994).

192. *Centella asiatica* (L.) Urban (Plate 33 B)

Syn: *Hydrocotyle asiatica* L.

Family: Apiaceae

Vernacular Name: San: Brahmananduki, Brahmi, Mandukaparni, Sarasvati
Eng: Indian penny-wort, Pohekula, Spade leaf  
Kan: Ondelaga, U rage, Brahmi  
Mal: Kodangal, Kudakan, Mutthil, Vellara  
Tulu: Thimare, Chimare

Habit: Prostrate herb.

Habitat: Wastelands.

Status: Common. Weed.

Description: Slender prostrate herb, with roots from the nodes; stem long, filiform. Leaves simple, orbicular to reniform, palmately nerved. Flowers small, pink, in simple axillary 3-flowered umbels; involucral bracts 2. Calyx truncate, 5-toothed. Corolla simple; petals 5, ovate. Stamens 5. Fruit laterally compressed schizocarp, with 7 – 9 ribbed mericarps.

Uses: Plant juice is taken internally for liver disorders and mouth ulcers. *Plant juice mixed with tender coconut water is given to drink for eczema and erysipelas. *Plant is chewed along with cumin seeds for mouth ulcers. Plant extract is consumed daily to improve circulation, neurological problems, gastrointestinal system and as a brain tonic. *Plant juice is used for fever in children and also as a blood purifier and diuretic. *Leaf juice is applied for skin diseases and poisonous bites. Leaf paste is applied for wounds, septic ulcers and burning sensation due to bruises. Whole plant decoction is taken for rheumatism, biliousness, phlegm, leprosy, fever and digestive disorders. Plant extract with milk is recommended to increase intellect and memory power. Plant paste is applied for ulcers, wounds, allergic skin diseases, urticaria, rashes and itches. *Oil prepared from plant juice is used as hair oil. *Leaf juice mixed with honey and milk is consumed before meals to increase memory power and for speech clearance. Eating leaves daily helps to clear the speech. *Leaf juice ground with Acorus calamus rhizome and honey is recommended to increase resistance in children. *Tambuli prepared using this plant is useful for biliousness and is a nerve tonic (should not be used during rainy season and night). *Leaf juice mixed with sugar is given to arrest diarrhoea. *Paste
prepared from whole plant, tender shoot tips of *Memecylon randerianum*, *Cynodon dactylon* and *Indigofera tinctoria* leaf cooked in cow milk is applied 5 – 6 times a day for herpes. *Whole plant juice (3 spoons thrice a day) or leaf extract with pepper seeds is taken for speech clearance. *Oil prepared from leaf juice is used as hair oil for vision problems. Plant juice mixed with honey and ghee is consumed at early morning in empty stomach to increase memory power. *Shade dried leaf powder mixed with honey is used for leprosy. *Whole plant, *Ocimum tenuiflorum* leaves and pepper decoction is used for fever. *Plant juice mixed with honey is recommended for burning during urination and shortage of urine. *One handful leaves and 12 – 20 pepper seeds boiled in two cup of water is reduced to one cup and is taken with one tsp ghee every morning for three weeks in case of alopecia totalis. *Leaf boiled in water with pepper seeds is given by adding ghee and leaf paste is applied externally for alopecia totalis. *Leaf, pepper and *Glycyrrhiza glabra* rhizome decoction is used for chronic rhinitis. *For the same disease, shade dried plant powder is used as *nasya*. Plant decoction is recommended for *tridoshas*, as a diuretic, for leprosy, tinea versicolor, digestive problems, wounds, septic wounds, eye, ear, nose, throat, mental problems and to increase memory power (should be used before 5 AM, if used at night can lead to blindness). Root extract is used as a cooling agent and memory tonic in children while that of whole plant for speech clearance. *Plant ground in buttermilk is taken at early morning for 12 days in case of skin diseases. *Whole plant, long pepper, milk and ghee are mixed and given with honey and sugar for a week in case of infertility problems. *Half spoon extract of whole plant juice ground with nutmeg is given to young children to develop their intellect. *Plant, *Hemidesmus indicus* root, *Hibiscus rosa-sinensis* root, *Papaver somniferum* seed powder mixed with fresh milk is given as a sexual tonic. *Whole plant juice is consumed in empty stomach by adding cumin powder for dysmenorrhea. *Oil prepared by heating equal quantities of its juice and coconut oil is applied for hair fall. *Root and coriander seed decoction is used by adding milk and sugarcandy for whooping cough. *Crushed whole plant boiled with water is given to drink for easy delivery. Leaf and pepper decoction is used for rhinitis. Root juice is recommended from the 3rd month of pregnancy for intellect.
development in child. *Whole plant and young coconut flower chutney is eaten for Parkinson’s disease and other nervine disorders.

Etymology: Ondelaga (single leaved) arose as its simple leaves are arranged at greater distance on creeping stem. It is one of the well known drugs for intellect development and speech clearance hence the name Sarasvati.

Note: It is used for preparations like Brhat cincadi taila, Brahma rasayana, Paphanadi taila, Paphanadi ghṛta, Brahmi paka, Saraswatarista, Saraswata ghṛta, Brahmi taila and Brahmi sattwa (Dey, 1994; Sivarajan & Balachandran, 1996). Asiaticoside, sitosterol, hydrocotylin and vallarine are the active constituents (Kapoor, 1990). Both Centella asiatica and Bacopa monnieri are used as the source of the drug Brahmi. Plant is used as vegetable.

193. *Centratherum punctatum* Cassini. (Plate 33 C)

Family: Asteraceae

Vernacular Name: Eng: Brazilian button flower
Kan: Henu shyavanthike
Tulu: Penu sevanthige

Habit: Erect herb.

Habitat: Cultivated in gardens, also seen as garden escape.

Status: Frequent. Exotic.

Description: Erect herb, with pubescent stem. Leaves simple, ovate to spatulate, hirtellous, with winged petiole and toothed margins. Flowers in homogamous terminal heads, surrounded by two types of bracts, outer larger, foliaceous and the inner small. Disk florets many, purple, central ones distinctly shorter. Calyx 5-toothed. Corolla-lobes 5. Stamens 5. Fruit linear, pale achene, covered with upward pointing bristles.

Uses: *Whole plant paste is applied for skin diseases and wounds. *Whole plant juice is used as a biocide especially for ticks and lice.
Etymology: Henu shyavanthike and Penu sevanthige (lice *Chrysanthemum*) are due to the resemblance of flower with that of *Chrysanthemum* and their biocide activity against lice.

Note: Usually grown as garden plant.

194. *Centrosema molle* Benth. (Plate 33 D)

Syn: *Centrosema pubescens* auct. non Benth.; *Centrosema virginianum* auct. non (L.) Benth.

Family: Papilionaceae

Vernacular Name: San: Mudgaparni
                     Eng: Climbing Centrosema
                     Kan: Kaaduhesaru
                     Mal: Kattucherupayar, Kattupayar
                     Tulu: Kaattupadenji

Habit: Climbing herb.

Habitat: Along the hedges.

Status: Common. Exotic and weed.

Description: Perennial climbing herb. Leaves 3-foliolate; leaflets ovate to orbicular, finely pubescent. Flowers lilac to bluish-violet, 3 – 5 in axillary racemes, each flower subtended by two striate bracteoles. Calyx campanulate, 5-toothed. Petals 5; standard orbicular. Stamens monadelphous. Fruit linear, compressed, slightly beaked pod.

Uses: Seeds are the best tonic, have cooling effect and its decoction is used to increase body weight and for gas trouble. *Root paste with sandalwood is applied over the eyes for eye diseases. *Whole plant soup is given as a tonic for weakness. *Plant decoction is recommended for gas trouble and loss of control over urination. *Root paste with sugar, sandalwood powder and butter is applied for conjunctivitis and burning sensation in the eyes. Seed decoction is used for rheumatism. *Seed
powder is rubbed over the body during bath for scabies. *Whole plant ground in milk is consumed for increasing the semen, sperms and lactation.

Etymology: Kaaduhesaru, Kattucherupayar and Kaattupadenji (wild green gram) are due its similarity with green gram plant.

Note: It is usually used as a substitute for *Vigna radiata* var. *sublobata* in preparations like *Dhanvantara kulambu, Vidaryadi lehya, Mahakalyanaka ghrta, Mahamasa taila* and *Amrtaprasa ghrta* (Sivarajan & Balachandran, 1996).

195. *Cerbera odollam* Gaertn. (Plate 33 E)

Syn: *Cerbera manghas* L.

Family: Apocynaceae

Vernacular Name: Eng: Chiute, Dog-bane, Grey milkwood

Kan: Chande mara, Kaande, Honde, Chande hoo

Mal: Chattankai, Othollam, Odalam

Tulu: Tende mara, Chende maro

Habit: Small tree.

Habitat: In swamps and along backwaters near the coast.

Status: Common. Poisonous.

Description: Small littoral tree, with whorled branchlets. Leaves simple, crowded at the ends of the branchlets, oblanceolate. Flowers large, sweet-scented, in stout peduncled, terminal lax cymes. Calyx 5-lobed. Corolla white, with yellow throat; tube cylindric below, funnel-shaped above; lobes 5, broad. Stamens 5. Fruit globose, green drupe, with thick and fibrous pericarp.

Uses: *Leaf decoction is taken to arrest diarrhoea.*

Etymology: Tende mara (entangled tree) is due to its characteristic whorled branches.
Note: Fruits are highly poisonous. *Seeds are fed to dog to induce teeth fall.

196. Cereus pterogonus Lam. (Plate 33 F)

Family: Cactaceae

Vernacular Name: Eng: Hedge cactus, Columnar cactus
Kan: Kalli, Chadurakkalli
Mal: Poochamullu
Tulu: Kalli

Habit: Tall cactus.

Habitat: Planted along hedges.

Status: Occasional. Exotic and poisonous.

Description: Tall arborescent, much-branched cacti, with green, 6 – 9 ribbed branches; areoles with 5 – 10 spines; spines brown to black. Flowers large, white, funnel-shaped, nocturnal, borne singly along the sides of the stem. Perianth tubular; outer segments thick, greenish; inner thin and white. Stamens many. Fruit fleshy berry, red when ripe.

Uses: *Oil prepared from stem juice is used for rheumatism, arthritis, lymphoedema, wounds and various skin diseases. Stem juice is an emetic and purgative. Latex is applied for toothache, rheumatism and scabies. *Root bark decoction is a drastic purgative. *Root paste with asafoetida is applied over the abdomen to expel worms. *Fried stem powder is dusted over septic wounds and ulcers. *Plant ash mixed with castor oil is applied for leprosy and chronic skin diseases.

Etymology: Chadurakkalli (angular cactus) arose due to its characteristic angled or ribbed branches.

Note: It is used in synonymous with Euphorbia antiquorum. It is believed that keeping this plant over the house prevents thunder fall.
197. *Ceropegia candelabrum* L. var. *candelabrum* (Plate 34 A)

Family: Asclepiadaceae

Vernacular Name: Eng: Goglet flower  
Kan: Halluka, Nagathumbe  
Mal: Nagathumba, Nota-nodhen-valli, Kammanamkizhangu  
Tulu: Nagathumbe

Habit: Twining herb.

Habitat: Among bushes in disturbed forests.

Status: Occasional.

Description: Glabrous twining herb, with globose tuber. Leaves simple, elliptic-ovate. Flowers in lateral umbellate cymes. Calyx-lobes 5, narrowly lanceolate. Corolla tubular, greenish-white, striped with purple on the tube; tube inflated below, then cylindric; lobes 5, purplish at tip, yellowish within, pubescent inside with white hairs. Corona double. Staminal column short. Fruit linear, follicle.

Uses: *Whole plant decoction is recommended for nervine disorders, fever, cold and cardiac debility.*

Etymology: Nagathumbe and Nagathumba (snake *Leucas*) are due to its characteristic tubular corolla.

Note: *Tubers are consumed after boiling in water.*

198. *Cestrum nocturnum* L. (Plate 34 B)

Family: Solanaceae

Vernacular Name: San: Nishagandhi  
Eng: Lady of the night, Night Jessamine, Night blooming jasmine  
Kan: Raatri rani  
Mal: Nishagandhi  
Tulu: Raatri rani
Habit: Shrub.

Habitat: Cultivated in gardens.

Status: Common. Exotic.

Description: Straggling shrub, with slender arching branches. Leaves simple, oblong-lanceolate. Flowers in axillary and terminal paniculate cymes, fragrant, nocturnal. Calyx 5-toothed. Corolla greenish-yellow; tube elongated, narrow, constricted at throat; lobes 5, reflexed. Stamens 5. Fruit ovoid berry, white when ripe.

Uses: *Flower powder or extract is used as a general tonic.

Etymology: Nishagandhi (fragrance of the night) and Raatri rani (queen of the night) arose from their nocturnal and fragrant flowers.

Note: Commonly cultivated in gardens.

199. *Chamaecrista mimosoides* (L.) Greene (Plate 34 C)

Syn: *Cassia mimosoides* L.

Family: Caesalpiniaceae

Vernacular Name: Kan: Nelathangadi, Nelabage

Mal: Cheruthakara, Padarchunda

Tulu: Nelabage

Habit: Diffuse undershrub.

Habitat: Open places.

Status: Common. Weed.

Uses: *Whole plant decoction is used as a tonic for ladies. *Root decoction is recommended for nerve spasm.

Etymology: Nelabage (ground *Albizia*) is due to its herbaceous nature and similarity of pod as well as leaves with that of *Albizia chinensis*. Cheruthakara (smaller *Senna*) clearly indicates its close affinity with *Senna*.

Note: Whole plant is used as fodder.

200. *Chassalia curviflora* (Wall. ex Kurz.) Thw. var. *longifolia* (Dalz.) Hook. f. *(Plate 34 D)*

Syn: *Psychotria longifolia* Dalz.

Family: Rubiaceae

Vernacular Name: Kan: Kaadu garudapatala, Nirvishi
    Mal: Yamari, Vellakurinji, Kattu vella amalpori
    Tulu: Kaattu patalagarude

Habit: Erect shrub.

Habitat: Moist shady places.

Status: Rare.


Uses: *Root paste with lime juice is applied for snake bites and high blood pressure. *Paste prepared by grinding whole plant heated in coconut oil along with coconut gratings is applied for burns. *Plant cooked with rice is consumed for viper bite. *Whole plant extract with dried turmeric is given internally for swollen stomach in cattle.

Etymology: Kaadu garudapatala and Kaattu patalagarude (wild *Rauvolfia*) are from its close resemblance with *Rauvolfia serpentina*.

Note: Usually used as a substitute for *Rauvolfia serpentina*. 
201. *Chassalia curviflora* (Wall. ex Kurz.) Thw. var. *ophioxyloides* (Wall.) Deb & Krishna. (Plate 34 E)

Syn: *Psychotria ophioxyloides* Wall.; *Chassalia ophioxyloides* (Wall. ex Kurz.) Craib.

Family: Rubiaceae

Vernacular Name: Kan: Kaadu garudapatala, Nirvishi
   Mal: Yamari, Vellakurinji, Kattu vella amalpori
   Tulu: Kaattu patalagarude

Habit: Erect shrub.

Habitat: Moist shady places.

Status: Common.


Uses: Same as *Chassalia curviflora* var. *longifolia*.

Etymology: Kaadu garudapatala and Kaattu patalagarude (wild *Rauvolfia*) are from its close resemblance with *Rauvolfia serpentina*.

Note: Usually used as a substitute for *Rauvolfia serpentina*.

202. *Cheilanthes farinosa* (Forsk.) Kaulf. (Plate 34 F)

Family: Cheilanthaceae

Vernacular Name: San: Hamsapadi, Hansaraja
   Kan: Hansaraja, Mayurashikha
   Mal: Mayurashikha
   Tulu: Navilbeelo
Habit: Small herb.

Habitat: Hilly areas, also grown in gardens.

Status: Occasional.

Description: Delicate fern. Rhizome short, stout, densely clothed with brown linear scales. Stipes slender, sub-erect, glabrous. Fronds bipinnate, deltoid-lanceolate, pinnatifid at apex; pinnae ascending. Sori scariose-rounded, in continuous margin.

Uses: *Plant powder or its extract is taken for cough and bronchitis. *Leaf extract is used as a laxative in case of constipation in children. *Plant, stem and leaf ground with lime juice are applied over the scalp for dandruff and small boils. *Gruel prepared by cooking rice with its leaf tied in a cloth is given to eat with butter milk for difficulty in breathing (antidote for overdose is *Cynodon dactylon* decoction). *Plant decoction is an intoxicant, blood purifier, useful for skin diseases and lung disorders.

Etymology: Mayurashikha (peacock’s crest) is due to the sharp ending of the fronds and Hamsapadi (goose foot) is due to the resemblance of pinnules with foot of a goose.

Note: Whole plant along with the leaves of *Lawsonia inermis* is used to colour hands. Kaempferol, quercetin, methylkaempferol, cheilanthatriol and cheilarinosin are the active constituents (Jain et al., 1991).

203. *Chenopodium ambrosioides* L. (Plate 35 A)

Family: Chenopodiaceae

Vernacular Name: Eng: American wormseed, Mexican tea, Sweet pig weed, Stinking weed

Kan: Kaadu oma, Gudde oma, Huli oma

Mal: Echekolli, Kattayamodagum, Mannennachedi, Nattachedi

Tulu: Kaadu omo

Habit: Erect herb.
Habitat: Wastelands and degraded forests on the hills.

Status: Occasional. Exotic and weed.


Uses: *Seed decoction is recommended for indigestion after delivery and to expel worms.

Etymology: Kaadu oma, Kattaymodagum, Kaadu omo (wild ajowan), Gudde omo (hill ajowan) and Huli omo (sour ajowan) are due to its wild nature, restriction to the hills and characteristic taste. Mannennachedi (kerosene plant) and Nattachedi (foetid plant) arose from its characteristic aroma.

Note: Ascaridole, $\rho$-cymene, d-terpene are the active constituents giving it anthelmintic property (Kapoor, 1990).

204. *Chionanthus mala-elengi* (Dennst.) P. S. Green ssp. *mala-elengi* (Plate 35 B)

Syn: *Forsytha mala-elengi* Dennst.; *Linociera malabarica* Wall. ex G. Don.; *Chionanthus malabaricus* (Wall. ex G. Don.) Bedd.

Family: Oleaceae

Vernacular Name: Kan: Tadagathi, Maisale, Horiyakki mara
Mal: Kallidala, Mala-elengi, Perumbal
Tulu: Poriyakki maro

Habit: Small tree.

Habitat: Riparian forests.

Status: Common.

Uses: *Oil prepared from leaf juice mixed with gingelly oil is applied for nervous disorders, epilepsy, fits and giddiness.

Etymology: Mala-elengi (hill *Mimusops*) arose due to its restriction to the forests and resemblance with *Mimusops elengi*.

Note: Flowers are highly fragrant.

205. *Chonemorpha fragrans* (Moon) Alston (*Plate 35 C*)

Syn: *Chonemorpha macrophylla* G. Don.; *Chonemorpha grandiflora* (Roth.) M. R. & S. M. Almeida; *Echites grandiflora* Roth.; *Echites fragrans* Moon.

Family: Apocynaceae

Vernacular Name: San: Murva, Morala
   Eng: Frangipani vine
   Kan: Perukurumbe
   Mal: Appuppanthadi, Mutthappanthadi, Perumkurumba
   Tulu: Perumkurumbe

Habit: Woody climber.

Habitat: Evergreen and semi evergreen forests.

Status: Frequent.

Description: Large woody climber, with tomentose branchlets. Leaves simple, broadly elliptic or suborbicular, tomentose beneath; petioles tomentose. Flowers fragrant, white, in terminal racemose cymes. Calyx-lobes 5, ovate, ciliate, glandular within. Corolla salver-shaped; lobes 5, broadly rounded. Stamens 5; filaments villous. Fruit long, straight, woody follicles. Seeds ovoid, beaked, tipped with long white silky coma.
Uses: *Plant boiled in milk is given for diarrhoea in children. *Leaf extract with water is rubbed over the head for malnutrition. Whole plant decoction is recommended for leprosy, scabies, syphilis, dyspepsia, flatulence, colic and cardiac debility. *Plant extract is given as a digestive and general tonic to children.

Etymology: Appuppanthadi and Mutthappanthadi (grandpa’s beard) are due to its characteristic seeds which are tipped with long white silky coma.

Note: It is used in the preparations like *Ayaskrti, Varanadi kashaya, Yogaraja guggulu and Laghu laksadi taila* (Sivarajan & Balachandran, 1996).

206. **Chromolaena odorata** (L.) King. & Robinson (Plate 35 D)

Syn: *Eupatorium odoratum* L.

Family: Asteraceae

Vernacular Name:  Eng: Bitter bush, Christmas bush, Siam weed, Triffid weed  
Kan: Communist kale, Communist gida  
Mal: Assam pacha, Communist-pacha  
Tulu: Communist dai

Habit: Erect undershrub.

Habitat: In wastelands, along roadsides and in forest clearings.

Status: Common. Exotic and weed.

Description: Erect undershrub, with sparsely pubescent stem. Leaves simple, ovate to rhomboidal, pubescent, subpalmately 3-nerved. Flowers in homogamous heads on dense terminal corymbs; involucral bracts 4 – 5 seriate, outer ovate, inner linear. Florets tubular-campanulate, pale blue, 5-lobed. Stamens 5. Fruit angular, blackish achene, with 4 – 5 scabrid ribs.

Uses: Pure leaf juice is used to arrest bleeding from cuts and wounds and for quick heal. It is a pain killer. *Oil prepared from plant juice is applied over the head for rhinitis. Plant juice is used for burns, gastritis and sprains.  Plant paste is applied
externally for pain and swellings. *Root extract in tender coconut water is taken for allergies and in starting stages of urticaria and rashes. *Stem peel paste is applied for septic wounds.

Etymology: Communist kale (communist weed), Communist gida, Communist-pacha and Communist dai (communist herb) are due to its property of rapid colonization or spreading in the form of a weed.

Note: Lupeol, β-amyrin, salvigenin, flavones, chalcones, scutellarein, sinensetin, isosakuranetin and acacetin are the active constituents responsible for its spasmolytic activity (Jain et al., 1991). Plant is used as a green manure for capsicum crop to prevent insect attack. Plant extract is poisonous to earth worms.

207. *Chrysanthemum indicum* L. (Plate 35 E)

Family: Asteraceae

Vernacular Name: San: Bahupatrika, Sevanti, Shatapatri, Taruni  
Eng: Chrysanthemum  
Kan: Shyavanthige, Sevanthige  
Mal: Jemanthi, Semanthi  
Tulu: Sevanthige

Habit: Erect herb.

Habitat: Cultivated in gardens.

Status: Common.

Description: Erect, branched, aromatic herb, with grey-pubescent branchlets. Leaves thin, ovate in outline, variously pinnatisect, grey-pubescent beneath. Florets yellow, in heterogamous heads, on terminal small clustered peduncles; involucral bracts 2-seriate, outer broadly scarious, the midnerve green and herbaceous. Ray florets yellow, showy, neuter. Disc florets fertile, yellow, tubular, 5-lobed. Stamens 5. Fruit fusiform achene, with a short crown of pappus.
Uses: *Dried flower powder is taken with honey or hot water for asthma and bronchitis. *Leaf juice mixed with cumin seed juice is given for stomachache and to expel intestinal worms.

Etymology: Bahupatrika (many flowered) and Shatapatri (hundred leaved or flowered) arose from its characteristic head inflorescence with numerous florets and highly pinnatisect leaves.

Note: This plant is often planted in between vegetables to ward off insect pests.

208. *Chrysophyllum cainito* L. (Plate 35 F)

Family: Sapotaceae

Vernacular Name: Eng: Caimito, Star apple, Satin leaf  
   Kan: Ale, Jokali, Nakshatra hannu  
   Mal: Star apple  
   Tulu: Nakshatra parandu

Habit: Medium-sized tree.

Habitat: Cultivated in gardens.

Status: Common. Exotic.

Description: Tree, with glabrescent branches. Leaves simple, oblong-ovate, purplish-brown beneath. Flowers small, greenish-white, in axillary fascicles. Calyx 5-lobed; lobes ovate, hairy within. Corolla 5-lobed; lobes ovate. Stamens 5. Ovary ferruginous-villous; stigma 7 – 10 lobed. Fruit globose, 4 – 8 seeded berry, purplish-brown when ripe.

Uses: *Fruit juice is used as a digestive agent.

Etymology: Nakshatra hannu (star fruit) is due to its bright and shining fruits.

Note: Ripe fruits are edible.
209. *Cicer arietinum* L. (Plate 36 A)

Family: Papilionaceae

Vernacular Name: San: Canaka, Canakah, Kanchuki, Vajibhakshya  
Eng: Bengal gram, Chick pea  
Kan: Kadle, Kadale, Kempukadale  
Mal: Kadala, Porikadala  
Tulu: Kadle

Habit: Spreading herb.

Habitat: Cultivated, found near habitations.

Status: Occasional.

Description: Annual spreading herbs, with glandular-hairy branchlets. Leaves many-foliolate; leaflets sub-opposite, ovate-elliptic, dentate. Flowers yellow, solitary, axillary. Sepals 5, pubescent. Petals 5, exerted, clawed. Stamens diadelphous. Fruit ovoid to oblong, glandular pubescent pod, with 2 – 5 seeds.

Uses: *Leaf decoction is consumed for urinary tract infections and fever. It has cooling effect, diuretic and is a laxative. *Fried seed extract is given for urinary tract block and gas trouble. *Seed paste with water is applied on the head and all over the body before bath for oily skin.

Etymology: Canaka (gold) and Vajibhakshya (powerful food) are due to its characteristic seeds which are dark yellow in colour and highly nutritious.

Note: Seeds are much valued nutritious food. Pangamic acid is the active constituent (Chaudhri, 1996).

210. *Cinchona succirubra* Pavon ex Klotzsch (Plate 36 B)

Syn: *Cinchona pubescens* Vahl.

Family: Rubiaceae

Vernacular Name: Eng: Quinine bark, Quinine tree
Kan: Cinchona mara, Quinine mara, Barkina mara, Jwarahari  
Mal: Quinine maram, Cinchona maram  
Tulu: Jwarattha maro

Habit: Small tree.

Habitat: Cultivated in the gardens.

Status: Rare.

Description: Small tree, with grayish-brown, longitudinally fissured bark and densely pubescent branches. Leaves simple, ovate-elliptic, puberulent, red when young, papery when dry; petioles puberulent. Flowers white or pink, in terminal puberulent panicles. Calyx 5-lobed, densely pilose; lobes 5, triangular. Corolla pink or white, 5-lobed; lobes 5, glabrescent out, ovate-lanceolate. Stamens 5. Fruit glabrescent, septicidal capsule.

Uses: Bark decoction is used for fever, diarrhoea, dysentery and indigestion.

Etymology: Barkina mara (bark tree) Jwarahari (fever killer) and Jwarattha maro (tree for fever) are the clear indicators of therapeutic efficacy of its bark.

Note: Quinine is the alkaloid extracted from this tree (Chaudhri, 1996).

211. *Cinnamomum camphora* (L.) J. S. Presl. (Plate 36 C)

Syn: *Laurus camphora* L.

Family: Lauraceae

Vernacular Name: San: Candraprabha, Gandhadravya, Karpura  
Eng: Camphor tree, True camphor, Camphor tree of Japan, Camphor laurel  
Kan: Karpoorada mara, Dhavala, Pacche karpura  
Mal: Karpuramaram, Karpuram, Sitamsu  
Tulu: Karpooratha maro

Habit: Small tree.
Habitat: Cultivated in gardens.

Status: Occasional. Exotic.


Uses: *Leaf ground with rice washed water is applied for itches, swelling, pain and carbuncles. *Leaf and tamarind paste is applied to the sole at night for glaucoma. Plant decoction is recommended for pain, swellings, cold, phlegm, increased body heat, rheumatism, indigestion, eye diseases and bronchitis. *Camphor mixed with gingelly oil is massaged over the stomach for stomachache. *Pacche karpura* heated with coconut oil is applied externally for headache and body pain.

Etymology: Camphor is extracted from this tree hence the names Karpoorada mara, Karpuramaram and Karpooratha maro (camphor tree).

Note: Cymene, camphoric acid, lauric acid, capric acid and oleic acid are the active components responsible for diaphoretic, antispasmodic and expectorant activities (Kapoor, 1990). It is used for preparations like Karpura rasa, Karpurasava, Amritabindu, Amritadhara, Amritanjana, Chandanadi vati, Karpura yoga and Vedanantaka rasa (Dey, 1994).

212. *Cinnamomum malabatrum* (Burm. f.) Blume (Plate 36 D)

Syn: *Laurus malabatrum* Burm. f.; *Cinnamomum iners* auct. non Reinw. ex Blume

Family: Lauraceae

Vernacular Name: San: Tvak, Darusita, Cocam  
Eng: Wild cinnamon  
Kan: Adavi dalchini, Kaadadalchini, Tejapatre  
Mal: Ilavangam, Karappa, Vayana, Vazhana  
Tulu: Ijinutha maro, Ijinu
Habit: Medium-sized tree.

Habitat: Hill tracts.

Status: Frequent.


Uses: *Seed powder is taken along with honey for fever, cough and dysentery in children. Dried flower bud powder is recommended for dysentery, diarrhoea, indigestion, cough and gas trouble. *Bark paste is applied for body pain and rheumatic pain. *Bark powder mixed with honey (1:2) is consumed for a week for excess urination due to diabetes. *Bark decoction mixed with equal quantity of egg white in brandy is used for 40 days in case of tuberculosis.

Etymology: Adavi dalchini and Kaadadalchini (wild cinnamon) clearly indicate its wild nature.

Note: Leaves are used as a cover for a number of steam cooked food items.

**213. Cinnamomum verum** Presl. (Plate 36 E)

Syn: *Cinnamomum zeylanicum* Blume

Family: Lauraceae

Vernacular Name: San: Tvak, Darusita, Cocam

Eng: Cinnamon, Cinnamomum

Kan: Chakke, Dalchini, Sambarapatre

Mal: Elavangam, Karuva, Karuvappatta, Thamalam

Tulu: Ijinu, Bellanthottu

Habit: Medium-sized tree.

Habitat: Forests and plains.

Status: Common.

Uses:
- Bark or bud decoction is given to expel phlegm in bronchitis, asthma, diarrhoea, vomiting and foul breath. It is a tonic and aphrodisiac. 
- *Bark paste is applied for discoloration of skin and swellings. 
- *Bark extract is used to arrest bleeding from any part of the body. 
- *Bud extract is recommended for rheumatism and raktavata*. 
- Bark paste is a pain reliever. 
- *Bark decoction is used as a wash for vitiated diabetic ulcers. 
- Bark extract is a digestive. 
- *Bark, Coscinium fenestratum, Abelmoschus manihot, Cyperus rotundus, pepper seeds and Aconitum heterophyllum decoction is used for malabsorption in children.

Etymology: Tvak and Chakke (bark) arose as bark is the most used part. Sambarapatre (condiment leaf) clearly indicates the use of leaf in the form of condiment.

Note: Bark, leaf and flower buds are used as condiment. Cinnamaldehyde, euginol, phellandrene, pinene, cymene, nonyl aldehyde, linalool, cumin aldehyde, carophyllene, isobutyric acid and cinnamic aldehyde are the active constituents (Kapoor, 1990). It is used in the preparation of Sitopaladi churna, Caturjata churna, Sudarsana churna, Lavanabhaskara churna, Talisadi churna, Pippalyasava, Astanga lavana, Khadirarista and Chandraprabha vati (Dey, 1994; Sharma et al., 1998). Leaf is good manure for sweet potato.

214. *Cipadessa baccifera* (Roth.) Miq. (Plate 36 F)

Syn: *Melia baccifera* Roth.; *Cipadessa fruticosa* Blume

Family: Meliaceae

Vernacular Name: Kan: Adasage, Chitunde, Narachalu gida, Bettada bevu, Mendalakaayi
Mal: Kaipanarangi, Potti, Pulippanchedi
Tulu: Sirugoli

Habit: Small tree.

Habitat: Mixed forests.

Status: Occasional.


Uses: *Leaf paste is applied for poisonous bites and stings. *Leaf extract is used both internally and externally as a haemostatic agent.

Etymology: Bettada bevu (hill neem) is due to its restriction to the forests and similarity with *Azadirachta indica*.

Note: It is much valued as a wound healer.

215. *Cissampelos pareira* L. var. *hirsuta* (Ham. ex DC.) Forman (Plate 37 A)

Syn: *Cissampelos hirsuta* Ham. ex DC.; *Cissampelos pareira* L.

Family: Menispermaceae

Vernacular Name: San: Ambastha, Brihattikta, Laghupatha, Varatikta, Vriddhakarnika

   Eng: Ice vine, Velvet leaf pareira
   Kan: Ambasta, Padavali, Meneballi, Hondike balli, Amarada balli
   Mal: Karanakody, Malathangi, Pambuveru
   Tulu: Amarada ballu

Habit: Climbing shrub.

Habitat: Forest tracts.

Status: Occasional.

Uses: Root decoction is used for diarrhoea, pain, nerve disorders, poisonous bites, worm infestation and lung disorders.

Etymology: Malathangi (hill holder) is due to its habitat. It grows along the hill tracts and prevents soil erosion. Amarada ballu (immortal vine) is due to its long life and also therapeutic efficacy. It is much valued for poisonous bites.

Note: Cycleanine, d-tubocurarine, hayatin, hayatidin, d-quercitol, methylcurine, methyl bebeerine, hayatinin, cissamine chloride, cyclanoline chloride, menismin iodide, sepeerine, bebeerines, cissampeline and parerin chloride are the active constituents with muscle relaxant property (Dey, 1994; Jain et al., 1991). It is used for preparations like Ayaskrti, Candanasava, Pathadi churna, Patolakaturohinyadi kashaya, Pusyanuga churna, Pradarantaka lehya, Sarasvata ghṛta, Brhat gangadhara churna, Stanyasodhana kashaya, Stanyasodhana churna, Kutajastaka kvatha, Pippalyasava and Yogaraja guggulu (Dey, 1994; Sharma et al., 1998).

216. *Cissus discolor* Blume (Plate 37 B)

Syn: *Vitis discolor* (Blume) Dalz.; *Cissus javana* DC.

Family: Vitaceae

Vernacular Name: San: Amlavetasah
Kan: Sonehuli
Mal: Aaronpuli, Njerinjampuli
Tulu: Soneppuli

Habit: Climbing herb.

Habitat: Semi evergreen forests.
Status: Common.

Description: Slender climbing herb, with glabrous, red, acutely angled branches and forked tendrils. Leaves simple, oblong-lanceolate, blotched with white above and deep red or purple beneath. Flowers red, in leaf-opposed umbellate cymes; pedicels red. Calyx truncate, 4-toothed. Petals 4, hooded at apex. Stamens 4. Fruit 1-seeded berry, black when ripe.

Uses: *10 ml of crushed stem decoction is taken twice a day for stomachache in pregnant women. *Leaf, salt and tobacco leaf powder are applied for tinea versicolor. *Root, those of *Croton laevigatus* and *Tragia involucrata* extract mixed with lime juice is used twice a day for scabies. *Crushed leaf mixed with salt is applied for insect bites. *Whole plant paste with cow urine is applied twice a day for eczema. *Root ground with that of *Senna tora* and *Achyranthes aspera* in lime juice is taken for pit viper bite. *Whole plant extract dissolved in rice washed water is given for dysentery in cattle.

Etymology: Amlavetasah (acidic climber) is due to the acidic taste and smell of the plant. Sonehuli and Soneppuli (acidic plant of the month *Sona*) arose as this plant blooms during the month of *Sona*.

Note: It is used as a substitute for *Cissus repens*.

217. *Cissus elongata* Roxb. (Plate 37 C)

Syn: *Vitis elongata* Wall. ex Wight & Arn.

Family: Vitaceae

Vernacular Name: Tulu: Ballu ambate

Habit: Large climber.

Habitat: Evergreen forests and along hedges.

Status: Occasional.

Uses: *Plant paste is applied externally and rhizome cooked with rice is taken internally for scorpion bite.

Etymology: Ballu ambate (climbing Spondias) arose due to its small fruits which resemble that of Spondias pinnata.

Note: Plant is much valued for scorpion bite.

218. **Cissus latifolia** Lam. (Plate 37 D)

Syn: *Vitis glauca* sensu Wight & Arn.; *Vitis gigantea* Bedd.; *Cissus glauca* sensu Gamble

Family: Vitaceae

Vernacular Name: Kan: Narande balli, Boodu balli

Mal: Chunnambuvalli

Tulu: Narande ballu

Habit: Large climber.

Habitat: Along hedges.

Status: Common.

Description: Large climber, with glaucous branches and forked, stout tendrils. Leaves simple, broadly ovate to suborbicular, pubescent beneath. Flowers small, greenish-yellow, in axillary umbellate cymes. Calyx cup-shaped, truncate, 4-toothed. Petals 4, hooded at apex. Stamens 4. Fruit pyriform berry, black when ripe.

Uses: *Fully grown stem (crushed) soaked in castor oil is kept in sunlight for three days. This oil is applied for limb pain and paralysis. Plant paste is applied for rheumatism, arthritis and swelling of legs. *Leaf and tender shoot tip ground in
buffalo urine is applied for knee joint swellings.  
*Stem (mature) crushed with salt is dissolved in castor oil and is applied for bone pain in cattle.  
*Leaf paste with cow urine is applied for rheumatism and knee joint swellings.  
*Shoot tip paste or oil prepared using its juice is applied for burns.

Etymology: Boodu balli (ash-coloured climber) and Chunnambuvalli (lime climber) are due to its glaucous branches.

Note:  
*Stem fibre is used to tie and protect rice seeds.  The net prepared from its stem is used to catch pigs.

219. **Cissus quadrangularis** L. (Plate 37 E)

Syn: **Vitis quadrangularis** (L.) Wall. ex Wight

Family: Vitaceae

Vernacular Name:  
San: Asthisandhani, Asthisamhara  
Eng: Adament creeper, Bone setter, Edible-stemmed vine  
Kan: Mangaravalli, Vajravalli, Sanduballi  
Mal: Chanamparanda, Changalamparanda  
Tulu: Sandu ballu, Sandu booru

Habit: Rambling shrub.

Habitat: Grown in gardens.

Status: Common.


Uses:  
*Half feet long stem piece cooked with rice or its decoction is given for rheumatoid arthritis (over dose may cause skin rashes or allergy).  Plant decoction is used for backache and burning sensation in feet.  Stem cooked with rice is eaten for
osteoporosis. Its decoction is an appetizer (may cause itch in some). *Dried plant or young stem powder is taken for digestive disorders and upset stomach. Plant decoction is recommended for joint pain as it has pain relieving property. *Plant paste is used for bone setting in case of bone fracture. It is also used for ankle twist and nervine spasm. *Stem (skin removed) juice mixed with sandalwood, honey and ghee is given in empty stomach in the morning for 3 – 6 days in case of over menstrual bleeding. *Stem and black gram dhal ground in gingelly oil is applied for rheumatism. Plant extract is a digestive, blood purifier, wormicidal and phlegm reliever. *Plant paste is applied for rat bite. *Stem and garlic (3:1) decoction is recommended with rock salt for a week in case of indigestion and gas trouble in women after delivery. *Stem, Hyoscyamus niger seeds, garlic and Murraya koenigii leaves (3:3:1:1) decoction is taken with rock salt or dried plant powder dissolved in garlic decoction is used with honey for same purpose. *Small stem pieces ground with equal quantity of Withania somnifera root are consumed with sugar and honey for improving semen quality and quantity.

Etymology: Asthisandhani (bone binder) clearly indicates its therapeutic efficacy in joining the broken bones. Sanduballi (jointed climber) arose as it has well marked nodes and internodes giving the appearance of jointed stem.

Note: It is used in the preparations like Brhat cincadi lehya, Asthisandhana taila and Pathya punarnavadi kashaya (Dey, 1994; Sivarajan & Balachandran, 1996). 3-ketosteroid and triterpenoides are the active components with stomachic action (Chaudhri, 1996; Kapoor, 1990).

220. *Cissus repanda* Vahl. (Plate 37 F)

Syn: Vitis repanda (Vahl.) Wight & Arn.

Family: Vitaceae

Vernacular Name: Kan: Elekombu balli, Kallu narande, Mudiballi
   Tulu: Kadal booru, Kallu narande, Mudiballu

Habit: Large climber.
Habitat: Along hedges and forests.

Status: Common.

Description: Large climber; branches covered with appressed rufous tomentum; tendrils much branched when young. Leaves simple, suborbicular, deeply cordate at base, young ones densely reddish adpressed wooly, becomes glabrescent with age. Flowers small, in leaf-opposed compound umbellately branched cymes; pedicels often reflexed. Calyx cup-shaped, truncate, 4-toothed. Petals 4, hooded at apex. Stamens 4. Fruit ellipsoid-pyriform berry.

Uses: *Stem bark, roots of *Aristolochia indica, *Embelia ribes, *Rauvolfia serpentina and *Zanthoxylum rhetsa seed (2:2:1:1:1) powder decoction is used twice a day for asthma. *Water oozing out from the cut stem is given by mixing it with sugarcandy for dry cough. *Stem (outer skin removed) powder and heated tobacco leaf powder ground with water is applied and tied once a day for foot and mouth disease in cattle.

Etymology: Kallu narande (stone *Cissus latifolia) is from its stem which is much harder than that of *Cissus latifolia. Mudiballu and Mudiballi (Mudi• vine) arose as its stem peels are used for mudi•, an oval bundle of layers of straw and vines containing grain.

Note: Stem fibre is used to tie and protect rice seeds.

221. *Cissus repens* Lam. (Plate 38 A)

Syn: *Cissus glauca* Roxb.; *Vitis repens* (Lam.) Wight & Arn.

Family: Vitaceae

Vernacular Name: San: Amlavetasah

- Kan: Sone balli, Sonehuli, Narande balli
- Mal: Chunnambuvalli, Mrigampuli, Nerinnampuli, Njarala
- Tulu: Soneppuli, Narande ballu

Habit: Slender climber.
Habitat: Along hedges.

Status: Frequent.


Uses: Whole plant juice is a digestive, used for indigestion, liver disorders, spleen problems, cough, lung diseases and skin ailments.

Etymology: Amlavetasah (acidic climber) is due to the acidic taste and smell of the plant. Sonehuli and Soneppuli (acidic plant of the month Sona*) arose as this plant blooms during the month of Sona*. Chunnambuvalli (lime climber) is due to its glaucous branches.

Note: It is used in the preparation of Panchamla taila, Hinguvacadi churna, Putikaranjanasava and Abhrabhasma (Sivarajan & Balachandran, 1996). Tender shoot is used as vegetable.

222. *Citharexylum spinosum* L. (Plate 38 B)

Syn: Citharexylum fruticosum L.; Citharexylum cinereum L.; Citharexylum subserratum Sal.

Family: Verbenaceae

Vernacular Name: Eng: Fiddle wood, Spiny fiddle wood
Kan: Kadiru parijatha
Mal: Parijatham, Kadirparijatham
Tulu: Kadirparijatho

Habit: Small tree.

Habitat: Grown in gardens.

Status: Common. Exotic.
Description: Small tree, with tetragonal branchlets. Leaves simple, elliptic-oblong. Flowers fragrant, small, in long drooping racemes. Calyx small, minutely 5-toothed. Corolla white; tube narrow; throat villous; limb 5-lobed. Stamens didynamous. Fruit drupaceous with 2 pyrenes.

Uses: *Same as Nyctanthes arbor-tristis.

Etymology: Kadiru parijatha, Kadirparijatham and Kadirparijatho (spiked Nyctanthes) is due to its characteristic drooping raceme inflorescence and use as the source of drug Parijatha.

Note: Accepted source of the drug Parijatha is Nyctanthes arbor-tristis. Citharexylum spinosum is used as a substitute of this drug.

223. Citrullus colocynthis (L.) Schr. (Plate 38 C)

Syn: Cucumis colocynthis L.

Family: Cucurbitaceae

Vernacular Name: San: Aindri, Brihatphala, Indravaruni, Mahendravaruni
   Eng: Colocynth, Citron, Bitter apple, Vine of Sodom
   Kan: Indravaruni, Dasamekke, Havumekke kaayi
   Mal: Pekumatti, Kattuvellari
   Tulu: Kakkendalu, Kaattubacchangai

Habit: Prostrate herb.

Habitat: Dry open sandy soil.

Status: Occasional.

Description: Prostrate much branched herb, with hirsute branchlets and simple tendrils. Leaves triangular, deeply lobed, villous. Flowers yellow, solitary, axillary. Calyx tubular; lobes 5. Corolla yellow; petals 5. Stamens 3. Fruit globose, striped green and white when young, yellow when ripe.
Uses: Root and fruit decoction is used as a laxative in constipation (in small dose is useful for phlegm and asthma). *Plant paste is applied for swellings while oil prepared from plant juice is used as hair oil. *Fruit extract is taken for diarrhoea and along sugar for swelling. *Root decoction is used for cough and asthma. *Oil extracted from the seed is applied for snake bite and epilepsy.

Etymology: Kattuvellari (wild cucumber) clearly indicate its wild nature and affinity with cucumber group. Kaattubacchangai (wild water melon) is due to its wild nature and plant body sharing close resemblance with water melon. Havumekke kaayi (snake melon fruit) arose from characteristic striations of the fruits.

Note: It is used for preparations namely Abhayarista, Mahatikutakam kashaya, Manasamitra vataka, Cavikasava, Lodhrasava, Mrtasanjivani sura, Brhatmanjistadi kvath, Brhatmanjistadi churna, Narayana churna, Misraka taila, Jwaraghni gutika and Madhuyastyadi taila (Sivarajan & Balachandran, 1996; Dey, 1994; Sharma et al., 1998). It has colocynthin, colocynthetin, α-elaterin, citrulluin, citrullene, citrulluric acid, α-pinosterol, citbittol, hentriacontane, citrullol, cucurbitacins E & I and choline responsible for hydrogogue and diuretic actions (Dey, 1994; Kapoor, 1990; Sharma et al., 1998).

224. *Citrullus lanatus* (Thunb.) Matsum. & Nakai (Plate 38 D)

Syn: Momordica lanata L.; Cucurbita citrullus L.; Citrullus vulgaris Schrad.

Family: Cucurbitaceae

Vernacular Name: San: Chitraphala, Krishnabijatula, Madhuraphala, Raktabija, Tindisa
   Eng: Water-melon
   Kan: Kallangadi hannu, Bacchangayi
   Mal: Than nimathan, Vattakka
   Tulu: Bacchangayi

Habit: Trailing herb.

Habitat: Cultivated in the paddy fields.
Status: Frequent. Exotic.

Description: Trailing herb, with angular hirsute stem; tendrils 2 – 3 fid. Leaves triangular-ovate, deeply 3 – 5 lobed; lobes pinnatifid, hairy. Flowers pale yellow, densely hairy, solitary, axillary. Calyx broadly campanulate; lobes 5. Corolla rotate, deeply 5-partite. Stamens 3. Fruit ellipsoid or subglobose, green or variegated; pulp white to red, sweet. Seeds compressed, black.

Uses: *Fruit juice is taken with sugar for fever.

Etymology: Chitraphala (ornamental fruit), Krishnabijatula (black seeded fruit) and Madhuraphala (sweet fruit) are from its variegated fruit, black seeds and sweet pulp.

Note: Ripe fruit pulp is eaten as low calorie food while rind is used for preparing various dishes.

225. *Citrus aurantifolia* (Christm. & Panz.) Swingle (Plate 38 E)


Family: Rutaceae

Vernacular Name: San: Amla, Jambira, Jambirah, Naranga, Nimbu
Eng: Lemon, Lime, Rough lemon
Kan: Nimbe, Limbe, Limbe hannu
Mal: Cherunaregam, Ilumbichinaregam, Oduchukuthinaregam
Tulu: Narangayi, Limbepuli

Habit: Small tree.

Habitat: Cultivated.

Status: Occasional. Exotic.

globose to ovoid hesperidium, greenish yellow when ripe; pericarp thin, smooth; juice very sour.

Uses: Fruit juice is a cooling agent and is used for vomiting. Pickle prepared from the fruit is an appetizer and is used for indigestion. *Fruit juice with salt induces biliousness while without salt is a remedy for biliousness. Fruit juice with sugar is taken for biliousness and vomiting. *Fruit juice is used as a base for grinding pearl shell into a paste and is applied tinea versicolor and pimples. *Bark paste is applied over the head for biliousness. *Fruit juice, turmeric powder and egg mixed with cow milk are taken for indigestion, loss of appetite and constipation in cattle. *Fruit juice mixed with pearl shell ash is applied for pus release from the ear. *One ounce lemon juice is taken after dinner for acidity. *Fruit can be used during all diseases (even in case of gastritis). *Tambuli* prepared from tender shoot tip is a digestive, useful for biliousness and body weakness. Fruit crushed with honey is consumed for gastritis. *Seed kernel and cumin seeds ground in water are taken at morning in empty stomach for biliousness, increased body heat, worms, over sweating and hair fall. *Seed pulp, black gingelly and fenugreek seeds ground with coconut milk is applied over the scalp for hair fall. *Lime juice heated with coconut oil is applied for burning sensation in hands and feet. *Oil prepared from the fruit juice is an insect repellant. *Lime juice mixed with hot water is used as a gargoyle for sore throat. *Lime juice mixed with salt, garlic, cumin and honey in butter milk is recommended for hypertension. *Lime juice mixed with ginger juice, honey and rock salt is used for loss of appetite. Fruit juice, honey and rock salt powder mixed in hot milk is given for leucoderma. *Fruit juice mixed with annabedhi sindhura* and honey is used for leucoderma due to phlegm. *Oil prepared by grinding one fruit in 200 ml coconut oil and keeping it in sunlight for one day is applied on the head and exposed to sunlight. This is performed for 6 months to one year in case of baldness. *Pills prepared by grinding seed kernel with Citrus medica fruit in milk are applied (as anjana*) after grinding with rose water or breast milk for insanity. *Ointment prepared by heating its fruit juice, Aloe vera juice, gingelly oil (one part each), Ocimum tenuiflorum leaf juice, Momordica charantia leaf juice (½ part), garlic (2), cotton seed pulp (15) and Canthium coromandelicum root by adding sandalwood oil
and bee wax is applied for eczema and psoriasis. *Fruit juice mixed with a little sodium bicarbonate is taken for stomachache due to indigestion and gas trouble. Fruit juice and honey dissolved in hot water is used for cough. Fruit juice is applied for pimples. *Fruit juice mixed with ginger juice is recommended for dysentery. *Fruit juice (half fruit) mixed with 2 tsp honey and a little cardamom powder is given for vomiting in children due to worm infestation. *Lime juice mixed with ghee is massaged over the forehead for giddiness and headache. *Fruit juice, honey, Bengal gram or maida flour and milk (in equal quantity) are mixed and applied over the face for shining and beautiful face. Lime juice mixed with hot ash is recommended for dysentery. *Fruit juice, glycerin and rose water (in equal quantity) are mixed and applied for cracks in the body during winter. Fruit rind juice is applied for wounds and blisters. *Lemon juice is heated with buffalo cheese and is applied for corns while its paste with pearl shell is applied for pimples. *Fruit juice mixed with camphor is applied for venereal diseases.

* Lime juice, *panchavalli* betel leaf juice and coconut oil (200 ml each), cardamom powder and *Nigella sativa* seed powder (18 gm each) are heated and applied for 1 – 2 weeks in case of ring worm and carbuncles. *Lemon juice ground with equal quantities of copper sulphate ash and *gopichandana* is applied for one week in case of skin diseases. *Fruit juice is applied or its rind is used as a cap and tied for whitlow. *Fruit juice mixed with equal quantity of honey is kept inside the mouth for sometimes in case of mouth ulcers. *Fruit rind fried in an iron pan or earthen plate into fine powder is mixed with equal quantities of coconut shell ash and *Murraya koenigii* leaf ash (prepared either by frying or drying). This mixture is used as a tooth powder by adding salt powder (3:1). *Fruit juice and coconut oil (in equal quantity) are heated and applied for cramps and muscle spasms. *Fruit juice paste with tortoise shell is applied for carbuncles.

Etymology: Amla (acid) and Cherunaregam (smaller lemon) are due to its acidic fruits which are comparatively smaller.

Note: Fruits are much valued for juice and pickle preparation. Citrus flavonoids are the active constituents (Chaudhri, 1996). It is used in the preparation of *Varisosana*
rasa, Vasanta malati rasa, Vanga bhasma, Kasisa bhasma, Gandhaka vati, Sankha vati, Ajirnakanaka rasa, Kalakuta rasa, Mahasankha vati and Nasika churna (Sharma et al., 1998). Lime juice mixed with salt (2:1) is applied to cloths and exposed to hot water steam before washing to remove iron stains.

226. *Citrus aurantium* L. (Plate 38 F)

Syn: *Citrus maderaspatana* Hort. ex Tanaka

Family: Rutaceae

Vernacular Name: San: Airavata, Kimira, Naranga
   Eng: Bigarade, Sour orange, Seville orange
   Kan: Kanchu huli, Duddle huli, Kahikanchi
   Mal: Karna, Kaippanaragam
   Tulu: Kanchikaayi, Baduvappuli

Habit: Small tree.

Habitat: Cultivated.

Status: Occasional. Exotic.

Description: Small armed tree; branchlets angular when young. Leaves simple, ovate, margins undulate, often broadly winged, dark green above. Flowers large, fragrant, in axillary corymbose cymes. Calyx cupular, 3 – 5 lobed. Petals 4 – 8, white. Stamens many. Fruit subglobose, slightly oblate hesperidium, greenish-yellow when ripe; pericarp thick, rough; pulp-vesicles orange; juice sour to bitter.

Uses: *Oil prepared from the fruit juice is applied for rheumatic pain. *Eating fruit and its preparations helps to improve the physiology of human systems. Fruit juice is recommended for improving digestive power. *Fruit paste is applied on the head for giddiness and sleeplessness. *Fruit juice is consumed internally to expel worms. Fruit paste is applied for swellings. Fruit pickle is a digestive and appetizer. Fruit juice is applied over the head for biliousness. *Small pieces of crushed fruit preserved in salt are eaten and water drunk in case of loss of appetite. *Fruit
(preserved in salt), *Asystasia dalzelliana*, salt and pepper seeds are boiled and then by mixing it with dried *Aloe vera* juice is applied for ankle twist and bruises. Preserved fruit paste is applied for relief from pain. Fruit or fruit rind extract is given for dysentery. *Oil extracted from fruit juice is applied over the head for biliousness and externally for rheumatism. *Dried fruit powder paste is applied over the head for biliousness. *Dried fruit extract in butter milk is used for indigestion. Fruit rind decoction is recommended for indigestion. *Tambuli* prepared from its leaves is useful for biliousness (it is digestive, used after *Ganesha chathurthi* and is not recommended for aged people).

Etymology: Kanchu huli (bitter acidic fruit), Kaippanaragam (bitter lemon) and Kanchikaayi (bitter fruit) arose from the acidic and bitter taste of this large lemon. Baduvappuli (big acidic fruit) clearly depicts large size of the fruit.

Note: Fruits are usually pickled.

**227. Citrus limon** (L.) Burm. f. (*Plate 39 A*)


Family: Rutaceae

Vernacular Name: San: Amla, Jambira, Jambirah, Naranga, Nimbu
   Eng: Bitter orange, Bigarade, Country lime, Key lime
   Kan: Doddalimbe, Kasinimbe, Gajalimbe
   Mal: Erumichinarakam, Cherunaregam
   Tulu: Malla limbe, Kasilimbe, Gajanimbe

Habit: Large shrub.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Large armed shrub. Leaves simple, ovate; petioles merely marginate. Flowers purplish, in axillary fascicles. Calyx cupular, 5-lobed. Petals 5, purplish.
Stamens many. Fruit ovoid-oblong, hesperidium, mammillate at apex, yellowish when ripe; juice sour.

Uses: Fruit juice is recommended for improving digestive power. Fruit pickle is a digestive and appetizer.

Etymology: Doddalimbe and Malla limbe (larger lemon), Kasinimbe and Kasilimbe (hybrid lemon), Gajalimbe and Gajanimbe (elephant lemon) clearly indicate its foreign origin and larger fruits when compared with common lemon.

Note: Fruit is used for juice extraction and pickle preparation. Citrus flavonoids are the active constituents (Chaudhri, 1996). It is used in the preparation of Varisosana rasa, Vasanta malati rasa, Vanga bhasma, Kasisa bhasma, Gandhaka vati, Sankha vati, Ajirnakanaka rasa, Kalakuta rasa, Mahasankha vati and Nasika churna (Sharma et al., 1998).

228. *Citrus maxima* (Burm. f.) Merr. (Plate 39 B)

Syn: *Aurantium maximum* Burm. f.; *Citrus grandis* Osbeck.

Family: Rutaceae

Vernacular Name:  
San: Madhukarkati
Eng: Bamblimoos, Babloos, Pomelo
Kan: Chakota, Sakkarekanchu, Sakkarekanchi, Thoranji
Mal: Babloos, Bablimoos, Kambalinaragam
Tulu: Chakotha

Habit: Medium-sized tree.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Medium-sized tree, with pubescent tender branchlets. Leaves ovate to elliptic; petioles broadly winged. Flowers large, white, fragrant, in axillary corymbose cymes. Calyx cupular, 5-lobed. Petals 5. Stamens 20 – 25. Fruit large,
subglobose to pyriform hesperidium; Pericarp yellowish, smooth; segments large, pinkish; juice sweet and sour.

Uses: Fruit juice is consumed or fruit is eaten for giddiness, headache, loss of appetite, vomiting, jaundice, diarrhoea and as a general tonic. *Fruit juice is given to arrest diarrhoea in small children. *Fruit juice is used as an appetizer and antacid.

Etymology: Sakkarekanchu and Sakkarekanchi (sweet *Citrus aurantium*) are due to its fruits which are similar to that of *Citrus aurantium* but are sweet in taste.

Note: Ripe fruit pulps are edible, used for juice extraction. Fruits are also pickled.

**229. *Citrus medica* L. (Plate 39 C)**


Family: Rutaceae

Vernacular Name: San: Bijapurah, Jambhira, Matulanga, Matulangah, Nimbuka
Eng: Wild lemon, Citron
Kan: Mahaphala, Matulanga, Madala, Devamadala
Mal: Ganapathinaragam, Kottanaranga, Madulungam
Tulu: Mamphala, Mapalapuli

Habit: Large shrub.

Habitat: Cultivated.

Status: Common.

Description: Large armed shrub. Leaves simple, ovate-lanceolate, serrate-crenate. Flowers large, white or purplish, bisexual or staminate, in axillary fascicles. Calyx cupular, 5-lobed. Petals 5. Stamens many. Fruit ovoid to oblong, mammillate hesperidium; pericarp rough-tuberculate, yellowish when ripe; juice sour.

Uses: *Unripe fruit is eaten to expel or kill intestinal worms. *Leaf vein (3 veins for one year old child) decoction is taken to expel intestinal worms. Fruit juice is recommended for vomiting, indigestion, stomachache and gas trouble. *Root paste
is applied for poisonous bites and stings. Fruit juice is used for gastric irritation, chest pain and tuberculosis. *Fruit rind extract is a digestive, removes poison from the body and is used for mineral poisoning. *Leaf decoction is consumed to arrest vomiting in pregnant women. Oil prepared from leaf juice is applied for old wounds and ulcers. *Fruit decoction with garlic bulblets is taken to expel intestinal worms. *Leaf extract is given with jaggery for biliousness. *Fruit extract is the best for liver and spleen disorders. *Six leaves and four garlic bulblets boiled in two glasses of butter milk are given for vomiting, stomachache and diarrhoea. *Lehyam prepared from the fruit is recommended for vomiting during pregnancy. Leaf decoction or paste is applied for infections, ulcers and wounds. *Leaf decoction is used to wash ulcers to repel flies. Leaf decoction is recommended for fever. *Root extract with lime juice is mixed with honey and is applied for tonsillitis. *Ripe fruit pulp juice mixed with long pepper powder and rock salt is given at morning in empty stomach for tuberculosis and as a cardiac tonic. *Leaf, cumin and turmeric powder boiled in coconut oil is applied for chronic septic wounds and ulcers. *This is the only fruit which can relieve hyper acidity. *Five veins of leaves, 5 petioles of Mangifera indica, leaves of Combretum latifolium, Artocarpus heterophyllus and cumin seed decoction is used for stomachache due to indigestion and gas trouble. *Fruit juice mixed with long pepper powder and rock salt is recommended for breathing difficulty during pregnancy. *Dried fruit rind preserved with salt is cooked with rice and is used for jaundice.

Etymology: Mahaphala (great fruit), Devamadala (god’s pomegranate) and Ganapathinagaragam (Ganapathi’s lemon) arose from its precious fruits with diverse uses. Fruits are used to worship god and are considered sacred to lord Ganapathi.

Note: Fruits are pickled. Fruits are used in the preparation of Putikaranjasava, Telvisaparihari gutika, Ksara taila, Ardraka ghṛta, Hingvadi churna, Kankayana gutika, Tarunarka rasa, Sankha dravaka, Madiphala rasayana, Matulangadi yoga, Bijapuradi ghṛta, Agnitundi vati and Suranadi lehya. Active components present include citric acid, limonene, dipentene and citral (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). Fruits are highly used in rituals.
230. *Citrus reticulata* Blanco (Plate 39 D)

Syn: *Citrus chrysocarpa* Lush.

Family: Rutaceae

Vernacular Name:  
San: Naranga, Svadunarangah  
Eng: Loose-skinned orange, Mandarin orange  
Kan: Kitthale, Orange, Kitthale hannu  
Mal: Orange, Madhuranaranga  
Tulu: Chittuppuli, Kitthul

Habit: Small tree.

Habitat: Cultivated.

Status: Occasional. Exotic.

Description: Small spinous tree. Leaves aromatic, ovate-oblong; petiole narrowly winged. Flowers large, white, in axillary 1 – 6 flowered cymes. Calyx cupular, 5-lobed. Petals 5, reflexed. Stamens 20 – 25. Fruit oblong to slightly oval hesperidium; pericarp thick, deep yellow and soft when ripe; pulp orange-yellow; juice sweet, slightly acidic.

Uses: *Fruit rind and Bayer’s yeast ground in honey are taken twice a day for removing alcohol addiction.  *Dried fruit rind powder paste with neem oil / *Pongamia pinnata* oil / coconut oil / old ghee / gingelly oil is applied for ring worm, itches and boils. *Fresh rind is rubbed to remove unwanted marks from the body.  *Gojju* prepared from the fruit rind is consumed for constipation, cold and running nose in children. *Fruit juice is applied for toothache and to strengthen the teeth.  *Fruit rind paste is applied for septic ulcers and its extract is taken internally for jaundice. *Fruit rind decoction is a tonic, used for indigestion and to expel worms.

Etymology: Svadunarangah (tastier lemon) and Madhuranaranga (sweet lemon) are due to its sweet fruits.

Note: Fruit is much valued as a food and known for juice extraction.
231. *Cleistanthus collinus* (Roxb.) Benth. ex Hook. f. (Plate 39 E)

Syn: *Clutia collina* Roxb.

Family: Euphorbiaceae

Vernacular Name: San: Indrayava, Kaudigam, Nandi

Eng: Rafter wood, Discous feather foil

Kan: Kadagargari, Bodagaraga

Mal: Odugu, Odaku

Tulu: Kadgargari

Habit: Small tree.

Habitat: Plains and near water streams in moist deciduous forests.

Status: Occasional. Poisonous.


Uses: *Plant decoction is recommended for worms, stomachache, piles, dysentery and digestive disorders. *It is also advised to increase the food assimilation power.

Etymology: Indrayava (Indra’s barley seeds) arose as its small globose seeds (resembling that of barley) are considered as Indra’s (king of heaven) gift to earth to treat diseases. Kadagargari (wild *Eclipta*) is due to its restriction to the forests and chartaceous young leaves which are rough just like that of *Eclipta prostrata*.

Note: Seeds are used as a substitute for the drug Indrayava (*Holarrhena pubescens*) for treating digestive disorders.

232. *Clematis gouriana* Roxb. ex DC. (Plate 39 F)

Family: Ranunculaceae

Vernacular Name: San: Morabela, Morata, Murva

Eng: Indian traveler’s joy
Kan: Tale jadari, Tale jaadari, Barijwarada balli
Mal: Nikidakodi
Tulu: Jwarattha ballu

Habit: Climbing shrub.

Habitat: Hilly tracts.

Status: Occasional.


Uses: *Root decoction is highly recommended for snake bite, fever and skin diseases.

Etymology: Barijwarada balli (vine for high fever) and Jwarattha ballu (vine for fever) clearly indicate its therapeutic efficacy against fever.

Note: Plant is much valued for fever.

233. *Cleome burmannii* Wight & Arn. (Plate 40 A)

Family: Capparaceae

Vernacular Name: San: Adityabhakta, Karnasphota, Manduki, Suteja, Suvarchala
Eng: Wild mustard, Dog mustard
Kan: Kaadusasive, Naayibelegida
Mal: Kattukadugu
Tulu: Kaattudasemi

Habit: Decumbent herb.

Habitat: Wastelands and roadsides.

Status: Common. Weed.
Description: Decumbent or erect herb, with weak ribbed stem. Leaves 3-foliolate; leaflets rhombate-elliptic or oblong-lanceolate. Flowers in axils of leaves below and foliaceous bracts above. Sepals 4, linear-lanceolate. Petals 4, pink or bluish-violet. Stamens 6. Fruit linear-cylindric, compressed, ribbed capsule, attenuate at the ends.

Uses: *Leaf or whole plant paste (of the size of a gooseberry) is taken internally for migraine.

Etymology: Kaadusasive, Kattukadugu and Kaattudasemi (wild mustard) are due to the resemblance of its seeds with that of mustard.

Note: Plant is much valued for the treatment of headache.

234. Cleome viscosa L. (Plate 40 B)

Family: Capparaceae

Vernacular Name: San: Adityabhakta, Karnasphota, Manduki, Suteja, Suvarchala
Eng: Wild mustard, Dog mustard, Sticky Cleome
Kan: Kaadusasive, Naayibelegida, Antusasive
Mal: Kattukadugu, Naikadugu, Naivela
Tulu: Kaattudasemi

Habit: Erect herb.

Habitat: Wastelands and roadsides.

Status: Common. Weed.


Uses: Decoction prepared from its seeds is used for fever. *Leaf paste is applied for wounds and cuts for easy healing. Leaf juice is recommended for ulcers, gastritis,
diarrhoea and worms. It also has aphrodisiac property. *Seed decoction is taken for diarrhoea and gas trouble. Root decoction is recommended to expel worms. *Whole plant decoction is recommended for kidney and bladder stones. Whole plant paste is applied externally for wounds, ulcers and skin diseases. *Seed paste is applied for rheumatic pains. *Crushed whole plant boiled with gingelly oil is applied all over the body for phlegm is small children. *Whole plant decoction mixed with honey is given to expel phlegm (for children 1:2 and adult 1:1). *Whole plant and tender shoot tip of *Tectona grandis* are boiled in coconut oil and the resulting oil is applied on the head (15 minute before of bath with hot water) for expelling cough. *Whole plant paste with coconut milk is applied around the furuncle for pus release.

Etymology: Kaadusasive, Kattukadugu and Kaattudasemi (wild mustard) are due to the resemblance of its seeds with the mustard seeds. Antusasive (sticky mustard) arose due to the sticky nature of the plant.

Note: Plant is much valued for rheumatic complaints. Seeds are usually used as a substitute for mustard seeds.

**235. Clerodendrum inerme** (L.) Gaertn. *(Plate 40 C)*

Syn: *Volkameria inermis* L.; *Clerodendrum neriifolium* Wall. ex Schauer in DC.

Family: Verbenaceae

Vernacular Name: San: Kshudragnimantha, Kundali, Samudrayuthika, Vanayuthika
    Eng: Garden quinine, Sorcerers bush, Seaside Clerodendrum, Wild jasmine
    Kan: Kundali gida, Vishamadhari
    Mal: Cheru chinna, Chinnayila, Nirnochi, Puzhamulla, Vishamadari
    Tulu: Tudemadarangi

Habit: Straggling shrub.

Habitat: Along sea coast and wet lands.
Status: Common.


Uses: *Root paste is applied for poisonous bites. *Oil prepared using its root is used for rheumatism and arthritis. Whole plant decoction is recommended for rheumatism. *Leaf paste is applied externally and 2 – 12 tsp juice is given internally for wasp sting, scorpion, centipede and snake bite. Leaf paste is applied for ulcers, scabies, urticaria and rashes.

Etymology: Kshudragnimantha (inferior Premna latifolia) clearly indicate that even though it has resemblance in smell with Premna it is less used due to less action. Nirnochi (water Vitex) and Puzhamulla (river jasmine) are due to its restriction to the coast, similarity with Vitex in smell and white flowers.

Note: Occasionally it is used as a substitute for Premna latifolia. Leaf is a lice and leech repellent.

236. *Clerodendrum phlomidis* L. f. (Plate 40 D)

Syn: Clerodendrum multiflorum (Burm. f.) O. Ktze.; Volkameria multiflora Burm. f.

Family: Verbenaceae

Vernacular Name: San: Agnimantha, Arani, Gandhapatra, Jaya, Laghumantha, Vaijayanti

Eng: Wind killer, Glory tree

Kan: Hosalakki, Ittevu, Ibbane, Taggi gida

Mal: Thiruthali

Tulu: Ittovu

Habit: Rambling shrub.

Habitat: Cultivated in gardens.
Status: Occasional.


Uses: *Whole plant boiled with gingelly oil is applied over the head for biliousness and malabsorption in children.

Etymology: Gandhapatra (fragrant leaf) is due to its fragrant leaves. Laghumantha (light churning stick) as its wood is light and occasionally used as fire churning stick in place of *Premna latifolia*.

Note: Occasionally used as a substitute for *Premna latifolia*. Sterols are the active constituents. Used in the preparations like *Dasamularista*, *Dasamula kvatha*, *Dasamula churna*, *Indukanta ghrta*, *Dhanvantara ghrta*, *Gorocanadi vati* and *Narayana taila* (Sharma et al., 1998).

237. *Clerodendrum serratum* (L.) Moon. (Plate 40 E)

Syn: *Rotheca serrata* (L.) Steane & Mabb.; *Volkameria serrata* L.

Family: Verbenaceae

Vernacular Name: San: Bhangri, Bharangi, Bharngi

Eng: Blue flowered glory tree, Beetle killer

Kan: Kirtekku, Nirvisha, Bharangi, Gantu bharangi

Mal: Cheruthekkku, Kattupadappa, Kurkkutti, Perikilam

Tulu: Chirtekku

Habit: Small shrub.

Habitat: Lateritic slopes.

Status: Frequent.
Description: Small shrub, with quadrangular stem. Leaves simple, opposite or in whorls of 3, elliptic-oblong. Flower in terminal panicles; bracts coloured. Calyx cupular, 5-toothed. Corolla bluish-purple; lobes 5. Stamens didynamous. Fruit obovoid drupe, purple when ripe.

Uses: Whole plant decoction is recommended for rheumatism. *Root alone or its paste with Azadirachta indica bark, Ixora coccinea root and Rauwolfia serpentina in lime juice is applied for viper bite. *Paste of leaf cooked with ghee is applied over forehead and eyes for headache and eye pain. *Root extract with ginger and coriander seeds is taken for digestive disorders. Root decoction is used for snake bite, fever and cough. *Root ground in honey (vertically) is given to children suffering from repeated fever attack. *Root paste is applied and its extract with lime juice is consumed internally for poisonous snake bite. Root ground with honey is recommended for cough. Root decoction is recommended for rheumatism. Root extract with lime juice is used for snake bite. Root extract is a blood purifier, used for breathing problems and to expel phlegm. *Full grown leaf paste with rice washed water is applied around the furuncle (over stomach) for quick heal. *Root bark extract is taken with honey at night for phlegm in children, asthma and continuous cough (it is of hot nature and butter milk is the antidote). *Root paste with rice washed water is applied for allergic swellings. *Root along with that of Aristolochia indica and Ventilago maderaspatana are ground in tender coconut water and is applied for eight days in case of viper and cobra bite. *Root along with that of Salacia chinensis and Ixora coccinea ground in lime juice is applied for herpes in small children. Root, Lagenaria siceraria fruit rind and Pterocarpus marsupium bark cooked with rice are recommended for pit viper bite. *Root and ginger extract is taken with fresh ginger juice for bronchitis and asthma. *Root, roots of Hedyotis corymbosa and Sida rhombifolia (in equal quantity) powder decoction is given by adding honey for 3 – 4 days in case of flue.

Etymology: Nirvisha (without poison or poison remover) as it is highly used for poisonous bites. Cheruthekku (little teak) is due to its resemblance with teak (appears as a miniature of teak).
Note: It is used in preparations like Ayaskrti, Bharngvadi kashaaya, Yogarajaguggulu vatika, Kanakasava, Dasamularista, Rasnadi kvatha, Rasnadi churna, Dhanvantara ghrta, Mahavatagajankusa rasa, Bharangi guda, Bharangadi kvatha and Sudarsana churna (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). Saponins and D- mannitol are the active constituents (Dey, 1994). Leaf, flower and seeds are used as vegetable.

238. Clerodendrum viscosum L. (Plate 40 F)

Syn: Clerodendrum infortunatum auct. non Vent.

Family: Verbenaceae

Vernacular Name: San: Bhandirah
    Kan: Ibbane, Ittevu, Thaggi gida
    Mal: Paragu, Perivelam, Perukilam, Peruku, Vattapparuvalam
    Tulu: Ittevu, Ittovu

Habit: Large shrub.

Habitat: Wastelands.

Status: Common.

Description: Large tomentose shrub, with quadrangular branches. Leaves simple, ovate to suborbicular, cordate at base, tomentose beneath. Flowers in large terminal panicles. Calyx campanulate, deeply 5-lobed, much enlarged in fruit. Corolla white; lobes 5, lanceolate. Stamens didynamous. Fruit obovoid drupe, bluish-black when ripe, enclosed in accrescent calyx.

Uses: *Oil prepared from its leaf is applied on the head for three days to kill lice. *Young shoot tip paste with salt (about the size of a gooseberry) is given for stomachache due to indigestion. *Root bark paste with coconut oil is applied for skin diseases in children while tender shoot tip paste with coconut oil for bruises. *Root ground in cold milk is drunk at night for stomachache. Root bark boiled in coconut oil is applied for scabies and itchess. *4 – 5 tender shoot tips are eaten with
little salt for stomachache. *Leaf, leaves of *Piper betle* (panchavalli†), *Citrus aurantium* (or lime juice), *Ocimum tenuiflorum*, *Pothos scandens*, *Kalanchoe pinnata*, *Cardiospermum halicacabum*, *Jasminum malabaricum* and turmeric are boiled with coconut oil. To this oil, cumin and camphor powder are added and is used for whitlow, fungus infection of foot, burns, wounds and knee pain. It is also applied over the head and kept for 1 hr in case of cold. *Leaf juice is applied to stop bleeding from cuts and wounds. *A ring made up of its root (shown to sun) is tied all over with stem of *Tragia involucrata* which in turn is tied to the neck of cattle (using the outer stem peel of *Helicteres isora*) for expelling worms from wounds and ulcers of cattle. *Pills prepared by crushing its tender shoot tip with cumin seeds are given for urticaria (at first increases it and then cures completely). *Root paste with coconut milk is applied for chronic ring worm and itches. *Tender shoot tip, fruits of *Vernonia anthelmintica*, *Piper longum*, *Myristica fragrans*, *Cinnamomum verum* bud and *Tabernaemontana heyneana* bark are crushed and boiled in coconut oil. To this oil, *pacche karpura* † and stamens of *Crocus sativus* are added and is applied for swelling and septic ulcers. Leaf juice is applied for allergy and lice in the head. *Crushed leaves are spread in the cow shed to repel or expel ticks from the body of cattle. Leaf or plant paste is applied for swellings. *Root decoction is used to arrest dysentery while oil prepared from its shoot tip is applied for burns. *It is believed that one leaf can provide the energy equal to that of two large pieces of jaggery. *Six tender shoot tips ground in lime juice are boiled in coconut oil and applied over the centre of head while 4 – 5 drops are poured into the ear in case of pus release from the ear in children. This oil is also applied to kill lice. *Leaf juice is applied to expel maggots from the wounds and to ward off ticks from the body of cattle. *Root paste with milk is applied for piles. Plant juice is recommended for gastritis and abscess. *Leaf juice mixed with coconut milk is applied over the head and covered with a cloth for 6 hrs (before bath) to kill lice. Root is of hot nature and its extract is given for skin diseases, piles, digestive problems and worms. *Root paste with human urine is applied on the tongue and its decoction is used internally for poisonous bites. *Root, *Protasparagus racemosus* tuber, *Cucurbita pepo* fruit, rice and jaggery are cooked and given to increase lactation in cattle. *Tender shoot tip, *Myristica
malabarica leaf, seeds of Nigella sativa and Citrus aurantium fruit juice are heated. To this mixture, Cedrus deodara heart wood decoction is added, boiled and is applied for carbuncle. *Flower and cumin seeds decoction is used for stomachache. *Tender shoot tip juice is used as an ear drop for pus release from the ear. Root decoction is recommended for cold. *Leaf juice is given with asafoetida and garlic extracts to induce vomiting. Leaf juice is applied to expel maggots from the wounds. Leaf juice mixed with salt is applied for pus release and easy heals of ulcers in the ear and navel region. *Root, Polyalthia longifolia bark and Celastrus paniculatus root ground with lime juice is applied for eczema. Tender shoot tip ground with gingelly oil is applied for swellings. *Leaf extract with milk is given once a day for a week in case of dysmenorrhoea. *Root decoction with honey and paste of root bark fried with cheese are given by adding cumin and butter milk for dysentery. *Paste of root and cumin seeds fried in cheese is used with rice for stomachache in pregnant women. Whole plant paste is applied for wounds in cattle as an anti-inflammatory agent.

Etymology: Bhandirah (closely bonded) arose as this plant is close to the hearts of people. Leaves are used in a number of traditional rituals and agriculture. It is also an integral part of treatment of children’s diseases.

Note: Clerodin, lenolenic acid, oleic acid, stearic acid, lignoceric acid and β-sitosterol are the major active constituents (Kapoor, 1990). Crushed leaves are tied with salt to the plantain to prevent bunchy top disease and other pests. Leaf is used as cover and then a weight is kept over it for quick germination of paddy and vegetable seeds. Flower is used in Durga pooja.*.

239. *Clinacanthus nutans* (Burm. f.) Lindau. (Plate 41 A)

Syn: Justicia nutans Burm. f.; Justicia fulgida Blume.; Clinacanthus burmannii Nees in DC.; Clinacanthus siamensis Bremek.

Family: Acanthaceae

Vernacular Name: Eng: Sabah snake grass

Kan: Vishakolli, Vishappacche
Mal: Vishappaccha  
Tulu: Visappacche

Habit: Rambling shrub.

Habitat: Cultivated in gardens.

Status: Occasional. Exotic.

Description: Tall rambling shrub; stem terete, glabrescent, yellow when dry. Leaf simple, linear-lanceolate, pubescent when young, then glabrescent and pilose along veins, dark green; secondary veins 4 – 6 on each side of mid vein, abaxially elevated, base cuneate or rounded, margin sinuate-crenate, apex acuminate. Flowering usually not seen.

Uses: *6 – 7 leaves are chewed and swallowed to prevent the spread of poison in the body. *Leaf paste is applied externally for poisonous bites.

Etymology: Vishakolli (poison killer), Vishappacche, Vishappaccha and Visappacche (herb for poison) are due to its therapeutic efficacy against poisonous bites.

Note: Much valued plant for poisonous bites.

240. *Clitoria ternatea* L. var. *pleniflora* Fantz. f. (Plate 41 B)

Family: Papilionaceae

Vernacular Name: San: Aparajitha, Ashphota, Girikarnika, Sankhapushpi, Vishnu-kranta  
Eng: Clitoria, Butterfly pea  
Kan: Girikarnike, Girikannike, Shankhapushpa  
Mal: Aaral, Kakkanamkoti, Malayamukki, Sankhupushpam  
Tulu: Shankupushpo, Sankupushpo

Habit: Climbing herb.

Habitat: Cultivated.
Status: Common. Exotic.

Description: Climbing or trailing perennial herb. Leaves pinnately 3 – 9 foliolate; leaflets 5 – 7, elliptic, glabrescent above, pubescent beneath. Flowers showy, axillary, solitary or paired; bracteoles ovate. Calyx tubular, 5-lobed. Corolla exerted; petals 5, standard like, blue or white. Stamens 10, free. Fruit flattened, sharply beaked, 8 – 10 seeded, sparsely pubescent pod.

Uses: Same as that of *Clitoria ternatea* var. *ternatea*.

Etymology: Aparajitha (unconquered) arose as there is no other substitute to this plant with similar therapeutic potential. Shankhapushpa, Sankhupushpam and Shankupushpo (conch shell flower) are due to the resemblance of its flower with conch shell.

Note: Major alkaloids are aparajitin, clitorin, rhamnosyl glucoside, kaempferol, malvidin, taraxerol, galactopyranoside, hexacosanol, β-sitosterol, γ-sitosterol and taraxerone (Jain *et al*., 1991; Kapoor, 1990; Sharma *et al*., 1998). It is one of the ingredients of *Brahmi ghrta, Manasamitra vataka, Misrakasneha, Manjisthadi kashaya* and *Vataraktantaka rasa* (Sivarajan & Balachandran, 1996; Sharma *et al*., 1998).

241. *Clitoria ternatea* L. var. *ternatea* (Plate 41 C)

Family: Papilionaceae

Vernacular Name: San: Aparajitha, Ashphota, Girikarnika, Sankhapushpi, Vishnu-kranta
Eng: Clitoria, Butterfly pea
Kan: Girikarnike, Girikannike, Shankhapushpa
Mal: Aaral, Kakkanamkoti, Malayamukki, Sankhupushpam
Tulu: Shankupushpo, Sankupushpo

Habit: Climbing herb.

Habitat: Cultivated.
Status: Common. Exotic.

Description: Climbing or trailing perennial herb. Leaves pinnately 3 – 9 foliolate; leaflets 5 – 7, elliptic, glabrescent above, pubescent beneath. Flowers showy, axillary, solitary or paired; bracteoles ovate. Calyx tubular, 5-lobed. Corolla exerted, papilionaceous; petals 5, standard large, much exceeding the other petals, white or blue. Stamens 9 + 1. Fruit flattened, sharply beaked, 8 – 10 seeded, sparsely pubescent pod.

Uses: *Root (white variety) ground with lime juice is taken for 14 days in case of food poisoning. *Root decoction is given to expel worms from urinary tract or kidney. Root decoction is recommended for gastritis, cancerous ulcers and to normalize excretory system (over dose can cause diarrhoea). Seed powder is used to control diarrhoea. Root decoction shows diuretic property. *Leaf paste is applied for septic wounds and ulcers. Root (white variety) ground in cold milk is given to arrest over menstrual bleeding. *Oil prepared from root juice is poured in the form of dhara for furuncles and carbuncles in the finger. *Root extract is recommended for rheumatism and stomachache due to food poisoning. Root extract is given to increase memory power in children. *Root ground with milk is recommended for infertility due to infection in uterus, also consumed for purification of the uterus and to correct menstruation. Root decoction is used for biliousness and as a blood purifier. *Root (white variety) decoction is used as a cardiac tonic. *Flower paste is applied to relieve the burning pain of snake bite. Root (10 gm) ground in water is used for menstrual irregularity. *Seven shoot tips are chewed and eaten daily in the morning for diabetes. Root extract is recommended for constipation in children.

Etymology: Aparajitha (unconquered) arose as there is no other substitute to this plant with similar therapeutic potential. Shankhapushpa, Sankhupushpam and Shankupushpo (conch shell flower) are due to the resemblance of its flower with conch shell.

Note: Major alkaloids are aparajitin, clitorin, rhamnosyl glucoside, kaempferol, malvidin, taraxerol, galactopyranoside, hexacosanol, β-sitosterol, γ-sitosterol and taraxerone (Jain et al., 1991; Kapoor, 1990; Sharma et al., 1998). It is one of the
ingredients of *Brahmi ghrta*, *Manasamitra vataka*, *Misrakasneha*, *Manjisthadi kashaya* and *Vataraktantaka rasa* (Sivarajan & Balachandran, 1996; Sharma *et al.*, 1998). Root of white flowered variety is used in black magic.

242. *Coccinia grandis* (L.) Voight. (Plate 41 D)

Syn: *Bryonia grandis* L.; *Coccinia indica* Wight & Arn.; *Cephalandra indica* (Wight & Arn.) Naud.; *Coccinia cordifolia* (L.) Cogn. in A. & C. DC.

Family: Cucurbitaceae

Vernacular Name:  
San: Bimbi, Bimbika, Raktaphala  
Eng: Ivy gourd, Scarlet gourd, Tindora, Gherkins  
Kan: Thonde balli, Thondekaayi, Sihithonde  
Mal: Kova, Koval  
Tulu: Manoli

Habit: Perennial climber.

Habitat: Cultivated.

Status: Common.

Description: Perennial dioecious climber, with glabrous, angled stem, becoming woody with papery bark. Leaves simple, variable in shape, broadly ovate-cordate, shallowly to deeply palmately 3 – 5 lobed, basal sinus wide. Flowers white, solitary, axillary. Calyx campanulate; lobes 5. Corolla campanulate, shortly 5-lobed. Stamens 3. Fruit oblong, subglabrous, scarlet when ripe.

Uses: *Oil prepared from leaf juice is applied over the head as a cooling agent to induce sleep in sleeplessness.  *Leaf juice mixed with butter is applied for herpes and burning bruises.  Leaf juice is applied over the neck and forehead for sleeplessness, nervous debility, headache and giddiness.  *The water in which its root is cooked is given once in a day (30 ml) for two weeks in case of bed wetting in children.  Stem or root juice is given for diabetes.  *Stem juice is recommended for burning during urination.  *Leaf ground with butter and *pacche karpura* into a
paste is applied for skin diseases and migraine. *Leaf smeared with butter is pasted over eczema and itches. *Fruits cooked with rice and a little salt are eaten for bleeding piles. *Five leaves ground with five cumin seeds in milk are taken for three days from the first day of menses for conditioning or cleaning the ovary and uterus. Root decoction is recommended for biliousness. Plant decoction is used for rheumatism, to stop bleeding and to regulate menses. *Fully grown stem extract in rice cooked water is consumed for easy delivery. *Paste prepared using its root powder is applied for STD. Root, stem or bark extract or decoction is recommended for piles. *The water in which its fruits are soaked overnight is drunk on the next day for piles. *Root decoction is recommended to prevent threatened abortion in women. *Leaf juice is poured immediately after burn to relieve burning sensation. *Root ground with buffalo buttermilk is given for six days in the morning for heal of ulcers due to urinary disorders. Leaf paste is applied for measles, chickenpox and urticaria. Whole plant decoction is recommended for anaemia, phlegm, biliousness and jaundice. *Plant extract with lime juice is used for wounds and to remove poison. Leaf extract is a laxative. *Leaf is chewed for mouth ulcers, urinary disorders and burning sensation in the body. Root and fruits are used for over urination and diabetes. Ripe fruit is eaten for urinary disorders in children. *Leaf juice is poured into the opposite side ear in case of furuncles in face. *Root extract with milk is taken for eight days in case of protein discharge through urine, urinary tract infections and urine block. *Leaf is given to eat (before 4 days of menstruation) for conception in cattle. *Leaf along with that of Leucas aspera, Vitex negundo and Aloe vera juice ground in egg white is applied for abdominal spasm. *10 fruits cooked without adding salt are eaten for 48 days in case of piles. Root cooked with rice is consumed for menstrual disorders. *Root powder mixed with gingelly oil is heated and is applied for male genital diseases. *Pills prepared from its leaf, that of Vitex negundo and old jaggery are used for three days from the 4th day of menses for stomachache during menses (also used for stomachache due to worm infestation).

Etymology: Raktaphala (red fruit) arose from its fruits which become scarlet or deep red when ripe.
Note: Fruits are used as vegetable. Lupeol, $\beta$-amyrin, $\beta$-sitosterol, cephalandrine A & B, cephalandrol, tritriacontane, ptoxanthin and cucurbitacin B are the active components with hypoglycemic, expectorant and cathartic activity (Jain et al., 1991; Kapoor, 1990). It is used in the preparation of *Vidaryadi ghrtas, Vidaryadi kashaya, Amraptaprasa ghrtas* and *Vastyamayantaka ghrtas* (Sivarajan & Balachandran, 1996; Sharma et al., 1998).

**243. Cocculus hirsutus** (L.) Diels in Engl. *(Plate 41 E)*

Syn: *Menispernum hirsutum* L.; *Cocculus villosus* (Lam.) DC.

Family: Menispermaceae

Vernacular Name: San: Dirghavalli, Garudi, Patalagarudi, Somavalli
Eng: Broom creeper, Ink berry
Kan: Dagadi balli, Dagadi hambu, Adambu balli, Kaagemari
Mal: Pathalagarudakkodi
Tulu: Adambu ballu

Habit: Climbing shrub.

Habitat: Dry areas of the forests.

Status: Occasional.

Description: Climbing or straggling shrub. Leaves simple, ovate-oblong or sagittate, softly pubescent above, velvety tomentose below. Flowers unisexual, pale yellow; male in short, slender panicles; female in axillary fascicles. Sepals 6, in two whorls, pubescent. Petals 6, apically bifid. Stamens 6, outer 3 with dithecous and inner 3 connate with monotheucous anthers. Carpels 3. Fruit drupe, purplish black when ripe.

Uses: Plant paste or oil is applied externally for rheumatism while decoction is used internally for same purpose. *Root decoction mixed with goat’s milk and chilly powder is taken for rheumatism.*
Etymology: Dirghavalli (long climber) is due to its habit. Patalagarudi (underground kite) and Pathalagarudakkodi (underground kite herb) are due to its therapeutic efficacy against poisonous bites.

Note: It has properties similar to that of Cyclea peltata. Leaf is used to clean water.

244. Cocos nucifera L. (Plate 41 F)

Family: Arecaceae

Vernacular Name: San: Daksinatya, Kalpavrksa, Mahaphala, Narikela, Narikelah, Narikera
Eng: Coconut, Coconut palm
Kan: Thengu, Thengina mara
Mal: Thengu, Kalpavrksham, Narikelam
Tulu: Thare, Theng

Habit: Tall palm.

Habitat: Cultivated.

Status: Common.

Description: Tall annulate palm, thickened at the base. Leaves pinnatisect; leaflets numerous, linear-lanceolate; petioles very stout. Spadix interfoliar, simply panicked, with flexuous branches; branches bear scattered female flowers, often between two male flowers towards their bases and male only above. Spathe woody, boat-shaped. Male flowers: small; sepals 3; petals 3; stamens 6. Female flowers: larger, ovoid; perianth greatly accrescent; sepals 3; petals 3; ovary 3-celled. Fruit ovoid, terete or trigonous, 1-seeded drupe; pericarp thick fibrous; endocarp stony with 3 pores. Seed cohereing with the endocarp; endosperm fleshy, lining the endocarp with a large cavity filled with sweetish fluid.

Uses: *Ripe coconut water is smeared all over the body before bath for four days to get relief from prickly heat. Inflorescence decoction is given to women suffering from infertility and menstrual irregularities. *Decoction prepared from tender
coconut husk (red variety) is used for bath during herpes. *Ripe coconut water paste (by heating) is used for arrest bleeding from cuts and wounds. *Silvery powder seen as a covering over the tender leaf is also used for the same purpose. *Inflorescence ground with cumin seeds in milk is taken for three days from the 4th day of menses (for 3 cycles) in case of infertility due to irregular menses. *Oil extracted by burning hard endocarp is applied for itchy ring worm (during this treatment, *Cynodon dactylon decoction is consumed internally). Tender coconut husk juice is drunk and is applied externally for all types of skin diseases due to increased body heat. It has diuretic property. *Inflorescence ground with cumin seeds in milk is taken to prevent habitual abortion and for urine block. Inflorescence extract in milk is a cooling agent and is given for preventing habitual abortion. Very tender coconut paste is applied for urticaria, herpes and other skin diseases. *The petiole piece decoction is used for bath during dropsy. Root decoction is recommended for jaundice and biliousness. *Coconut shell oil is applied for foot and mouth disease in cattle, also for neurodermatitis and whitlow in humans. *Tender coconut water is the antidote for indigestion caused by beaten rice. *Paste of leaf ash fried with ghee is applied for old chronic ulcers and wounds. *Coconut shell (of germinating side) is burnt and is tied to the neck of cattle for watery swelling in neck and navel of cattle. *Smearing eye lids with coconut oil is beneficial in early stages of conjunctivitis. *Sandalwood paste dissolved in tender coconut water is covered, heated in charcoal and given for burning urination.

*Coconut milk mixed with banana and honey is said to have the property of *amruth*. *Root along with that of white *Hibiscus rosa-sinensis, Agave americana and sugarcandy are made into a decoction and is given in empty stomach for leucorrhoea. *Pieces of tobacco and Justicia adhatoda root are inserted into the coconut through a small pore which is then sealed with a paste of ripe coconut water and clay soil. This coconut is heated over cow dung flakes and on next day the drug present inside the coconut is taken out, powdered and taken with honey at night for asthma. Tender coconut husk decoction is used for thirst due to diabetes. *Parched rice and black gingelly seeds are inserted into the tender coconut (through a small pore), store overnight and half of water is drunk on the next morning while the rest
is made into a paste and is applied for cracks in feet. Inflorescence extract is recommended for urinary disorders and blood dysentery. Fruit pulp is a semen improver. Coconut milk is used for rheumatism, phlegm and *gulma*. Fresh toddy is a tonic and helps in conception. Ripe fruit water is applied for hair fall, mental problems and biliousness. Oil from endocarp is applied for skin diseases. Root decoction is used for uterine diseases. *Oil prepared from fruit pulp juice is used for insanity. Dried coconut water is used for dysentery. *Young flower juice mixed with sugarcandy, cardamom, saffron and *pravala bhasma* are used for bleeding during pregnancy. *Coconut oil, lime water and *Aporosa lindleyana* leaf paste is applied for burns. Inflorescence extract with milk is consumed for azoospermea. *Coconut oil mixed with two drops of lime juice is applied over the head for dandruff. *Tender coconut water mixed termite shelter soil is applied over the body (kept for 6 hrs) in case of allergic swellings and urticaria. Inflorescence extract with milk is used for urinary disorders. *Young inflorescence ground with cumin seeds in cold milk is given for conception and stomachache during menses. *Coconut oil mixed with buffalo dung is boiled and is applied for wounds or ulcers due to burns. *Oil extracted from fully ripe coconut gratings ground and heated (in low fire) is applied on the scalp for thickness and blackness of hairs. *Fully ripe coconut gratings and tamarind seed coat juice mixed with human hair ash is applied for ulcers or wounds due to burns. *Young inflorescence, *Ficus racemosa* fruit and *Cyperus rotundus* rhizome decoction with milk is recommended for disorders during pregnancy. *Crushed coconut shell decoction is taken for indigestion and worm infestation in children. *Calotropis gigantea* latex is filled into a fully ripe coconut (water removed by making a small hole) is sealed and kept above fire in such a way that it comes in contact with smoke; This is taken after one month and oil accumulated inside the coconut is applied for chronic scabies, itches and other skin diseases. Oil heated with powders of borax and pearl shell is applied for septic wounds and ulcers. *Coconut oil heated with bee wax and saffron soil powder is applied for ring worm in children. Coconut shell oil is applied once or twice for warts and itches. *Very young fruit ground with milk is applied over the inner side of mouth and also used internally for 3 – 6 days in case of mouth ulcers. *Coconut
gratings are eaten / coconut milk is given to drink / cotton soaked in coconut oil is
given to smell in case of tobacco and arecanut intoxication. *Coconut oil mixed
with equal quantity of lime water is used as *dhara* for burns. *Coconut milk mixed
with lime is also applied for burns. *Coconut oil, Ixora coccinea flower and gingelly
seeds are heated and applied (three times in a month before bath) for malabsorption
in children.

Etymology: Daksinatya (belonging to the south) indicates its origin. Kalpavrksa
and Kalpavrksham (tree which fulfills all desires) arose from its diverse uses. Every
part of this tree has diverse uses.

Note: It is used for preparing *Narikela khanda* and *Narikela lavana* (Sharma et al.,
1998). It has histidine, lauric acid, myristic acid, phytosterol, squalene and
galactomannan as major constituents with diuretic and refrigerant properties
(Kapoor, 1990).

245. Coffea arabica L. (Plate 42 A)

Family: Rubiaceae

Vernacular Name: San: Kaphi, Mlechca-phala, Rajapiluh
                   Eng: Arabian coffee, Coffee
                   Kan: Kaphi gida, Kapi, Coffee gida
                   Mal: Coffee, Kappi
                   Tulu: Kappi, Kapi

Habit: Large shrub.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Large shrub. Leaves simple, elliptic or ob lanceolate, glabrous. Flowers
white, fragrant, in axillary dense clusters. Calyx-lobes 5. Corolla salver-shaped;
lobes 5, spreading. Stamens 5. Fruit obovoid, 2-seeded drupe, deep crimson when
ripe.
Uses: Coffee is a nervine stimulant, diuretic and is used for fever and weakness due to diseases (it can cause gastric irritation). *Raw seed paste is applied for migraine and its hot decoction is given to arrest diarrhoea, asthma and indigestion. *Coffee powder is applied to arrest bleeding from cuts and wounds.

Etymology: Mlechca-phala (foreign fruit) clearly indicates its foreign origin.

Note: Caffeine is the major active constituent. Seed powder is used as beverage.

246. *Coix lacryma-jobi* L. (Plate 42 B)

Family: Poaceae

Vernacular Name: San: Gavedhu, Gavedhuka, Gojihva
Eng: Job’s tears
Kan: Kaagemani, Ashrubeeja, Jogimani, Japasara
Mal: Kakkappallunku, Kattugothembu, Kunthamani, Poochakal
Tulu: Jogimani, Japasaro

Habit: Robust herb.

Habitat: Moist areas.

Status: Common.

Description: Perennial, robust, monoecious herb; nodes thick, glabrous. Leaves convolute, flat, spinulose serrate, midrib thick, glabrous. Racemes axillary and terminal; lower spikelets solitary, female; male spikelets protrude through the apex of female spikelets; peduncle very long. Female spikelets enclosed in a hardened, polished involucre. Glumes ovate, margins incurved; lemmas ovate; palea ovate-oblong; styles basally united. Fruit broadly ovate, oblong caryopsis, furrowed in the middle, white.

Uses: *Fruit extract is taken to expel phlegm. *Root decoction is recommended for urinary disorders and menstrual problems.
Etymology: Japasara and Japasaro (rosary) as its seeds are used as beads for rosaries. Kattugothembu (wild wheat) is due to its resemblance with wheat.

Note: Benzoaxazolinones, leucine, tyrosine, histidin, arginine and coicin are the major constituents. It is used in the preparation of *Visnu taila* (Sharma et al., 1998).

247. *Coldenia procumbens* L. (Plate 42 C)

Family: Boraginaceae

Vernacular Name: San: Tripakshi, Tripadi  
Eng: Trailing Coldenia  
Kan: Tripadi, Hamsapadi  
Mal: Nilamparanda, Cherupulladi  
Tulu: Tripadi

Habit: Prostrate herb.

Habitat: Post harvest paddy fields and moist ground.

Status: Common. Weed.

Description: Prostrate spreading herb, densely strigose. Leaves asymmetric, obovate-oblong, crisped, densely strigose, base tapering, veins ending in the sinuses. Flowers minute, extra-axillary. Sepals 4, lanceolate, persistent. Corolla pale yellow, 4-lobed. Stamens 4, included. Fruit dry, hairy, with a sharp central double beak, breaking into four 1-seeded nutlets.

Uses: *Whole plant extract or decoction is used as a general and hepato tonic. It is useful for indigestion and gastritis. *Dried leaf and fenugreek seed paste is applied for furuncles, ulcers and piles.

Etymology: Hamsapadi (goose foot) is due to the resemblance of leaves with foot of a goose. Tripadi (three-footed) arose from its asymmetric leaves.

Note: It is often used as a substitute for *Desmodium triflorum*. 
248. *Colocasia esculenta* (L.) Schott. (Plate 42 D)

Syn: *Arum esculentum* L.; *Arum colocasia* L.; *Colocasia antiquorum* Schott.

Family: Araceae

Vernacular Name: San: Alukam, Alupam, Kachu
                      Eng: Cocoyam, Dasheen, Eddo, Kalo, Taro
                      Kan: Kesavu, Kesu, Kesavedantu, Savegadde, Shyame gadde,
                          Syavegadde
                      Mal: Chembu, Kattuchembu, Madantha, Tal
                      Tulu: Chevu, Thevu

Habit: Large herb.

Habitat: Wet places.

Status: Common. Weed.

Description: Large tuberous herb. Leaves ovate to suborbicular-cordate, apex apiculate, basal sinus triangular, dark green, sometimes clouded with black; petioles long, green or violet. Peduncle stout; spathe has two parts, lower green and accrescent, the upper elongate, narrowly lanceolate, yellow to orange, and deciduous; spadix shorter than the spathe, in four parts: lower pistillate, intermediate sterile, middle staminate and terminal naked appendix. Flowers naked. Male flowers: Stamens 3 – 6, united into synandria. Female flowers: Ovaries oblong, 1-celled. Fruit oblong, many-seeded berry.

Uses: *The acrid juice of this plant is applied for easy expulsion of spines or thorns. *Cooked petiole juice is taken for fever. *Fresh corm juice is applied for alopecia totalis. *Cooked rhizome is given to eat and juice extracted by burning it in fire is applied externally for skin allergy. *Petiole juice is applied to stop bleeding form cuts and wounds. *Cooked rhizome paste with salt is applied to expel spines or thorns from the body. *Finger is inserted into the hole made in its petiole for carbuncles, whitlow and in growing toenails. Seed decoction is recommended for rheumatism and nervous debility. Petiole paste is applied for swellings. Tender root
extract is germicidal and is used for bleeding, *raktapitta*, cold, phlegm and hernia. *Petiole juice (of black variety) dissolved in salt water is consumed to induce menstruation. *Seeds paste with termite eggs is applied externally for rheumatism.

Etymology: Savegadde, Syavegadde and Shyame gadde (dark-coloured tuber) are due to the colour of its tuber.

Note: Tuber, petiole and leaves are used as vegetable. Cooked rhizome and petiole are used as nutritious food.

249. *Combretum latifolium* Blume (Plate 42 E)

Syn: *Combretum extensum* Roxb. ex G. Don.

Family: Combretaceae

Vernacular Name: Kan: Kojambe, Kojambe balli  
Mal: Pee-ula  
Tulu: Kojambe ballu

Habit: Large climber.

Habitat: Semi evergreen forests.

Status: Common.

Description: Large scandent or climbing shrub. Leaves simple, broadly elliptic or obovate, glabrous. Flowers pale yellow, fragrant, polygamo-dioecious, in axillary panicked spikes. Calyx-tube constricted above the ovary and expanding into funnel-shaped limb; lobes 4. Petals 4, oblong, shorter than calyx-lobes. Stamens 8. Fruit ovoid, 1-seeded samara, with 4 membranous wings.

Uses: *Decoction prepared from its leaves is used to wash burns, septic wounds and ulcers. *It is internally given to arrest vomiting, expel intestinal worms and for flatulence. *Tender shoot tip *tambuli* is a digestive agent. *Plant cooked with rice or its decoction with jaggery is given for 2 – 3 days to expel all kinds of intestinal worms. Whole plant decoction is used internally and its paste is applied externally
for rheumatism. Bathing with whole plant decoction is useful for swelling, skin diseases and burns. Plant decoction is useful for diarrhoea and urinary diseases. *Leaves along with that of *Cymbopogon citratus, *Mangifera indica* are made into a decoction and is used to arrest vomiting. *Leaf decoction is given for diarrhoea in small children. *Leaf ground with rock salt is applied around the navel and leaf decoction is consumed for worm infestation in children. *Shoot tip, those of *Melastoma malabathricum, *Syzygium caryophyllatum, *Calycopteris floribunda and *Careya arborea* are tied in *Careya arborea* leaf, covered with soil and cooked in charcoal. This preparation ground in buttermilk is taken in empty stomach at morning for 12 days in case of anal prolapse due to dysentery. *One handful tender shoot tip cooked with rice is given to eat for diabetes in children.

Note: Much valued for burn and children’s diseases.

**250. *Commelina benghalensis* L. (Plate 42 F)**

**Family:** Commelinaceae

**Vernacular Name:** San: Kanchata, Kosapuspi, Vatspriya
Eng: Day flower, Fire leaf, Tropical spider wort
Kan: Kanne soppu, Kanasura, Hittugani
Mal: Kanavazhai, Vuzhaipadathi
Tulu: Kannechappu

**Habit:** Diffuse herb.

**Habitat:** Wet fields.

**Status:** Frequent. Weed.

**Description:** Diffuse herb, with creeping branches, sometimes develop leafless underground branches bearing cleistogamous, white, fertile flowers. Leaves simple, ovate or oblong, base contracted into petiole, often asymmetrical, pubescent; sheaths with ciliate margins. Spathes 1 – 3 together, auricled on one side, funnel-shaped, pubescent. Aerial flowers blue. Sepals 3, membranous. Petals 3, clawed, unequal, two larger. Stamens 3 fertile; staminodes 3. Fruit pyriform capsule.
Uses: *Whole plant powder is consumed for constipation. *It along with tamarind seed powder (1:1) in milk is used for 40 days in case of premature ejaculation.

Etymology: This plant usually develops flowers in underground branches and these fertile flowers are not seen above ground, hence the name Kanne sopppu (virgin leaf).

Note: Plant is used as fodder.

251. *Commelina diffusa* Burm. f. (Plate 43 A)

Syn: *Commelina nudiflora* auct. non L.

Family: Commelinaceae

Vernacular Name: San: Kanchata, Kosapuspi, Vatspriya
   Eng: Day flower, Fire leaf, Tropical spider wort
   Kan: Kanne sopppu, Kanasura, Hittugani
   Mal: Kanavazhai, Vuzhaipadathi
   Tulu: Kannechappu

Habit: Diffuse herb.

Habitat: Weed in moist places.

Status: Common. Weed.


Uses: *The mucilage oozing out from the cut stem is applied for two days in case of boils on the sides of the eye. *Plant extract is used as a cooling agent while its paste is applied for burns.

Etymology: Even though it produces flowers in the usual manner, due to the close affinity with *Commelina benghalensis* it got the name Kanne sopppu (virgin leaf).
Note: Plant juice is used in the preparation of tamra bhasma*.

252. *Corallocarpus epigaeus* (Rottl. & Willd.) Clarke (Plate 43 B)

Syn: *Bryonia epigaea* Rottl. & Willd.

Family: Cucurbitaceae

Vernacular Name: San: Katunahi, Mahamula, Patalagaruda, Sukanasar
    Kan: Akashagaruda, Akashagaruda balli, Gilimoogina gadde
    Mal: Kilimukkankizhangi
    Tulu: Vishamungli

Habit: Climbing herb.

Habitat: Lower hill slopes, along hedges.

Status: Rare.


Uses: *Plant decoction is taken for rheumatism, snake bite and dysentery. *Plant paste with cumin seeds, onion and castor oil is applied for rheumatism.

Etymology: Akashagaruda (sky kite), Akashagaruda balli (sky kite vine) and Vishamungli (enemy of poison just like mongoose for snake) clearly shows its therapeutic efficacy against poisonous bites. Sukanasar (parrot nose), Gilimoogina gadde and Kilimukkankizhangi (parrot nose tuber) arose from the morphology of its tubers and fruits which are beaked just like parrot’s nose.

Note: Tuber is much valued in the treatment of snake bites.
253. *Corchorus capsularis* L. *(Plate 43 C)*

Family: Tiliaceae

Vernacular Name: San: Cancu, Kalasaka, Nadibhanga, Nadika, Pattu  
Eng: Jute  
Kan: Senabu, Kinikinibeeja, Chunchala gida, Sannamudre gida  
Tulu: Kinkini beejo

Habit: Erect undershrub.

Habitat: Weed in waste places.

Status: Common. Weed.


Uses: *Seeds are highly bitter and their extract is given for biliousness.*

Etymology: Kinkini beejo (small bell seeds) arose as the mature seeds make a sound similar to that of a small bell.

Note: Even though it is the source of jute and usually cultivated, in the study area it is not cultivated and runs as weed.

254. *Cordia obliqua* Willd. *(Plate 43 D)*

Syn: *Cordia latifolia* Roxb.; *Cordia myxa* Wight

Family: Boraginaceae

Vernacular Name: San: Bahuvaraka, Bahuwara, Bhutadruma, Shailu, Selu, Shleshmantaka  
Eng: Sebesten plum  
Kan: Naravuli, Challe hannu, Challe, Dodda challe
Mal: Pasakkamaram, Viri, Cheekatta, Cheekattapasha  
Tulu: Challeparandu

Habit: Small tree.

Habitat: Plains, also cultivated.

Status: Frequent.

Description: Small tree. Leaves simple, ovate to suborbicular, repand-crenate. Flowers in terminal lax corymbose cymes. Calyx campanulate, 5-lobed, silky-pubescent within. Corolla campanulate, white, 5-lobed. Stamens 5, exerted. Fruit ovoid drupe, yellowish or pinkish when ripe, seated on the saucer-like calyx; mesocarp mucilaginous.

Uses: *Seed paste with coconut oil is applied for ringworm. *Bark juice mixed with coconut milk is given for stomachache. Fruit juice is taken for cough and urinary disorders. Bark decoction is recommended to expel phlegm, for diarrhoea, fever, burning sensation in the body, dry cough and skin diseases. *Leaf extract is applied for pimples. *Mucilage obtained from the fruit is used for phlegm. *Fruits are eaten to expel intestinal worms. *Bark extract with coconut milk is consumed at morning in empty stomach for two weeks in case of gastric ulcers. *Ripe fruit juice is swallowed for dry cough, stomachache and headache. Fruit decoction is taken for digestive disorders, cough, phlegm and breathing problems.

Etymology: Shleshmantaka (phlegm killer) is due to its therapeutic potential against phlegm. Pasakkamaram (gum fruit tree) arose from gummy mucilaginous mesocarp of the fruits.

Note: Fruit and seeds are edible. Cathartin, β-sitosterol, benzopate and digitomide are the active components with demulcent action (Kapoor, 1990). Young fruits are pickled.

255. *Coronopus didymus* (L.) Smith (Plate 43 E)


Family: Brassicaceae
Vernacular Name: Eng: Swine’s cress, Swine cress
       Kan: Gabbukothambari
       Tulu: Nathakothambri

Habit: Prostrate herb.

Habitat: Weed in degraded forests and coffee plantations.

Status: Occasional. Exotic and weed.


Uses: *Whole plant paste is applied for hair fall.

Etymology: Gabbukothambari and Nathakothambri (foetid coriander) is due to the foetid smell of this plant having slight resemblance with that of coriander.

Note: It is a rapidly colonizing weed.

256. Corypha umbraculifera L. (Plate 43 F)

Family: Arecaceae

Vernacular Name: San: Alpayushi, Karalika, Katkali, Sritala, Sritalam
       Eng: Talipot palm
       Kan: Kodetali, Panoli, Baini, Shritale, Pane
       Mal: Kodappana, Sitalam, Talippana
       Tulu: Panetha maro, Pane

Habit: Tall palm.

Habitat: Plains.

Status: Very rare.

Description: Tall stout palm, with annulate stem, dying after once flowering and fruiting. Leaves large, orbicular or lunate in outline, flabellately multifid, cleft to the

Uses: *Pith powder is given as food during the treatment of insanity. *Pith powder is strongly recommended to arrest diarrhoea. Pith powder in milk or in the form of decoction is taken for liver disorders, leucorrhoea, jaundice, burning during urination and also given for 48 days in case of osteoporosis. *Paste prepared from fruit pulp is applied for venereal diseases. *Pith powder dissolved in milk is recommended for leucorrhoea and rheumatism. *Pith powder dissolved in water is consumed for piles. *Fruit ground with butter milk is applied for tinea versicolor.

Etymology: Alpayushi (short lived) is due to its peculiar nature of dying after once flowering and fruiting. Sritala and Shritale (precious palm) arose due to its diverse uses and sacred label. Kodetali and Kodappana (umbrella palm) are due to its characteristic leaves.

Note: In the past leaves were used for writing. Tree is used for worship. Pith powder is nutritive and is used just like arrowroot powder.

257. *Coscinium fenestratum* (Gaertn.) Colebr. *(Plate 44 A)*

Syn: *Menispermum fenestratum* Gaertn.

Family: Menispermaceae

Vernacular Name: San: Daru haridra, Daruharidrakam, Haricandana, Pitacandana, Pitadaru
Eng: Tree turmeric, False calumba
Kan: Maradarasina, Daruharidra, Maramanjalu,
Mal: Maramanjal, Marathi, Manjavalli
Tulu: Maramanjalu

Habit: Woody climber.

Habitat: Evergreen forests.
Status: Rare.

Description: Large dioecious liana, with yellow wood and sap; branchlets terete, brown tomentose, later glabrescent with petiole-scars. Leaves simple, broadly ovate, glabrescent above, yellowish-white beneath, thinly coriaceous; petiole swollen at both ends. Flowers unisexual, small, yellowish or whitish, in supra-axillary long racemes on old leafless stems; bracts villous. Sepals 9, in 3 whorls, densely pilose. Petals absent. Stamens 6. Carpels 3 – 6, free, subglobose. Fruit globose, tomentose drupe, brown or yellow when ripe, with persistent calyx.

Uses: Root paste is applied for vitiated boils and ulcers. Plant paste is applied for eye infections while its decoction is used internally for vomiting, diarrhoea and kidney stones. *The water oozing out from the cut stem (collected and stored for years) is applied for septic wounds and ulcers. *Bark extract mixed with jaggery is used as a tonic for gastro intestinal tract disorders. Root paste is applied for skin diseases while extract is consumed to expel phlegm. Plant extract is a blood purifier. *Root decoction alone or in combination with gooseberry is recommended for diabetes. *Stem, rasanjana*, Cyperus rotundus tuber, Semecarpus anacardium bark, dried gooseberry, Justicia adhatoda leaf and Andrographis paniculata decoction is used for leucorrhoea. *Bark, Embelia ribes seed, Boerhavia diffusa root and Tinospora cordifolia stem (in equal quantity) decoction is consumed for fever. *Bark, Eleaegnus conferta root, Embelia ribes root, Tabernaemontana heyneana bark, Casuarina litorea bark (50 gm each), garlic, Trachyspermum ammi and Zanthoxylum rhetsa seeds are crushed and given to eat for swelling on the sides of throat in cattle.

Etymology: Daru haridra, Maradarasina, Maramanjali and Maramanjalu (tree turmeric) are due to its yellow woody roots and stem. Pitacandana (yellow sandal) and Pitadaru (yellow wood) clearly illustrate its wood morphology, anatomy and utility.

Note: Berberine, palmitine, jatrorrhizine, proto berbene, N-di-lindacarpine, thalifendine and columbamine are the active constituents (Sharma et al., 1998).
258. *Cosmostigma racemosum* (Roxb.) Wight (Plate 44 B)

Syn: *Asclepias racemosa* Roxb.; *Cosmostigma acuminatum* Wight

Family: Asclepiadaceae

Vernacular Name: Kan: Ghara hoovina gida, Dodda pethasajanku  
Mal: Vattuvalli, Vattolam  
Tulu: Mire baaputha thappu, Malla pethasajanku

Habit: Twining shrub.

Habitat: Along hedges.

Status: Frequent.


Uses: *Leaf paste is applied for breast and udder swellings.* *Whole plant paste is applied for hardened swellings and warts.* *Heated leaf juice mixed with ghee is applied over the chest for chest pain.* *Plant paste is applied for poisonous bites.* *Root and leaf decoction is used to wash wounds and poisonous bites.* *Root paste with rice washed water is applied for mastitis.* *Root extract with cumin seeds in milk is taken for leucorrhoea.

Etymology: Dodda pethasajanku and Malla pethasajanku (larger *Wattakaka*) are due to its close affinity with *Wattakaka volubilis* and larger leaves. Mire baaputha thappu (leaf for mastitis) clearly indicate its therapeutic efficacy.

Note: Crushed leaves emit a smell of green chillies. When the leaves are plucked, watery sap starts to ooze out. These are the two identifying features of this herb.
259. *Costus pictus* D. Don. *(Plate 44 C)*

Family: Zingiberaceae

Vernacular Name: Eng: Insulin plant  
Kan: Insulin gida  
Mal: Insulin chedi  
Tulu: Insulin dai

Habit: Erect herb.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Erect succulent clumping herb, with hirsute stem, green at apex, glabrous and purple towards base. Leaves simple, elliptic-oblanceolate, dark green above, lighter below; petiole purple at margin. Inflorescence both terminal and basal, condensed, ovoid to cylindric spike; bracts green outside, deep scarlet within; bracteoles red. Flowers showy. Calyx red; lobes cuspidate. Corolla yellow. Labellum yellow with red streaks; lip yellow, pubescent, recurved, several-lobed. Anthers cream coloured.

Uses: Leaves are eaten daily for diabetes. Plant extract is a digestive.

Etymology: Insulin gida, Insulin chedi and Insulin dai (insulin plant) arose as its leaves are used for diabetes.

Note: Also grown as ornamental plant.

260. *Costus speciosus* (Koenig) J. E. Smith *(Plate 44 D)*

Syn: *Banksea speciosa* Koenig in Retz.

Family: Zingiberaceae

Vernacular Name: San: Canda, Kashmira, Pushkara, Subandhu  
Eng: Costus, Cane-reed, Crepe-ginger, Spiral ginger
Kan: Kundige gida, Changalvakosta, Changalakosta
Mal: Aanakoova, Channa, Channakoova, Narumchanna
Tulu: Kannutha mardu, Narikkabbu

Habit: Succulent herb.
Habitat: Moist areas.
Status: Common.

Description: Succulent herb, with tuberous rhizome and spirally twisted stem. Leaves simple, spiral, elliptic-ovate, silky-pubescent beneath; ligule ciliate. Inflorescence globose or ovoid, terminal dense spike; bracts ovate, pubescent, bright red; bracteoles keeled, ciliate on the margins. Calyx red; lobes cuspidate. Corolla-lobes ovate-oblong. Labellum suborbicular, white, with a yellow centre. Stamen yellow at apex. Fruit globose, trigonous capsule, red when ripe.

Uses: *Cooked tuber is given along with food to dogs suffering from rabies and indigestion. *2 – 3 drops of heated stem / rhizome juice are poured into eyes in cases of eye pain and conjunctivitis. This is also used as ear drop for earache. Rhizome or stem juice along with honey is recommended for cough and fever. *Rhizome juice is consumed for biliousness and that mixed with honey for cough in small children. Root decoction is given for fever and biliousness. *Plant extract is used for whooping cough. *Rhizome decoction is given for albumin in urine and menstrual disorders. Crushed rhizome decoction is taken for fever due to indigestion. Rhizome extract is recommended for biliousness, phlegm, fever, indigestion, heart problems, elephantiasis, leprosy, snake bite and for easy delivery. Plant extract is recommended for diabetes. *Rhizome juice is given by adding sugarcandy powder for phlegm. *Rhizome juice mixed with buffalo curd is consumed for bleeding piles. *Rhizome, Pholidota imbricata pseudobulb and Dendrophthoe falcata leaf ground with rice washed water is given for DUB in cattle. *Rhizome juice boiled with gingelly oil is applied for ringworm in dogs.

Etymology: Aanakoova (elephant arrowroot) is due to its large size and tubers resembling that of arrowroot. Kannutha mardu (eye medicine) arose as its stem juice is popularly used for eye diseases.
Note: β-sitosterol, saponins A, B, C & D, tigogenin and diosgenin are the active constituents with anti-inflammatory and anti arthritic actions (Jain et al., 1991; Kapoor, 1990). It is one of the major ingredients of Eladi taila, Manjisthadi taila, Asana manjisthadi taila, Manjisthadi churna, Baladhatryadi taila, Krmighna kvatha and Krmighna churna (Sivarajan & Balachandran, 1996; Sharma et al., 1998). Rhizome is used as food by the tribes. Tender shoot tip is used as vegetable.

261. *Couroupita guianensis* Aublet (Plate 44 E)

Family: Lecythidaceae

Vernacular Name: San: Nagalinga  
Eng: Cannon ball tree  
Kan: Nagalinga, Lingada hoovinamara  
Mal: Nagalingamaram  
Tulu: Nagalingo

Habit: Tall tree.

Habitat: Planted in gardens.

Status: Occasional. Exotic.

Description: Tall tree. Leaves simple, crowded towards the ends of the branches, oblong-ovate, blunt at apex. Flowers large, in racemes on trunk and lower branches. Sepals 6. Petals 6, broad, yellow or red outside, pink inside. Stamens many, basally connate on a ring and extended on one side into a curved androphore. Fruit globose, cannon-ball-like, hard outside, brown, having foetid smell when ripe.

Uses: *Oil prepared by boiling its leaf juice with gingelly oil is applied for hair fall.

Etymology: Nagalinga, Nagalingo (snake mark) and Nagalingamaram (snake mark tree) are due to its characteristic flowers in long pendent racemes on the trunk.

Note: Sometimes it is used as a substitute for Nagakesara (*Mesua ferrea*).
262. *Crassocephalum crepidioides* (Benth.) S. Moore (Plate 44 F)

Syn: *Gynura crepidioides* Benth.

Family: Asteraceae

Vernacular Name: Eng: Red flower rag leaf, Thickhead  
Kan: Kaadu jeerige  
Mal: Appuppanthadi  
Tulu: Kattujeerdari

Habit: Erect herb.

Habitat: Wastelands and weed in cultivated lands.

Status: Common. Exotic and weed.

Description: Annual herb. Leaves elliptic-oblanceolate, gradually narrowed below into a petiole, sometimes lyrately lobed, puberulous. Florets in terminal discoid, homogamous leafy racemes, pendulous at first in the bud, later erect; involucres cylindrical, puberulous; bracts uniseriate, linear-lanceolate. Florets red or dark orange. Corolla tubular, with 5-lobed limb. Stamens 5. Fruit oblong, ribbed achene, puberulous on the ribs; pappus hairs numerous, silky, white.

Uses: *Whole plant paste is applied for skin diseases and wounds. *Whole plant juice is used as a biocide, especially for ticks and lice.

Etymology: Kaadu jeerige and Kattujeerdari (wild cumin) are due to its characteristic smell and similarity in fruits. Appuppanthadi (grandpa’s beard) as its fruits are with numerous silky, white pappus hairs.

Note: Seeds are used as a substitute for cumin seeds.

263. *Crataeva magna* (Lour.) DC. (Plate 45 A)

Syn: *Capparis magna* Lour.; *Crataeva nurvala* Buch.-Ham.; *Crataeva religiosa* var. *nurvala* (Buch.-Ham) Hook. f. & Thoms.
Family: Capparaceae

Vernacular Name:  San: Varuna, Varunah  
                 Eng: Three leaved caper  
                 Kan: Holenekki, Narambele, Nervaalamara, Nervaala  
                 Mal: Neermathalam, Neerval, Mavulangam  
                 Tulu: Thudenekki, Neernekki, Sudenekki

Habit: Small tree.

Habitat: Along banks of rivers.

Status: Rare.

Description: Small deciduous tree, with lenticellate branchlets. Leaves digitately 3-foliolate; leaflets elliptic-lanceolate, pale beneath. Flowers large, polygamous, in terminal and axillary cymes. Sepals 4. Petals 4, long-clawed, pale yellow or white. Stamens many; filaments lilac. Ovary on a slender gynophore. Fruit ovoid berry, covered with white specks.

Uses: *Rasayana* (tonic) prepared from its fruit is given for vomiting during pregnancy. Leaf decoction is used for gas trouble, nervous diseases and stomachache. *Bark, ginger, long pepper and milk boiled in gingelly oil is applied for cuts, wounds, oedema and swellings.  *Bark and leaf decoction is used as a blood purifier. *Bark paste by boiling with oil is applied for rheumatism. Bark decoction is used for rheumatism and allergy.  *Bark paste is applied for body pain after fever attack. *Plant is of hot nature and gives higher result for swelling. *Root decoction is taken with honey for lymph node swellings.

Etymology: Varuna (the god of water), Holenekki, Thudenekki and Sudenekki (river *Vitex*) and Neernekki (water *Vitex*) are due to its habit and similarity with *Vitex*. It grows along banks and has digitately trifoliolate leaves just like *Vitex*.

Note: Lupeol, β-sitosterol, choline, friedelin, betulinic acid, triacontane, triacontanol and diosgenin are the major active constituents (Jain et al., 1991). It is used in the preparation of *Varunadi kashaya*, *Varunadi kvatha*, *Varunadi churna*, *Varunadya*
ghrta, Varunadya taila, Brhat varunadi kvatha, Prabhanjana kulambu, Candraprabha gutika and Dhanvantara ghrta (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). It is planted in front of temples along with Vitex negundo and Nyctanthes arbor-tristis.

264. Crinum asiaticum L. (Plate 45 B)

Syn: Crinum toxicarium Roxb.

Family: Amaryllidaceae

Vernacular Name: San: Nagadamani, Sudarsana, Vishamandala
            Eng: Poison bulb
            Kan: Nagadali, Vishamungali, Vishamungili
            Mal: Puzhatthali
            Tulu: Isamungli, Visamungli

Habit: Large herb.

Habitat: Near sea and along back waters.

Status: Frequent.

Description: Large bulbous herb; bulb produced into a neck. Leaves radical, in rosette, linear-lanceolate. Flowers large, white, umbellate, on long scape; bracts 2, spathe-like; bracteoles linear. Perianth salver-shaped, 6-lobed; lobes linear. Stamens 6, reddish. Fruit subglobose capsule, bursting irregularly.

Uses: *Leaf decoction or plant cooked with rice is given to cattle or humans who have eaten some poison. Rhizome and stem juice is used for fever, cough and heart trouble in children (overdose may cause vomiting). *Burnt rhizome paste is applied for all types of swellings. *Leaf juice is poured into ears for earache. *Leaf pounded with castor oil is applied for whitlow. *Plant juice is applied externally and shoot tip cooked with rice is given internally for herpes. Leaf juice is given to cause vomiting in case of snake bite. *Shoot tip mixed with equal quantity of rice washed water is consumed once in the morning for breathing difficulty in children due to
phlegm. *One spoon juice of shoot tip baked in charcoal is given once in the morning for asthma in children. *Tender shoot tip baked in charcoal is crushed, applied and is tied for whitlow. *Same paste tied in a cloth is heated and massaged for nerveine pain.

Etymology: Nagadamani (snake tamer), Vishamungali, Visamungli and Isamungli (enemy of poison just like mongoose for snake) clearly indicate its therapeutic potential against poisonous bites.

Note: Much valued herb for the treatment of poisonous bites and food poisoning. Plant (dried) is smoked in order to repel mosquitoes.

265. *Crinum latifolium* L. (Plate 45 C)

Family: Amaryllidaceae

Vernacular Name: San: Cakrangi

Kan: Vishamungali, Vishamungli

Mal: Sjovanna-pola-tali

Tulu: Visamungli

Habit: Bulbous herb.

Habitat: Moist areas near streams.

Status: Occasional.

Description: Erect bulbous herb, with short, stout neck. Leaves radical, in rosette, lorate, acuminate. Flowers large, in 8 – 20 flowered umbels, on long scape; bracts 2, spathe-like; bracteoles linear. Perianth funnel-shaped, drooping, white tinged with pink or purple; lobes 6, oblanceolate. Stamens 6. Fruit subglobose capsule.

Uses: *Leaf juice is used as ear drop for earache. *Bulb decoction is recommended to arrest vomiting, for poisonous bites, food poisoning, indigestion and nerveine disorders.

Etymology: Vishamungali and Visamungli (enemy of poison just like mongoose for snake) clearly indicate its therapeutic potential against poisonous bites.
Note: Much valued herb for the treatment of poisonous bites and food poisoning. Usually used as a substitute for *Crinum asiaticum*.

266. *Crinum viviparum* (Lam.) R. Ansari & V. J. Nair (Plate 45 D)

Syn: *Amaryllis vivipara* Lam.; *Crinum defixum* Ker.-Gawl.

Family: Amaryllidaceae

Vernacular Name: San: Nagadamani, Sudarsana, Vishamandala

   Eng: Poison bulb

   Kan: Vishamungali, Vishamungili, Kadu eerulli

   Mal: Veluthapolathali, Vatamkolli

   Tulu: Isamungli, Visamungli

Habit: Herb.

Habitat: Along back waters and streams.

Status: Frequent.

Description: Erect bulbous herb; bulb narrowed into a neck. Leaves radical, in rosette, linear, deeply channeled. Flowers large, white, in 6 – 12 flowered umbels, on long scape; bracts 2, spathe-like; bracteoles linear. Perianth salver-shaped; lobes 6, linear. Stamens 6, reddish. Fruit subglobose capsule.

Uses: *Leaf cooked with rice is recommended for rheumatism and poisonous bites.*

Etymology: Nagadamani (snake tamer), Vishamungali, Visamungili and Isamungli (enemy of poison just like mongoose for snake) clearly indicate its therapeutic potential against poisonous bites. Vatamkolli (rheumatism killer) indicate its use for rheumatism.

Note: Much valued herb for the treatment of poisonous bites and rheumatism. Sometimes it is used as a substitute for *Crinum asiaticum*. Lycorine is the active constituent with emetic, diaphoretic and purgative actions (Sharma *et al.*, 1998).
267. *Crossandra infundibuliformis* (L.) Nees (Plate 45 E)

Syn: *Justicia infundibuliformis* L.; *Crossandra undulaefolia* Salisb.

Family: Acanthaceae

Vernacular Name: San: Kanakambara  
Eng: Tropic flame  
Kan: Abbolige, Kanakambara, Kanakambara hoo  
Mal: Manjakkurinji, Kanakambaram  
Tulu: Abbolige

Habit: Undershrub.

Habitat: Grown in gardens.

Status: Common.

Description: Erect undershrub. Leaves simple, in whorls of 4, elliptic to oblanceolate, decurrent at base, pubescent beneath. Flowers in oblong, 4-sided spikes; bracts elliptic; bracteoles linear-lanceolate. Calyx 5-partite. Corolla orange-yellow to orange-red; tube incurved; limb unilateral, with a lip of 5 subequal lobes. Stamens didynamous. Fruit oblong, compressed capsule.

Uses: *Seed decoction is used as an aphrodisiac agent.*

Etymology: Kanakambara (gold clothed) is due to its attractive orange-red or orange-yellow flowers. Manjakkurinji (yellow *Strobilanthes*) arose from its *Strobilanthes* like appearance and orange-yellow flowers.

Note: Flowers are much valued for garlands.

268. *Crotalaria calycina* Schrank (Plate 45 F)

Family: Papilionaceae

Vernacular Name: Kan: Bekkina tharadugida, Hullu saranga gida  
Tulu: Pucche bitthudai
Habit: Erect herb.

Habitat: Higher elevation grasslands.

Status: Occasional.

Description: Erect herb, with velvety branchlets. Leaves simple, variable, linear or oblong. Flowers yellow, in axillary or terminal elongate racemes. Sepals 5, fulvous hairy, lanceolate. Petals 5; standard ovate-oblong. Stamens monadelphous. Fruit oblong, hairy pod, with pale yellow seeds.

Uses: *Root ground with lime juice is applied for poisonous bites. *One cup of whole plant extract is given twice a day for three days in case of pit viper bite.

Etymology: Bekkina tharadugida and Pucche bitthudai (cat's testicle plant) are due to its characteristic fruits.

Note: It is much valued for poisonous bites.

269. *Crotalaria pallida* Dryand in Ait. (Plate 46 A)

Syn: *Crotalaria mucronata* Desv.; *Crotalaria striata* DC.; *Crotalaria striata* DC. var. *acutifolia* Trimen

Family: Papilionaceae

Vernacular Name: San: Katutikta, Sana, Sanah, Sanapuspi

   Eng: Madras hemp, Sann hemp

   Kan: Gijigiji gida, Gijigiji soppu

   Mal: Kilukkachedi, Kilukilikki, Kilukkampettichedi

   Tulu: Gijigiji kayi, Gijigiji dai

Habit: Erect shrub.

Habitat: Wastelands.

Status: Common. Weed.
Description: Erect shrub, with stout stem and puberulous branches. Leaves digitately 3-foliolate; leaflets elliptic, obtuse, glabrous above, minutely puberulous beneath. Flowers in terminal, many flowered racemes. Sepals 5. Petals 5, yellow, often veined with purple. Stamens monadelphous. Fruit oblong, cylindric, much deflexed, puberulous, many-seeded pod.

Uses: *Root extract with lime juice is taken for snake bite. *Paste prepared by grinding its leaf with salt in rice cooked water is applied for mastitis in cattle. Plant paste is applied for scabies. *200 seeds ground with 100 pepper seeds in water are given internally for snake bite. *Seed paste is applied for septic wounds and ulcers. *Hot paste of its root ground with rice cooked water is applied for scrotal swelling. *Crushed root and leaf (kept in one day old rice) are ground, heated and is applied for backache. Seed extract is used for poisonous bites, rheumatism, phlegm, body pain, stomachache and gonorrhoea. *Oil prepared from leaf juice is applied for boil or scabies in the head of children. *Root paste with rice washed water is applied for breast swelling.

Etymology: Katutikta (highly bitter) is due to the taste of this plant juice. When the fruits with fully mature seeds are shaken, they produce a sound resembling chirping and chattering of birds, hence the names Gijigiji gida, Kilukkachedi and Gijigiji dai (chirping and chattering herb).

Note: Mucronatine, corchorin, mucronatinine, usaramine, crotostriatine, nilgirine, luteolin and vitexin are the active constituents (Jain et al., 1991; Sharma et al., 1998). It is used in the preparation of Nirgundyadi gutika, Sarsapadi pralepa, Dasamuladya ghrt, Muktadya churna, Kulatthadya ghrt and Nirgundyadi ghrt (Sivarajan & Balachandran, 1996; Sharma et al., 1998).

270. *Crotalaria retusa* L. (Plate 46 B)

Family: Papilionaceae

Vernacular Name: San: Mahasanah, Sanapuspi, Shanarghandika  
Eng: Golden yellow sweet pea  
Kan: Gejje gida, Gijigiji gida
Mal: Chana, Kilukilikki, Kilukiluppa, Mathru-gathini, Thanthalakkotti
Tulu: Gijigiji dai

Habit: Erect undershrub.

Habitat: Wastelands.

Status: Common. Weed.


Uses: *Root decoction is given for cough in children. *Leaf juice is taken along with salt to expel worms in children.

Etymology: When the fruits with fully mature seeds are shaken they produce a sound resembling chirping and chattering of birds, hence the names Gijigiji gida, Kilukilikki and Gijigiji dai (chirping and chattering herb).

Note: Mucronatine, corchorin, mucronatinine, usaramine, crotostriatine, nilgirine, luteolin and vitexin are the active constituents (Jain et al., 1991; Sharma et al., 1998). It is used in the preparation of Nirgundyadi gutika, Sarsapadi pralepa, Dasamuladya ghrta, Muktadya churna, Kulattadaya ghrta and Nirgundyadi ghrta (Sivarajan & Balachandran, 1996; Sharma et al., 1998).

271. *Crotalaria verrucosa* L. (Plate 46 C)

Family: Papilionaceae

Vernacular Name: San: Brihatapushpi, Dhavani, Sanapuspi, Shanapuspi
Kan: Gijigiji gida, Gijigiji kaayi
Mal: Kilukiluppa
Tulu: Gijigiji dai
Habit: Annual undershrub.

Habitat: Wastelands and sandy sea coast.

Status: Common. Weed.

Description: Much branched annual undershrub, with acutely angled, glabrescent branches. Leaves simple, ovate-deltoid or rhomboid; stipules foliaceous, semilunate. Flowers in terminal 8 – 14 flowered racemes. Sepals 5. Petals 5, blue or white. Stamens monadelphous. Fruit stalked, oblong-cylindric, minutely pubescent pod.

Uses: *Leaf juice is used for upset stomach, excess salivation and phlegm. *Leaf juice mixed with salt is given to expel worms. *Root decoction is recommended for cough.

Etymology: When the fruits with fully mature seeds are shaken they produce a sound resembling chirping and chattering of birds, hence the names Gijigiji gida, Kilukiluppa and Gijigiji dai (chirping and chattering herb).

Note: Mucronatine, corchorin, mucronatine, usaramine, crotostriatine, nilgirine, luteolin and vitexin are the active constituents (Jain et al., 1991; Sharma et al., 1998). It is used in the preparation of Nirgundyadi gutika, Sarsapadi pralepa, Dasamulada ghrta, Mukhchuda churna, Kulaththada ghrta and Nirgundyadi ghrta (Sivarajan & Balachandran, 1996; Sharma et al., 1998).

272. Croton laevigatus Vahl. (Plate 46 D)

Syn: Croton oblongifolius Roxb.; Croton roxburghii Balakr.

Family: Euphorbiaceae

Vernacular Name: San: Hastidanti, Putrasreni
    Kan: Somara beru, Somavarada mara, Bhutala bhairava
    Mal: Pongalam, Somaraaji, Thomarayam
    Tulu: Somaratha beru

Habit: Small tree.
Habitat: Semi evergreen forests.

Status: Occasional.

Description: Small tree. Leaves simple, oblong-lanceolate, narrowed at base, glabrous. Flowers unisexual, pale yellowish-green, in slender fascicled racemes; male numerous; female few at the base of the raceme. Calyx-lobes 5, ovate in male, triangular in female, hairy on the margins. Petals 5, ovate, shorter than calyx-lobes. Stamens 12. Fruit depressed-globose capsule, covered with silvery orbicular scales.

Uses: Root paste is applied over the swellings. *Leaf juice is applied all over the body for oedema and psychoneurotic disorders. *Root ground with lime juice is applied for throat pain or tonsillitis. *Bark paste with rice washed water is applied over the head for headache and poisonous bites. Bark extract or paste with lime juice is used for various skin diseases. Bark decoction is used as a pain reliever. *The tribes rub their body with its bark to ward off infections. Bark decoction has purgative property and is used in the treatment of rheumatism. *Root paste with lime juice is applied externally and the extract is given internally for urticaria, rashes and herpes. *Paste prepared from its bark along with that of *Pterocarpus marsupium, root of *Calotropis gigantea and salt is applied for pain. *Root paste with lime juice or *Citrus aurantium fruit juice is applied for tonsillitis. *Root, *Spondias pinnata bark, *Plumeria alba bark, *Calotropis gigantea leaf and camphor powder are ground with coconut gratings, stored in a copper vessel and is applied for eczema. *Root extract with water is taken twice a day for stomachache and cough. *Root extract with rice washed water is recommended for urine block.

Etymology: Hastidanti (elephant tusk) is due to its characteristic roots. Somara beru, Somaratha beru (moon root) and Somavarada mara (moon tree or Monday tree) arose as this tree is considered sacred to moon.

Note: Oblongifoliol, deoxyoblongifoliol and acetyl aeuritolic acid are the active components with cholagogue activity (Kapoor, 1998). It is much valued drug for skin diseases. Leaf is characterized by the presence of tubercles.
273. *Croton malabaricus* Bedd. (Plate 46 E)

Family: Euphorbiaceae

Vernacular Name: Kan: Pasisappu, Yettimara  
Mal: Chunnambaram, Kolavanchi, Pamaram, Thenadal  
Tulu: Pasichappu

Habit: Tree.

Habitat: Evergreen forests.

Status: Rare.


Uses: *Oil prepared from its leaf juice is applied for rheumatism and rhinitis. *Leaf decoction is used for cough, septic wound and ulcers.

Etymology: Pasisappu and Pasichappu (leaf for rhinitis) are due to its therapeutic efficacy against rhinitis. Chunnambumaram (lime tree) is due to its silvery stellate branches and leaves.

Note: Leaf oil is much valued for rhinitis.

274. *Croton tiglium* L. (Plate 46 F)

Syn: *Croton officinalis* (Klotzsch) Alston

Family: Euphorbiaceae

Vernacular Name: San: Danti, Dantibijah, Dravanti, Jepala, Jepalah  
Eng: Purging croton, Croton oil plant  
Kan: Japala, Japalada kaayi, Danti
Mal: Kadalavanakku, Neervalakuru, Neervallam
Tulu: Byaribitthu, Berada bitthu

Habit: Small tree.

Habitat: Cultivated, also run wild.

Status: Occasional. Poisonous.


Uses: Seed decoction causes drastic or severe vomiting and diarrhoea (when purified it becomes good laxative or purgative). *Oil prepared from the seed is applied to get relief from rheumatic pain. Purified seed extract is used for stomach disorders, breathing problems, cough, epilepsy and swellings. *Leaf extract in water is a purgative. *Bark paste if taken internally causes perspiration and vomiting. *Dried leaf paste is applied for snake bite. *Root paste with lime juice is applied for septic wounds and ulcers. Fruit extract is a drastic purgative and is used in the treatment of rheumatism. Tablets prepared from purified seed powder are given to expel worms. *Leaf paste is applied for ringworm. *Root paste with lime juice is applied for septic wounds and ulcers.

Etymology: Danti (elephant tusk) is due to its whitish roots which show resemblance with elephant tusk. Kadalavanakku (sea castor) indicates its origin. It originated in China from where it got introduced into India.

Note: It is one of the major ingredients of Misraka sneha, Icchabhedi rasa and Asvakancuki rasa (Sivarajan & Balachandran, 1996; Sharma et al., 1998). It has croton globulin, croton albumin, crotonoside, phorbol esters and crotin as active constituents with drastic purgative and rubefacient actions (Kapoor, 1990; Dey, 1994; Sharma et al., 1998). Fruits are used as fish poison.
275. *Cryptolepis buchananii* Roem. & Schult. (Plate 47 A)

Syn: *Nerium reticulatum* Roxb.

Family: Periplocaceae

Vernacular Name: San: Gopakanya, Gopavalli, Krishnasariva, Sariba, Sariva

   Eng: Milk vine

   Kan: Kareballi, Metguli hambu, Nelahaale, Metlahambu

   Mal: Kattupalvalli, Kalipalvalli, Kilipalvalli, Palvalli

   Tulu: Nilappale, Nelappale

Habit: Twining shrub.

Habitat: Along hedges.

Status: Common.

Description: Glabrous twining shrub, with white smooth branches. Leaves simple, elliptic-oblong, glaucous beneath. Flowers small, in lax, peduncled axillary cymes. Calyx deeply 5-lobed. Corolla pale greenish-yellow, campanulate; lobes 5, linear-lanceolate; corona of 5 scales. Stamens 5; filaments broad; anthers sagittate. Fruit lanceolate, divaricate follicle.

Uses: *Leaf juice or latex is applied for water oozing itches, venereal diseases and hardened tumours. *Gruel prepared by cooking its leaves (five) with rice is consumed for same purpose (this should be used in limited quantity). *Leaf paste is applied for cancerous tumours (is effective in the starting stage).

Etymology: Krishnasariva (black sarasaparilla) and Kareballi (black wine) are due to its use as the source of the drug Krishnasariva (*Ichnocarpus frutescence*). Kattupalvalli (wild milk vine) arose as it has milky latex and grows wild.

Note: Fibres are obtained from its stem. Stem is used as thread to tie the rafters. It is used in the preparation of *Saribadyasava, Pindataila, Vidaryadi lehya, Drakshadi kashaya, Satavari guda, Kalyanaka ghrta, Triphala ghrta, Brhatphala ghrta, Mahakalyanaka ghrta, Maha tiktaka ghrta, Maha pancagavya ghrta,*
Vastyamayanaka ghrta, Candanadi taila, Brhat Chagaladya ghrta and Jatyadi ghrta (Sivarajan & Balachandran, 1996; Sharma et al., 1998).

276. Cucumis melo L. (Plate 47 B)


Family: Cucurbitaceae

Vernacular Name: San: Bahuphala, Kantakiphala, Karkatee, Tiktakarkatika, Trapusah
Eng: Cucumber, Melon, Muskmelon, Sweet melon
Kan: Kharbuja, Sauthe, Sauthekaayi, Maghekaayi
Mal: Vellari, Kattuvellari, Pekkummatti
Tulu: Chauthe, Garbheejoo, Ibbudalu

Habit: Trailing herb.

Habitat: Cultivated.

Status: Common.

Description: Trailing annual herb, with hirsute, angular stem. Leaves simple, orbicular-ovate to reniform, entire or 3 – 5-lobed, scabrid. Flowers yellow, monoecious; male in axillary clusters; female solitary. Calyx-tube campanulate; lobes 5. Corolla rotate, deeply 5-partite. Stamens 3. Ovary softly hairy. Fruit polymorphous, usually rounded or oblong, smooth. Seeds white, obovoid.

Uses: *Fried seeds are taken with sugar for burning during urination and to stop vomiting. *Seed ground with rat excreta is applied below the navel for immediate urine release in case of urine block. *Fruit pulp is rubbed all over the sole for burning sensation in the sole. *Fruits are mused as vegetable to increase peristalsis. *Paste prepared from its fruit rind, *Curcuma longa* rhizome, fruit rinds of *Citrus aurantifolia*, *Citrus aurantium*, heart wood of *Pterocarpus santalinus*, *Spondias pinnata* (leaf and bark) and *Glycyrrhiza glabra* rhizome with rice washed water is
applied to remove unwanted marks from the body. Fruit extract relieves biliousness.

*Seed paste is applied around the navel for urine block in children.

Etymology: Kantakiphala (prickly fruit) and Tiktakarkatika (bitter melon) are due to its young fruits which are prickly and bitter in taste.

Note: Enzyme crepsin is the active component with nutritive, demulcent and diuretic actions (Kapoor, 1990). Used in the preparation of Dadhika churna and Dadhika ghrta (Sharma et al., 1998). Fruits are used as vegetable.

277. *Cucumis prophetarum* L. (Plate 47 C)

Family: Cucurbitaceae

Vernacular Name: San: Aindri, Indravaruni, Kakadini, Kshudrakantaphala
Eng: Wild cucumber
Kan: Seendla, Kahi mullusauthe
Mal: Andanga, Peerapotti, Peerappattikka, Kaippan vellari
Tulu: Seendla, Seendlo

Habit: Climbing herb.

Habitat: Along hedges.

Status: Frequent.

Description: Prostrate or climbing perennial herb; stem hispid, rough, with whitish hairs. Leaves simple, ovate-orbicular, entire or 3 – 5 lobed, hispid-scabrid. Flowers yellow, monoecious; male in axillary fascicles of 2 – 3; female solitary. Calyx-tube hispid; lobes 5, linear, spreading. Corolla villous; lobes 5, ovate-oblong. Stamens 3. Ovary muricate. Fruit ovoid or subglobose, puberulous, softly echinate, longitudinally striped, greenish-white, yellow when ripe. Seeds pale ashy.

Uses: *Fruit extract is given to drink to cause vomiting in case of severe biliousness or when some poison entered the body.
Etymology: Kshudrakantaphala (inferior prickly fruit) is due to its fruits which are softly echinate and are not much used. Kahi mullusauthe and Kaippan vellari (bitter cucumber) are due to the bitter taste of its fruits.

Note: Fruit juice is used as an emetic agent. If this plant is planted near the plants with sweet fruits, all will become bitter in taste. *During Deepavali* this plant is tied to the vessel in which hot water is prepared for bath.

278. *Cucumis sativus* L. (Plate 47 D)

Family: Cucurbitaceae

Vernacular Name: San: Bahuphala, Kantakiphala, Karkatee, Trapusah
   Eng: Cucumber, Common cucumber, Sweet cucumber
   Kan: Mullu sauthe, Hekkarpe
   Mal: Vellari, Kakkari, Mullankakkari
   Tulu: Chekkarpe, Chakkarpe

Habit: Trailing herb.

Habitat: Cultivated.

Status: Common.

Description: Annual trailing or climbing herb, with hirsute, angular stem. Leaves simple, broadly ovate, shallowly 3 – 5 lobed, very scabrous; petioles hispid. Flowers yellow, monoecious; male in axillary clusters; female solitary. Calyx-tube campanulate; lobes 5. Corolla rotate, deeply 5-partite. Stamens 3. Ovary muricate, with rigid prickles. Fruit narrowly oblong, with tubercular prickles when young, yellow when ripe.

Uses: *Seeds paste with rat excreta is applied on the navel for immediate urine release. Fruit juice is applied for rheumatism. Leaf ash mixed with cumin powder is taken for breathing problems. *Root decoction is recommended for ovarian pain in pregnant women. *Leaf boiled with cumin seed powder is used as gargle for tonsillitis. Seed extract is a diuretic, increases blood and is useful for fever. *Seed
oil is applied all over the body for fever. *Fried seed powder is used as a diuretic agent. *Fruit ground and mixed with coriander seed powder is eaten daily in the morning to remove toxins from the body. *Seed and rock salt (1:1) ground in milk and hot water is given at morning in empty stomach for over urination and diabetes. *Leaf and rock salt ground in butter milk is applied for rheumatism and bodyache. Plant paste is applied externally for biliousness, skin diseases and increased body heat. Leaf, stem and roots are germicidal. Fruit has constipating action. *Paste of root bark fried in Vateria indica seed oil is applied for vitiated septic ulcers and wounds.

Etymology: Kantakiphala (prickly fruit), Mullu sauthe and Mullankakkari (prickly cucumber) are due to its young fruits which are prickly.

Note: Enzyme crepsin is the active component with nutritive, demulcent and diuretic actions (Kapoor, 1990). Used in the preparation of Dadhika churna and Dadhika ghrta (Sharma et al., 1998). Fruits are used as vegetable.

279. Cucurbita maxima Duch. in Lam. (Plate 47 E)

Family: Cucurbitaceae

Vernacular Name: San: Dadhiphala, Peetaphala, Pitakushmandah
Eng: Squash gourd, Pumpkin, Squash melon, Red gourd pumpkin
Kan: Govekaayi, Sihikumbala, Cheenikaayi
Mal: Mathanga, Mathan
Tulu: Theepekumbudo, Kembuda

Habit: Trailing herb.

Habitat: Cultivated.

Status: Common.

Description: Trailing annual herb, with angular, scabrous stem and multifid tendrils. Leaves simple, broad-ovate to circular-ovate, 5 – 6 lobed, with whitish blotches on the upper surface. Flowers monoecious, large, yellow, solitary. Calyx campanulate;
lobes 5, often leafy. Corolla campanulate; lobes 5, acute, reflexed. Stamens 3. Fruit large, oblong or depressed globose, usually fluted with 15 – 30 ridges; fruit stalk angled, expanded at apex.

Uses: *Paste of fruit pedicel with rice washed water or lime juice is applied for poisonous bites.  Fruit is nutritious with high protein content and has diuretic property.  *Fruit pulp is applied for burns and over the forehead for migraine.  *Seed powder is consumed to expel worms and also as a nervine tonic. Flower is nutritive and edible.  *Leaf juice or paste is applied immediately after burn to relieve the burning pain.  *Juice from heated placenta is given with jaggery for pancreatic calculi.

Etymology: Sihikumbala and Theepekumbudo (sweet ash gourd) are due to its sweet taste and oblong fruits. Peetaphala (yellow fruit) Pitakushmandah (yellow ash gourd) are due to yellow colour of ripe fruits. Govekaayi (Goa fruit) and Cheenikaayi (China fruit) clearly indicate its foreign origin and latter naturalization.

Note: Fruits are used as vegetable. Phytosterols, squalene, tocopherol and phytoclorophylls are the active components (Chaudhri, 1996).

280. *Cucurbita pepo* L. (Plate 47 F)

Family: Cucurbitaceae

Vernacular Name:  San: Dadhiphala, Peetaphala, Pitakushmandah  
Eng: Pumpkin, Red gourd pumpkin  
Kan: Govekaayi, Sihikumbala, Cheenikaayi  
Mal: Mathanga, Mathan  
Tulu: Theepekumbudo, Kembuda

Habit: Trailing herb.

Habitat: Cultivated.

Status: Common. Exotic.
Description: Trailing annual herb, with angular, scabrous stem and multifid tendrils. Leaves simple, triangular or ovate-triangular, irregularly dentate, scabrous-hairy. Flowers monoecious, large, yellow, solitary; pedicel yellow, setose. Calyx campanulate; lobes 5, often leafy. Corolla campanulate; lobes 5, acute, reflexed. Stamens 3. Fruit large, depressed globose, usually fluted with 15 – 30 ridges; fruit stalk angled, expanded at apex.

Uses: *One year old fruit cooked in steam is ground with sugar, dried ginger, cumin and coriander seed powder, 10 gm of this mixture by adding ghee is recommended at night after food for digestive disorders. *Fruit pulp juice is given at morning in empty stomach for expelling the poison that entered the body. Young fruit may increase the phlegm. Fruit is a tonic, increases saptadhatu* and is used for heart problems, biliousness, rheumatism and internal bleeding.

Etymology: Sihikumbala and Theepekumbudo (sweet ash gourd) are due to its sweet taste and oblong fruits. Peetaphala (yellow fruit) Pitakushmandah (yellow ash gourd) are due to the yellow coloured ripe fruits. Govekaayi (Goa fruit) and Cheenikaayi (China fruit) clearly indicate its foreign origin and latter naturalization.

Note: Fruits are used as vegetable. Phytosterols, squalene, tocopherol and phytochlorophylls are the active constituents (Chaudhri, 1996).

281. *Curculigo orchioides* Gaertn. (Plate 48 A)

Family: Hypoxidaceae

Vernacular Name: San: Bhutali, Mausali, Musalikanda, Talamuli, Talamulika, Talaparni

Eng: Black musale, Black musali, Indian musali

Kan: Nelatali gadde, Neladale, Nelatali, Onikegadde

Mal: Nelappana, Nilappana

Tulu: Nilappane, Nelappane

Habit: Slender herb.

Habitat: Grasslands.
Status: Common.

Description: Slender perennial herb, with tuberous rootstock. Leaves radical, plicate, linear-lanceolate. Scape very short and hidden among the bases of the leaves underground, only perianth rising above ground and appears solitary. Perianth-lobes 6, petaloid, spreading, bright yellow. Stamens 6. Ovary usually below ground, produced into a hairy rostrum; stigmas 3. Fruit indehiscent.

Uses: Tuber decoction is used as a general health tonic. *Root decoction with Ricinus communis root is given for backache, burning sensation in feet and nervous debility. Tuber decoction has aphrodisiac, sperm count increasing, cooling, diaphoretic properties and is given for leucorrhoea, fever, asthma, rheumatism, bronchitis and biliousness. Tuber extract in milk is recommended for weakness, chest pain and bone fever. *Tuber extract is used as eye drop in case of eye pain and eye diseases. Tuber decoction is consumed for menstrual disorders. *Dried rhizome ground with butter milk is taken at night after food for chronic dysentery. *Dried rhizome decoction is given with sugar and milk at night after food for weakness after a disease. *Tuber and that of Cyperus rotundus are made into a decoction and is used for piles, fever, pain and urinary problems. It is a tonic, increases body weight, removes poisons from the body, increases quality of sound and colour of body (it can increase phlegm). *Tuber, Picrorrhiza kurroa seeds, clove and Justicia adhatoda leaf extract is taken internally and also used as nasya* for wound caused by porcupine spine. *Tuber, gum resin of Shorea robusta, roots of Urena lobata, Sida acuta, fruit rind of Terminalia chebula, Terminalia bellirica, Phyllanthus emblica, barks of Ficus racemosa, Ficus religiosa, Ficus microcarpa and Ficus benghalensis (in equal quantity) decoction is used with jaggery and ghee for leucorrhoea. *Root ground with fresh milk is given to babies with sugar for 48 days as a tonic. Tuber boiled in milk is recommended for leucorrhoea.

Etymology: Bhutali, Nelatali, Neladale, Nilappana and Nelappane (ground palm) are due to its herbaceous nature and resemblance with palms. Talamuli, Talamulika (palm root) and Talaparni (palm leaved) clearly indicate their leaf pattern and habit.
Note: It is used in the preparation of Vidaryadi ghrta, Vidaryadi lehya, Gandharvahastadi kvatha, Gandharvahastadi churna, Candanadi churna and Marma gutika (Sivarajan & Balachandran, 1996; Sharma et al., 1998). Sapogenins are the active components having demulcent, tonic, diuretic and aphrodisiac activities (Kapoor, 1990; Sharma et al., 1998). For medicinal purpose, this plant should not be collected using iron objects. Tubers are edible.

282. Curcuma amada Roxb. (Plate 48 B)

Family: Zingiberaceae

Vernacular Name: San: Amragandha, Amragandhiharidra, Amrardrakam, Karpuraharidra
Eng: Mango ginger
Kan: Amabahaladi, Ambhaladi, Mavushunti, Karpuraarasina
Mal: Mangainchi, Mannayinchi
Tulu: Kukkusunti, Kukkushunti

Habit: Herb.

Habitat: Cultivated.

Status: Common.

Description: Tall herb; rhizome large, pale-yellow inside, with a smell of green mango. Leaves in basal tufts; oblong-lanceolate, narrowed to the base. Inflorescence appearing with the leaves and central to the leaf-tuft; coma bracts greenish white, tinged with pink or red; fertile bracts pale-green. Calyx tubular, 3-toothed. Corolla funnel-shaped, pale-yellow; lobes 3, oblong. Lateral staminodes oblong; labellum yellow, 3-lobed, midlobe emarginate. Fruit 3-valved capsule.

Uses: *Tambuli* and decoction prepared from its rhizome is used for indigestion and gas trouble. *Rhizome paste with water is applied for ankle twist, sprain, swellings and bruises. *Rhizome and very young coconut fruit paste is applied for skin diseases in children. Rhizome extract is a digestive, tonic, blood purifier and is used
for biliousness. *Rhizome extract with milk is taken from the first day of menses for conception.

Etymology: Amragandha (mango smell), Amragandhiharidra (mango smell turmeric), Amrardrakam, Mavushunti, Mangainchi and Kukkusunti (mango ginger), Karpuraharidra and Karpuraarasina (camphor turmeric) are due to the characteristic smell of the rhizome.

Note: Curcumin, d-α-pinene, δ-camphor, α-curcumene, 1-β-curcumene, phytosterol, ocimene, linalool, linalyl acetate and safrole form the active components with CNS depressant and astringent actions. It is used in the preparation of Asthisandhanaka lepa (Jain et al., 1991; Kapoor, 1990; Sharma et al., 1998). Rhizome is edible and is used as a substitute for ginger. Rhizome is often pickled.

283. *Curcuma aromatica* Salisb. (Plate 48 C)

Family: Zingiberaceae

Vernacular Name:  San: Aranyaharidra, Sholika, Vanaharidra, Vanaarishta
   Eng: White turmeric, Yellow zedoary, Cochin turmeric
   Kan: Kasturi arishina, Kadu arishina, Kasturimanjal
   Mal: Kasthutimanjal, Kattumanjal, Pullakizhangu
   Tulu: Kattumanjal, Kasturimanjalu

Habit: Large herb.

Habitat: Cultivated.

Status: Occasional.

Description: Large herb; rhizome palmately branched aromatic tubers, cream coloured inside. Leaves in basal tufts, lanceolate-oblong, base deltoid, pubescent below. Flowers pink, fragrant, in lateral condensed spikes; bracts ovate, recurved; fertile, pale green tinged with red or pink. Calyx unequally 3-lobed. Corolla funnel-shaped; lip yellow, obovate, deflexed, obscurely 3-lobed. Lateral staminodes obtuse. Fruit globose capsule.
Uses: *Rhizome decoction is used internally for cough, cold and bronchitis. Rhizome paste is applied externally as a cosmetic, also for skin diseases and wounds.

Etymology: Aranyaharidra, Vanaharidra, Kadu arishina, Kattumanjal and Kattumanjal (wild turmeric or forest turmeric) indicate its nature and also that it is not the true turmeric. Kasturi arishina and Kasthutimanjal (musk turmeric) are due to its characteristic aroma.

Note: Curcumin forms the active component with CNS depressant action (Jain et al., 1991). Much valued as a cosmetic drug.

284. *Curcuma caesia* Roxb. (Plate 48 D)

Syn: *Curcuma malabarica* Velayu. et al.

Family: Zingiberaceae

Vernacular Name: San: Tavakshira, Tavakshiri
Eng: Indian arrowroot
Kan: Kariarasina, Narukachora, Koove
Mal: Karimanjal, Koove
Tulu: Karimanjalu, Koove

Habit: Erect herb.

Habitat: Cultivated.

Status: Common.

Description: Herb; rhizome with palmately branched tubers, aromatic, blue within. Leaves in basal tufts; oblong-lanceolate, glabrous, with a purple blotch down the centre of the upper surface. Inflorescence lateral to the leaf-tuft, appearing before the leaves; coma bracts crimson or purple; fertile bracts pale-green with a pinkish tip. Flowers shorter than bracts. Calyx minutely 3-toothed. Corolla funnel-shaped, pale-yellow with pinkish tinge; lobes 3, dorsal broadly ovate. Lateral staminodes pale-yellow, oblong; labellum yellow, deflexed, obscurely 3-lobed. Fruit ovoid capsule.
Uses: *Root decoction is recommended for gas trouble. *Rhizome paste is applied for allergies poisonous bites, ulcers and wounds.

Etymology: Kariarasina, Karimanjal and Karimanjalu (black or dark turmeric) are due to darker coloured rhizome and plant body. Koove and Koova (arrowroot) arose as arrowroot is extracted from its rhizome.

Note: Rhizomes are much valued for arrowroot extraction.

**285. Curcuma longa L. (Plate 48 E)**

Syn: *Curcuma domestica* Vahl.

Family: Zingiberaceae

Vernacular Name: San: Bhadra, Haridra, Haridrakam, Harita, Rajani  
    Eng: Turmeric  
    Kan: Arishina, Arasina, Arashina, Haladi  
    Mal: Manjal  
    Tulu: Arasino, Manjal, Manjalu

Habit: Tall herb.

Habitat: Cultivated.

Status: Common.

Description: Tall herb; rhizome aromatic, bright-yellow within. Leaves in basal tufts, oblong-lanceolate, tapering to the base. Inflorescence appearing with the leaves and central to the leaf-tuft; coma bracts white and green, tinged with pink; fertile bracts pale-green, ovate. Flowers pale-yellow. Calyx minutely 3-toothed. Corolla pale-yellow, funnel-shaped; lobes subequal. Lateral staminodes oblong; labellum obovate, with a central yellow band. Fruit ovoid capsule.

Uses: *Turmeric paste with lime is applied for whitlow. *Rhizome paste with rice powder is heated, applied and tied to expel the spines and for pus release from ulcers or boils. *Turmeric ground with pepper seeds and sugarcandy in milk is given for
cold and headache while same preparation in buttermilk is used for burning sensation in the body. *Turmeric ground with heart wood of *Pterocarpus santalinus in buffalo milk is applied to remove marks of pimple. *Rhizome decoction with pepper seeds is given for tonsillitis. Rhizome paste is applied for poisonous bites, herpes, allergic itches, swellings, also as a cosmetic over the face for good skin texture. Turmeric powder dissolved in hot milk is consumed for cold, blood from throat, tonsillitis, diarrhoea, and liver disorders. *Rhizome fried in neem oil is applied for ulcers on the nose. Rhizome paste is applied for ulcers, wounds and digestive problems. *Rhizome decoction with gooseberries is given to arrest uncontrolled urination. Raw turmeric decoction is taken to expel worms. *Turmeric powder mixed with ghee, gingelly oil and melted bee wax is applied for heel cracks (heel becomes clear within one week). Rhizome paste is applied for scabies, swellings, cuts and wounds. Rhizome extract is recommended for acidity. *Fresh rhizome paste with milk fat is applied over the face or shining face. *Rhizome, *Coscinium fenestratum root, *Pterocarpus santalinus heartwood, *Rubia cordifolia root, *Aristolochia indica root, *Rauvolfia serpentina root, *Salacia chinensis root and *Cucurbita maxima seed paste is applied for spider and scorpion bites. *Turmeric powder and gooseberry powder mixed with honey is consumed for diabetes. *Cotton dipped in turmeric powder extract in water is applied over the eyes for burning sensation in the eyes. Turmeric powder dissolved in hot milk is used for fever.

*Crushed fresh rhizome boiled with milk is taken as an effective remedy at the starting stage of viral fever. Turmeric and pepper decoction is used for sore throat. *Turmeric, *Glycyrrhiza glabra rhizome and pepper decoction is used for chest pain due to phlegm. *Turmeric, *kunkum*, lime and coconut oil paste is heated and is applied for fungal infections and ulcers in the feet. Rhizome crushed with pepper and jaggery is eaten for cough. Turmeric powder paste is applied for pimples. Turmeric powder paste with fresh milk is applied for skin diseases. *Fresh rhizome, *Vernonia anthelmintica seeds and crab shelter soil paste is applied for carbuncles. *Turmeric powder slightly heated with castor oil is applied for heel cracks. *Turmeric paste with *Eclipta prostrata juice is applied for urticaria and rashes. *Turmeric ground with *Aloe vera is applied to the tip of breast in case of block in
milk flow. *Turmeric, pepper, Tinospora cordifolia stem and Glycyrrhiza glabra rhizome (in equal quantity) decoction is given with honey for influenza. *Rhizome and pepper (in equal quantity) powder mixed with gingelly oil are heated and applied for itches and scabies. *Rhizome and Terminalia chebula fruit ground in buttermilk is for tinea versicolor. *Rhizome and sandalwood ground with milk fat is applied for lip, hand and feet cracks during winter. *Rhizome ground with coconut milk is applied over the face as a cosmetic. Rhizome paste with water is applied for swellings in any part of the body. *Turmeric, dried ginger and pepper (in equal quantity) are ground, mixed with gingelly oil and pacche karpura* are applied to cheeks and forehead for headache. *Turmeric powder, garlic and ginger boiled in milk are taken at bed time for running nose, cough and throat pain. *Rhizome powder dissolved in boiled then cooled milk is recommended twice a day for three days in case of urine block. *Rhizome paste with honey is given to children (before sleeping) to prevent bedwetting. *One tsp powder of its rhizome (ground with equal quantity of dried gooseberry) is given with hot water for diabetes and jaundice. *Turmeric powder mixed with Calotropis gigantea latex is applied for bleeding piles. *Turmeric powder ground with cow urine is applied for 2 – 3 days to cure tinea versicolor. *Rhizome and Musa paradisiaca stem ash paste is also applied for same purpose. *Turmeric, banana stem juice, borax, Senna tora leaf paste, Anacardium occidentale seed coat, salt, neem leaf, leaves of Calotropis gigantea and Cassia fistula (in equal quantity) paste with cow urine is applied for tinea versicolor. *Rhizome paste with impure sodium chloride in gingelly oil is applied for tinea versicolor. *Turmeric, sandalwood, red sandalwood and Argemone mexicana root paste with goat urine is applied for venereal diseases. *Rhizome ashes mixed with equal quantity of lime and ghee is applied for anal swellings, piles, chronic wounds and warts. *Turmeric paste with bee wax is applied over the face for a shining face. *Fresh rhizome juice is given to drink by adding a little fried asafoetida in case of arecanut intoxication. *Turmeric powder mixed with coconut oil is used as a gargle for lime intoxication. *Fresh rhizome paste with Senna alata leaf juice is applied for itches and rashes. *Rhizome and pepper powder (in equal quantity) are heated with coconut oil and applied externally for itches and scabies.
Etymology: Arishina, Arasina, Haladi and Manjalu (yellow) are due to the characteristic colour of the rhizome. Bhadra (prosperous) is due to its diverse uses. It is an integral part of traditional rituals and is considered auspicious.

Note: It is used in the preparation of Nalpamaradi taila, Jatyadi taila, Haridra khanda, Chandraprabha vati, Laghu visagarva taila, Pippalyasava, Punarnava modaka, Suddarsana churna, Vidangadi lepa and Narayanagula (Sivarajan & Balachandran, 1996; Dey, 1994; Sharma et al., 1998). Sabinene, α-phellandrene, cineol, borneol, zingiberene, tolymethyl carbinol and curcumin are the active constituents with stimulant and carminative properties (Kapoor, 1990; Dey, 1994). Much used as condiment.

286. Curcuma neilgherrensis Wight (Plate 48 F)

Syn: Curcuma angustifolia sensu Dalz. & Gibbs.

Family: Zingiberaceae

Vernacular Name: San: Talakshira, Tavakshira, Tavakshiri, Tugaksiri, Vamsi

Eng: Bombay arrowroot, East Indian arrowroot
Kan: Kaadukoove, Koove, Kattu koove
Mal: Koova, Kattukoova
Tulu: Koove, Kaattukoove

Habit: Small herb.

Habitat: Hill slopes and shaded areas of wet forests.

Status: Occasional.

Description: Small herb; rhizome small, white inside; fibrous roots ending in small tubers. Leaves in basal tufts, oblong-lanceolate, chartaceous, tuberculate-pubescent. Inflorescence lateral spike, appearing before the leaves; coma bracts dense, pink; fertile bracts oblong-lanceolate, pale yellowish-green. Calyx 3-toothed. Corolla funnel-shaped, 3-lobed; lobes lanceolate. Lateral staminodes oblong, petaloid; labellum broadly ovate, apex bilobed. Fruit globose capsule.
Uses: *Cooked rhizome powder is recommended as a nutritious food for children. *A thick poultice with its rhizome paste is given for bruises, hardened blood clots and swellings. *Rhizome starch cooked with milk, sugar and ghee is used as a tonic by the patients suffering from indigestion. Purified starch is a tonic, used for dysentery and loss of appetite.

Etymology: Kaadukoove, Kattu koove and Kattukoova (wild arrowroot) clearly indicate its wild nature and utility. Occasionally arrowroot is extracted from its rhizome.

Note: Rhizome has demulcent and nutritive activity (Kapoor, 1990). Rhizome is used for arrowroot extraction.

287. *Curcuma oligantha* Trim. var. *lutea* (R. Ansari *et al.*) Bhat (Plate 49 A)

Syn: *Curcuma cannanorensis* R. Ansari *et al.* var. *lutea* R. Ansari *et al.*

Family: Zingiberaceae

Vernacular Name: Kan: Kaadarasina, Kaadukoove  
Mal: Kattukoova  
Tulu: Kattu koove

Habit: Small herb.

Habitat: Moist shady places.

Status: Common.

Description: Small herb, growing in mass; rootstock small, white inside; fibrous roots terminating in subglobose tubers. Leaves in basal tufts, ovate-elliptic. Inflorescence arising before or with the developing leaves, from the base of a new leaf shoot; coma absent; fertile bracts ascending, recurved at apex, green. Calyx obscurely 3-lobed. Corolla yellow; lobes subequal. Lateral staminodes yellow, ovate; labellum yellow. Fruit subglobose capsule.
Uses: *Root extract is taken internally while its paste is applied on the head for insanity and mental disorders. *Arrowroot extracted from its rhizome is a nutritious food for babies. *It also has diuretic property.

Etymology: Kaadukoove, Kattu koove and Kattukoova (wild arrowroot) clearly indicate its wild nature and utility. Occasionally arrowroot is extracted from its rhizome.

Note: Rhizome is used for arrowroot extraction. Its properties are almost similar to that of *Maranta arundinacea.

288. *Curcuma oligantha Trim. var. oligantha (Plate 49 B)

Syn: Curcuma cannanorensis R. Ansari et al.

Family: Zingiberaceae

Vernacular Name: Kan: Kaadarasina, Kaadukoove
Mal: Kattukoova
Tulu: Kattu koove

Habit: Small herb.

Habitat: Moist shady places.

Status: Occasional.

Description: Small herb; rootstock small, white inside; fibrous roots terminating in subglobose tubers. Leaves in basal tufts, ovate-elliptic. Inflorescence arising before or with the developing leaves, from the base of a new leaf shoot; coma absent; fertile bracts ascending, recurved at apex, green or with pinkish tinge. Calyx obscurely 3-lobed. Corolla white or white with a pinkish tinge; lobes subequal. Lateral staminodes white, ovate; labellum white with a yellow spot at the throat. Fruit subglobose capsule.

Uses: *Same as Curcuma oligantha var. lutea
Etymology: Kaadukoove, Kattu koove and Kattukoova (wild arrowroot) clearly indicate its wild nature and utility. Occasionally arrowroot is extracted from its rhizome.

Note: Its properties are almost similar to that of *Maranta arundinacea*.

**289. Curcuma pseudomontana** Graham *(Plate 49 C)*

Syn: *Curcuma ranadei* Prain.

Family: Zingiberaceae

Vernacular Name:  
San: Vanaharidra  
Eng: Hill turmeric  
Kan: Kaadarasina  
Mal: Kattumanjal  
Tulu: Kattumanjalu, Kattumanjal

Habit: Erect herb.

Habitat: Moist areas of the forest.

Status: Occasional.

Description: Erect herb; rootstock with small sub-globose tubers at the ends of fibrous roots; tubers fleshy, aromatic, white inside. Leaves in basal tuft of 3 – 5, oblong-lanceolate, tip sharp. Inflorescence in the centre of leaf-tuft; coma bracts oblong-lanceolate, purple below, pinkish purple above; fertile bracts reflexed, green with pink tip. Flowers bright yellow. Calyx obscurely 3-lobed. Corolla bright yellow, funnel-shaped; lobes subequal. Lateral staminodes oblong; labellum yellow. Fruit spherical capsule.

Uses: *Rhizome paste is applied externally for ringworm. Rhizome is a source of arrowroot. *Rhizome paste is applied for septic wounds, ulcers and poisonous bites.

Etymology: Vanaharidra, Kaadarasina, Kattumanjal and Kattumanjalu (wild turmeric) are due to its wild nature and close affinity with turmeric.

Note: Occasionally rhizome is used for arrowroot extraction.
290. *Curcuma zedoaria* (Christm.) Rosc. *(Plate 49 D)*

Syn: *Amomum zedoaria* Christm.; *Curcuma zerumbet* Roxb.

Family: Zingiberaceae

Vernacular Name:  San: Gandhamula, Kaccura, Kachura, Karcurah, Vanaharidra  
Eng: Zedoary  
Kan: Kaaduarasina, Kachora, Kaadakacchora  
Mal: Adavikachola, Manjakoooa, Pulakizhangu  
Tulu: Aanemanjal, Aanemanjalu, Kaacchuro

Habit: Large herb.

Habitat: Moist deciduous forests and plains.

Status: Occasional.

Description: Tall herb; rhizome with palmately branched tubers, aromatic, yellow within. Leaves in basal tufts; narrowly ovate or elliptical, glabrous, with a purple blotch down the centre of the upper surface. Inflorescence lateral to the leaf-tuft, appearing before the leaves; coma bracts green with pinkish tip; fertile bracts whitish, deeply saccate. Flowers shorter than bracts. Calyx minutely 3-toothed. Corolla funnel-shaped, white with purple tinge; lobes 3, dorsal broadly ovate. Lateral staminodes pale-yellow, oblong; labellum obovate, with a central yellow band. Fruit ovoid capsule.

Uses: *Rhizome paste with tender coconut husk is used for scabies and eczema. Rhizome powder mixed with honey is taken to arrest vomiting. *Rhizome, ginger and *Andrographis paniculata* decoction is used for fever. Rhizome powder dissolved in milk is consumed for diarrhoea, rheumatism, throat infection and cold. Rhizome powder is used as a tonic for gastritis. *Rhizome extract or paste is applied externally for itches and scabies.*

Etymology: Vanaharidra and Kaaduarasina (forest turmeric) clearly indicate its habitat. Kaadakacchora and Adavikachola (forest zedoary) are as this wild plant is
used as the source of drug Karcurah. Aanemanjalu (elephant turmeric) is due to its large size.

Note: It is used in the preparations like *Dasamularista, Brhat rasnadi kashaya, Kaccoradi churna, Karcuradi lepa, Karpuradyarka, Sutasekhara rasa, Asanaeladi taila* and *Brhat narayana taila* (Sivarajan & Balachandran, 1996; Sharma *et al.*, 1998). Curcumin, arabins, methyl paramethoxy cinnamate, cineol, pinene, camphene, camphor and borneol are the active constituents (Kapoor, 1990; Sharma *et al.*, 1998; Chaudhri, 1996).

291. *Cuscuta reflexa* Roxb. (Plate 49 E)

Family: Convolvulaceae

Vernacular Name: San: Akasavalli, Amaravela, Amarvalli  
Eng: Dodder  
Kan: Seethakeshi, Amaruballi, Badanike  
Mal: Akasagarudakodi, Akasathamara, Akasavalli, Moodillathali  
Tulu: Seethakesi, Mudelidyanthi booru

Habit: Twining parasite.

Habitat: Grows on a variety of hosts.

Status: Occasional.

Description: Slender parasitic herb, with twining, filiform, yellow stem, often forming a tangled mass. Leaves reduced to minute scales. Flowers small, in fascicles. Calyx 5-lobed; lobes triangular-ovate, with a tubercular keel on the back. Corolla yellow, campanulate; lobes 5, triangular-ovate, spreading and the tips inflexed; with a ring of fimbriate scales at the base of filaments. Stamens 5. Fruit globose capsule.

Uses: *Whole plant paste is applied for scabies. *Plant extract with milk is taken internally as a cooling agent, useful for rheumatism, menstrual irregularities and leucorrhoea. *Oil prepared from plant juice is applied for increasing the length of
hair and black colour. *Mucilage extracted from whole plant is applied over the head for biliousness.

Etymology: Akasavalli (sky vine), Moodillathali and Mudeleyanthi booru (vine without trunk) are due to the parasitic nature of the plant.

Note: It is used in synonymous with *Cassytha filiformis*. Dulcitol, cuscutin, cuscutalin, β-sitosterol, kaempferol, mannitol and luteolin are the active components with relaxant and spasmolytic actions (Kapoor, 1990; Jain *et al.*, 1991).

292. *Cyanotis cristata* (L.) D. Don. *(Plate 49 F)*

Syn: *Commelina cristata* L.

Family: Commelinaceae

Vernacular Name: Kan: Bettada kanne soppu
Mal: Veetla-caitu
Tulu: Kanne chappu

Habit: Diffuse herb.

Habitat: Moist areas, during rainy season.

Status: Common. Weed.

Description: Diffuse herb, with creeping, then ascending branches. Leaves simple, ovate-oblong; sheaths hirsute. Flowers in axillary or terminal scoprioid cymes formed of 2-seriate, secund, foliaceous bracteoles; bracteoles ciliate. Flowers blue or purple. Sepals 3. Petals 3. Stamens 6; filaments bearded and apex inflated. Fruit oblong, trigonous capsule.

Uses: *Whole plant paste is applied for scorpion bite. *It is also used as fodder to increase milk yield from cattle.

Etymology: Kanne chappu (virgin plant) is due to its close affinity with *Commelina benghalensis*, the actual Kanne chappu.

Note: It is much used as fodder.
293. *Cyathula prostrata* (L.) Blume (Plate 50 A)

Syn: *Achyranthes prostrata* L.

Family: Amaranthaceae

Vernacular Name: San: Raktapamargah, Apamarga
    Eng: Small prickly chaff flower
    Kan: Kempu uttarani, Kempu uttarane, Sanna uttarane, Nela uttarane
    Mal: Cherukadaladi, Chuvannakadaladi
    Tulu: Kempu uttarane

Habit: Slender herb.

Habitat: Moist shaded areas.

Status: Common. Weed.


Uses: *Plant is given to eat for three days to expel placenta in cattle.  *Plant juice mixed with gingelly oil is given to drink for blood in urine of cattle.  *Extract of one handful plant ground with cumin seeds in milk is given for three days after menses for leucorrhoea, dysmenorrhoea, DUB and all types of bleedings.  *Whole plant ash mixed with coconut oil is applied for cracks in feet.  *Decoction prepared from whole plant is recommended for sudden bleeding in pregnant women.  *Plant ashes mixed with coconut oil are applied for diabetic gangrene.  *Plant decoction with honey is used internally and paste with *Evolvulus alsinoides* in butter is given to eat for over bleeding after abortion.  Plant ash is applied for gangrene due to poisonous bites. Plant juice is consumed to arrest bleeding from any part of the body.  Plant
decoction is recommended for diabetes. *One handful whole plant and one tsp cumin seeds ground in one cup milk are given in empty stomach at early morning for three days in case of menstrual problems. Whole plant decoction with cumin seeds is given for vomiting, diarrhoea and amoebic dysentery. *Whole plant ground with cumin seeds in fresh milk is used in empty stomach at morning for three days from the 4th day of menses for menstrual problems. *Whole plant, *Sida cordata* root, cumin powder and long pepper powder mixed with fresh milk is recommended for over bleeding, stomachache and waist ache. *Whole plant boiled with cumin seeds is given at night after food 9with milk and sugarcandy) for a week in case of anaemia. Leaf or stem juice is applied to arrest bleeding from cuts. *Full grown stem is used as tooth brush to strengthen and clean teeth. *Stem, pepper and cumin seed decoction is used with lime juice and salt to cause sweating during fever and for loss of appetite. *Whole plant with ten *Ixora coccinea* flowers ground in curd is applied for skin diseases. Leaf juice mixed with milk is used for bleeding and menstrual problems. Root decoction is consumed for bleeding piles. *Root, *Nelumbo nucifera* stamen, *Protasparagus racemosus* tuber and *Justicia adhatoda* root (in equal quantity) decoction is used two times a day for 1 – 2 weeks in case of piles. *Root powder and cardamom seeds mixed with sheep milk are taken once a day for joint swelling. Root paste is applied for bubo. *Leaf and onion (1:2) fried in ghee are eaten in the morning for bleeding piles. 4 – 6 drops of oil prepared by mixing and heating the supernatant liquid (whole plant powder dissolved in water and stored overnight) with gingelly oil and *Achyranthes aspera* ash is used as ear drop for earache. *Dried whole plant powder mixed with honey is taken twice a day for respiratory disorders. *Plant juice mixed with old jaggery is consumed in the morning for a week in case of anaemia and oedema. Leaf ground with water is given with honey in the morning for *raktapitta*. Plant juice is given twice a day with pepper powder for haematuria. *One handful leaf, 5 pepper seeds and 5 garlic bulblets ground in buffalo curd is taken daily in the morning for 20 days in case of over urination. *One ounce plant juice mixed with 10 ml gingelly oil is taken in the morning for 90 days in case of diabetes. *Root ashes mixed with gingelly oil are heated and applied for diabetic ulcers.
Etymology: Raktapamargah, Kempu uttarani, Kempu uttarane and Chuvannakadaladi (red *Achyranthes*), Sanna uttarane and Cherukadaladi (small *Achyranthes*) and Nela uttarane (ground *Achyranthes*) arose due to its small size, reddish colour, resemblance with *Achyranthes aspera* and prostrate habit.

Note: It is used in preparations like *Surasadi taila*, *Aviltoladi bhasma*, *Suvarnamuktadi gutika*, *Jatyadi taila* and *Ardhavilva kashaya* (Sivarajan & Balachandran, 1996). Leaf is used as vegetable. Plant ash is rich in potassium.

294. *Cycas circinalis* L. (Plate 50 B)

Family: Cycadaceae

Vernacular Name: San: Hintalah
Eng: Queen Sago, Sago palm
Kan: Goddechalu, Mandechalu, Kaadumadanamasthi
Mal: Chana, Eenth, Eenthappana, Theddappana
Tulu: Eechalu

Habit: Tree.

Habitat: Open wastelands in plains.

Status: Occasional.

Description: Dioecious trees, clothed with woody bases of the petioles. Leaves in terminal crowns, pinnate; leaflets linear, acuminate at tip. Microsporophylls densely aggregated to form large terminal cones. Ovuliferous scales loosely imbricate round the apex of stem, leaf-like, pinnatifid with 1 – 3 pairs of ovules along the margins of the stalk. Seeds ellipsoid to globose, compressed.

Uses: *Pith powder is a source of starch which is used as food for digestive disorders.*

Etymology: Goddechalu (barren wild date tree) arose as majority of the trees are male and does not produce any seeds while Kaadumadanamasthi (wild intoxicating tree) is due to the sexual stimulant fragrance of its male cones.

Note: Now its population is very low. Pith powder is used as a nutritive food.
295. *Cyclea peltata* (Lam.) Hook. f. & Thoms. (Plate 50 C)

Syn: *Menispermum peltatum* Lam.; *Cyclea burmannii* (DC.) Hook. f. & Thoms.; *Cyclea arnottii* Miers.; *Cocculus burmannii* DC.

Family: Menispermaceae

Vernacular Name: San: Ambastha, Patha, Pata, Piluphala, Shitala

Eng: Pata root

Kan: Padavali, Haadeballi, Padavali balli

Mal: Padakizhangu, Padathali, Padavalli, Pattichevian

Tulu: Padalappu, Padovu

Habit: Twining herb.

Habitat: Along hedges and bushes.

Status: Common.


Uses: *Leaf extract is given with sugar for burning sensation in stomach or gastritis. *Leaf extract paste is applied over the eyes as a pad for burning sensation in the eyes and sleeplessness. *Squashed tuber boiled with oil in a copper vessel (without tin coating) is applied for scabies. *Ripe fruit is rubbed daily until wart withers. Leaf mucilage is recommended for dysentery and burning during urination. Fruit juice is applied over the forehead for headache. *Root decoction is consumed for DUB. Root, *Ixora coccinea* plant and *Ventilago maderaspatana* root are boiled in coconut oil and resulting oil is used as hair oil and to massage the body of small children for strengthening their body. *Powder of root fried in ghee is given for chronic dysentery and headache. Root paste with lime juice is applied for urticaria and
rashes. *Root extract with lime juice (1 spoon) is given for snake bite (when the identity of bitten snake is not known). *Leaf mucilage is used as shampoo for itches, scabies and dandruff. *Crushed root boiled with coconut oil in a copper vessel is applied for fungal infection of the sole. Tuber ground with milk is taken at early morning for all kinds of ovarian or uterine diseases. *Same preparation is given by mixing it with *Tinospora cordifolia plant extract for leucorrhoea and infertility due to stomachache during menses (for 12 days in a month, for 3 cycles). *Tuber and plant mucilage mixed with one day old rice cooked water is consumed internally to prevent threatened abortion. Root extract with lime juice is used as a first aid in snake bite. Leaf extract mixed with jaggery is used for biliousness. Plant paste is applied over the head for biliousness and giddiness. About 10 leaves crushed with milk are given to arrest dysentery (relief is within one day). Plant decoction is recommended for piles, burning sensation, digestive tract disorders, pain, raktavata* and leucorrhoea. Leaf juice mixed with two glasses of water is given as a first aid for snake bite. *Root along with that of *Rauvolfia serpentina are ground in lime juice and the extract is given for krait bite. *For cobra bite, its leaf juice is administered at five minute intervals. Root extract with lime juice is advised for pit viper bite. *One spoon root extract with rice washed water is given at every 15 minutes in case of saw scaled viper bite. *Root and *Clerodendrum serratum root ground in lime juice is given at five minute intervals when the identity of bitten snake is not known. *Root along with that of *Calotropis gigantea and sandalwood paste are ground with lemon juice and is used for viper bite. Leaf juice is given as a first aid after heart attack. *If the person is unconscious after snake bite, then its root extract with lime juice is poured into the nose. Leaf extract is given with jaggery for burning during urination. Root decoction is used for dysentery. Leaf and root decoction is recommended for blood dysentery and piles. *Oil prepared from leaf juice along with that of *Hibiscus rosa-sinensis and *Lawsonia inermis is used for blackening the hair. Oil extracted or prepared using root juice is applied for septic ulcers. *Leaf along with that of *Murraya koenigii and cumin seeds ground in sweet butter milk are given at morning for rectal or anal prolapse. *Root ground in sweet curd is recommended by adding cumin and cardamom seed powder at morning for
indigestion and loss of appetite in calves. Leaf is eaten with jaggery for stomachache due to indigestion and gas trouble. Root paste with rice washed water is applied for scabies. *Root decoction with cumin seeds and *Garcinia indica* fruit rind is used with milk for stomachache during menses. *Tuber, ginger, Holarrhena pubescens* bark, pepper and long pepper powder are taken with honey for menstrual disorders. Leaf juice is taken with jaggery for blood in stool. *Two spoon root extract with lime juice is used for stomachache due to worms. *Stem is tied around the stomach for stomach swelling in young babies. *Root along with that of *Hemidesmus indicus* are ground with breast milk and given thrice a day for diarrhoea in children. *Leaf and *Ziziphus rugosa* shoot tip paste mixed with gingelly oil is poured into nose in case of joint dislocation in cattle (this is performed after tying the leg without pain using a rope). Crushed root kept in a copper vessel for 1 – 2 days is applied for septic ulcers and wounds. *Leaf juice is applied over warty swellings (by leaving the central portion) for quick relief. *Whole plant juice mixed with coconut oil and *Hibiscus rosa-sinensis* flower bud paste (4:1:1) is heated and is applied to remove burnt marks.

Root extract in butter milk is used for blood dysentery, piles and gas trouble. Leaf extract with water is applied over the eyes for burning sensation in the eyes, dust in eyes, sleeplessness and water release from the eyes. Fruit juice is applied for boils over the skin and warts. *Leaf juice mixed with sugar is used as a tonic. Leaf or root paste is applied over the head for biliousness and decoction is recommended for piles and dysentery. *Oil prepared from root juice is applied for skin diseases and septic ulcers.

**Etymology:** Ambastha (physician) clearly indicate its diverse therapeutic potentials. Piluphala (very small fruit) narrate the size of its fruits.

**Note:** It is used in the preparation of *Ayaskrti, Candanasava, Pathadi churna* and *Patolakaturohinyadi kashaya* (Sivarajan & Balachandran, 1996). Young fruits are used as vegetable.
296. *Cymbidium aloifolium* (L.) Sw. (Plate 50 D)

Syn: *Epidendrum aloifolium* L.; *Epidendrum pendulum* Roxb.; *Cymbidium pendulum* (Roxb.) Sw. & Lindl.; *Cymbidium erectum* Wight

Family: Orchidaceae

Vernacular Name: Kan: Marabale  
   Mal: Kansjiram maravazha  
   Tulu: Marabare

Habit: Epiphytic herb.

Habitat: Forests.

Status: Occasional.

Description: Tufted epiphytic herb, with fleshy stem; pseudobulbs hardly differentiated. Leaves long, loriiform, coriaceous, tip unequally and obtusely 2-lobed. Flowers in pendulous racemes, from the axils of leaf-sheaths. Sepals and petals 3 each, lanceolate, purple along centre, with yellow margin; lip yellow with deep purple striations. Pollinia 2. Fruit ellipsoid capsule.

Uses: *Whole plant decoction is used internally for digestive disorders and intestinal worms. *Oil prepared from its leaf juice is applied externally for nervine disorders.

Etymology: Marabale and Marabare (wood plantain) arose due to its epiphytic nature and resemblance of leaves with that of actual Marabale (*Vanda tessellata*). Kansjiram maravazha (*Strychnos* wood plantain) is as it is usually found on *Strychnos nux-vomica*.

Note: Occasionally it is used as a substitute for *Vanda tessellata*.

297. *Cymbopogon citratus* (DC.) Stapf. (Plate 50 E)

Syn: *Andropogon citratus* DC.

Family: Poaceae
Vernacular Name: San: Atigandha, Bhustrina, Malatrinaka, Putigandha, Rohisha
   Eng: Oil grass, Lemon grass, Melissa grass, West Indian lemon grass
   Kan: Chahullu, Nimbehullu, Majjigehullu, Sambharahullu
   Mal: Chayapullu, Chonakapullu, Inchipullu, Sambarapullu
   Tulu: Chatappu, Majjige thappu, Alepanthi

Habit: Tall grass.

Habitat: Cultivated.

Status: Occasional.


Uses: Plant decoction is given for cold, fever and phlegm. Oil extracted from this plant is applied on the forehead for headache and cold. *Leaf juice is given along with butter milk as a cooling and digestive agent. *Leaves, root of Flacourtia indica, Andrographis paniculata leaf, ginger and pepper decoction mixed with honey is taken (½ ounce thrice daily) for malaria. *Leaf juice is heated and poured into ear for earache. Oil is applied externally for rheumatism. Root extract is a digestive, used for biliousness and digestive disorders. *Tambuli* prepared from its leaves is useful for fever, biliousness, pain and is a digestive. *Leaf paste with butter milk is applied for back leg pain. Leaf decoction with coriander seeds is used for fever due to indigestion, giddiness, loss of appetite, cough, sleeplessness and gas trouble. *Leaf decoction is a thirst quencher and sweat inducer during fever. *Leaf, long pepper and jaggery decoction is used for cold and fever. *Leaf, ginger, Andrographis paniculata and jaggery decoction is consumed for malaria. Leaf, pepper and ginger decoction is recommended for cough. Leaf crushed with pepper is
boiled with water and is used twice a day for indigestion, cold and fever. *Crushed leaf boiled with water is consumed thrice a day for dry cough and running nose.

Etymology: Chahullu, Chayapullu (tea grass) and Chatappu (tea leaf) arose as the leaves are used to prepare hot tea for fever. Majjigehullu (buttermilk grass) and Majjige thappu (buttermilk leaf) as the leaves boiled in buttermilk is used for fever. Sambharahullu and Sambarapullu (condiment grass), Inchipullu (ginger grass) and Nimbehullu (lemon grass) are due to its characteristic aroma.

Note: Citral, geraniol and terpenes are the active constituents. It is used for preparing *Masabaladi kvatha* and *Masabaladi churna* (Sharma *et al.*, 1998).

**298. Cymbopogon flexuosus** (Nees ex Steud.) Wats. (Plate 50 F)

Syn: *Andropogon flexuosus* Nees ex Steud.; *Andropogon nardus* L. var. *flexuosus* (Nees ex Steud.) Hack.

Family: Poaceae

Vernacular Name:  San: Dhyamakah, Rohisa, Rohisah  Eng: Ginger grass, East Indian lemon grass  Kan: Anthibale hulu, Shuntihullu, Sambhara hullu, Chahullu  Mal: Chukkunaripullu, Inchipullu, Thailappullu, Theruvappullu  Tulu: Suntipanthi, Chapanthi

Habit: Tall grass.

Habitat: Deciduous forests, grasslands and plains.

Status: Common.

Description: Tall aromatic tufted grass; nodes shortly bearded; internodes tomentose in upper part. Leaves linear-acuminate, tapering at the ends, glaucous-green, minutely scabrid, coarsely scabrid along margins; ligule chartaceous. Panicle decompound, with many long flexuous drooping branches; spatheole glabrous. Sessile spikelets oblong-acute. Glumes 2; lower glume lanceolate, flat on the back with depressions, 3-nerved; upper boat-shaped. Lemmas 2; lower empty; upper

Uses: Root decoction is used for fever and to expel phlegm. *Leaf is used for preparing an herbal tea which causes sweating during fever. *Leaf is added to impart characteristic smell to hair oil which is used for hair fall and headache. Oil extracted from the leaf is applied for muscular pain. *Oil extracted from this plant is applied for sprains and headache. This oil mixed with sugar is taken internally for gas trouble, vomiting and fever. *Decoction prepared from its roots is given as a blood purifier for various skin diseases and phlegm. *Oil extracted from this plant is applied externally for rheumatism, also used as hair oil to prevent hair fall.

Etymology: Shuntihullu, Chukkunaripullu, Inchipullu, Suntipanthi (ginger grass) and Sambharu hullu (condiment grass) are due to its characteristic aroma. Chahullu and Chapanthi (tea grass) arose as from its leaves hot tea is prepared for fever. Thailappullu (oil grass) as oil is extracted from the leaves.

Note: Geraniol, geranyl acetate, citronellol, linalool, geranyl butyrate, myrcene, α-pinene and β-pinene are the active constituents. It is used in the preparation of Bala taila, Masabaladi kvatha and Masabaladi churna (Sharma et al., 1998).

299. Cynodon dactylon (L.) Pers. (Plate 51 A)

Syn: Panicum dactylon L.

Family: Poaceae

Vernacular Name: San: Dhurva, Durva, Haritali, Sahasravirya  
Eng: Bermuda grass, Couch grass, Dog’s tooth grass, Dhub grass  
Kan: Garike, Garike hullu, Karike hullu  
Mal: Belikaruka, Balikaruka, Karuka, Karukapullu  
Tulu: Kadike panthi, Kadikkepanthi

Habit: Creeping grass.

Habitat: Irrigated fields and wetlands.
Status: Common.


Uses: *Whole plant paste with *Ocimum tenuiflorum* leaves is used for several skin diseases. *Plant juice (4 spoons) is given to children suffering from stomachache due to worms. *Whole plant decoction with *Scoparia dulcis* is recommended for malnutrition in children. Whole plant decoction is used for swellings in body due to allergy and also to remove water from legs. *Whole plant decoction with milk is taken for non infective leucorrhoea. *Whole plant along with cumin seeds are boiled in milk until it becomes a paste and is applied for scabies, ulcers and boils on the head. *Plant and *Centella asiatica* extract in tender coconut water is consumed for skin rashes. Whole plant juice is applied for burning in the eyes, gastritis, sleeplessness, burning during urination, shortage of urine, UTI and DUB. *Leaf juice is applied over the body for herpes, urticaria and rashes due to allergy. Whole plant decoction is used as a blood purifier for body pain, menstrual irregularities, urinary disorders and DUB. This is used as an eye wash for burning sensation in the eye. *Plant paste is applied for herpes while with butter for swellings, migraine and headache. Plant juice is recommended for getting relief from pain of osteoporosis. Plant extract is a cooling agent and stops bleeding from any part of the body. *One handful plant ground with milk is given in empty stomach at early morning for three days in case of burning during urination. *Plant paste with *Centella asiatica, Breynia vitis-idaea* and turmeric is applied externally for urticaria and rashes. Plant paste is applied for expelling thorns and spines. *Whole plant paste with *Centella asiatica and Ipomoea marginata* is applied for erysipelas and eczema. *Paste with
Ficus racemosa bark is applied for pus release and easy heal of swelling and boils of erysipelas.

Oil extracted from plant juice is used as hair oil. Plant juice is taken internally to expel phlegm. *Whole plant chutney with Centella asiatica is eaten at least once in a month to increase memory power. *Paste prepared from whole plant cooked with Centella asiatica, Indigofera tinctoria, Basella alba, Plectranthus amboinicus, Memecylon umbellatum, Scleropyrum pentandrum leaves, cumin, gingelly seeds, Glycyrrhiza glabra and Curcuma longa rhizome in milk is applied 7 – 8 times a day for urticaria and rashes. *Whole plant, Centella asiatica, Indigofera tinctoria, Azadirachta indica, Memecylon randerianum, Plectranthus amboinicus leaves and Curcuma longa fresh rhizome paste with tender coconut husk juice is applied 7 – 8 times a day for allergies. *Paste prepared from tender shoot tip and bark of Ficus racemosa fried in ghee is applied 6 – 7 times a day for feet ulcers or septic wounds. Plant juice is applied to arrest bleeding, to heal cuts and wounds. *Plant juice mixed with honey is used for over menstrual bleeding and that with milk is given for 41 days for bleeding in pregnant women. *A little quantity of juice from crushed plant is poured into nose while the rest is given with equal quantity of honey for 1 – 2 week in case of bleeding from nose. *Whole plant paste with milk is applied for 3 – 6 days in case of joint pain and swellings. *One handful whole plant paste milk, gingelly seeds (hale a hand) and butter is applied to the centre of the head and kept as such for 3 hrs in case of sleeplessness, anxiety and mental depression. Plant juice is a diuretic agent and is given with sugarcandy anaemia. *It is known as green blood, decreases appetite and is usually given after fasting. Plant decoction increases the quantity of blood and is useful for stomach ulcers. *Tambuli prepared from this plant is recommended for infection after delivery. Whole plant paste with pepper seeds in milk is applied for joint swellings and pain (if there is burning sensation then pepper can be avoided). *Root juice mixed with jaggery is used as a healthy drink. Plant decoction is recommended for blood disorders, urinary problems, oedema, bleeding, menstrual problems, epilepsy, eye diseases and all type of poisonous bites. Plant cooked with rice is consumed for 48 days as a health tonic. Whole plant extract is used for chronic vomiting. *Plant juice is recommended
internally after purgation with salt water during the treatment for psoriasis. *Whole plant, Acalypha indica and Citrullus colocynthis paste is applied for rheumatism. *Whole plant, Plectranthus amboinicus, Indigofera tinctoria, Azadirachta indica, Ocimum basilicum, Nyctanthes arbor-tristis, Ocimum tenuiflorum leaves and turmeric paste with tender coconut husk juice and butter is applied for eczema. *Whole plant and Centella asiatica ground in cold water is applied all over the body of new born baby (for 10 days). *Whole plant, Ixora coccinea shoot tip and Centella asiatica extract (sieved) is given to new born babies from 10th day to 40th day to increase memory power. *Plant juice boiled with coconut oil is applied for scabies and tinea versicolor. Plant paste with turmeric powder is applied for skin diseases. Whole plant extract in tender coconut water is used for burning during urination. *Plant juice mixed with one spoon sandalwood paste is given for over bleeding and stomachache during menses. Plant juice is taken with sugar for bleeding piles. *Stem decoction is recommended twice a day for a week for over menstrual bleeding. *Whole plant, Senna tora, Terminalia chebula fruit, Ocimum tenuiflorum leaf and rock salt (in equal quantity) ground in butter milk is applied for scabies, tinea versicolor and warts. *Whole plant paste with rice washed water is applied for urticaria and rashes. Oil prepared by heating plant juice with coconut oil (4:1) is applied for skin diseases. *Plant juice, gingelly oil, Elephantopus scaber juice (4:1:2) are boiled and the resulting oil is applied for ringworm, warts and foul ulcers. Whole plant decoction mixed with lime juice is used in empty stomach for ulcers. Root decoction is consumed twice a day for amoebic dysentery and as a tonic. *Tambuli* prepared using shoot tip with that of Centella asiatica, Oxalis corniculata (fried in ghee) and coconut gratings is recommended for cold and fever. Tender shoot tip paste is applied on the forehead for headache. *4 – 5 drops of its root juice is used a nasya* twice a day for bleeding from nose. *Whole plant, a little cumin seeds and turmeric paste is applied for boils in fingers. *One glass whole plant juice is taken thrice a day for a period of 48 days in case of blood disorders. *Crushed tender shoot and cumin seeds soaked in tender coconut water for half an hour is used internally at morning in empty stomach for 3 – 6 days in case of allergic rashes. *Fresh plant and a little cumin seeds ground in milk are heated with coconut
oil and resulting oil is applied externally for scabies, boils and foul ulcers. *Plant and *Elephantopus scaber (in equal quantity) juice heated by adding coconut oil (2:1) is applied for itches, scabies and boils. *Tuber mixed with equal quantity of tamarind seed coat are fried with coconut powder, mixed with fried hair powder and sulphur powder (4:2:1) into a paste and is applied to remove burnt marks from the body.

Etymology: Sahasravirya (thousand times vigour) is the indicator of its potency to treat diverse diseases. Balikaruka (tribute Bermuda grass) as this is used to offer tribute to the ancestors during traditional rituals.


Phytotoxins, flavonoids, ferulic acid, syringic acid, p-coumaric acid, vanillic acid, p-hydroxyl benzoic acid and o-hydroxyphenil acetic acid are the active components with hemostatic, demulcent and diuretic properties (Dey, 1994; Sharma *et al.*, 1998).

Tender plant is used as vegetable.

300. *Cynoglossum zeylanicum* (Vahl. ex Hornem.) Thunb ex Lehm. (Plate 51 B)

Syn: *Cynoglossum denticulatum* A. DC. var. *zeylanicum* (Vahl. ex Hornem.) Clarke.; *Cynoglossum furcatum* Wall.

Family: Boraginaceae

Vernacular Name: Kan: Amrada soppu

Mal: Kayooram, Mudichlooram

Tulu: Amrada thappu

Habit: Erect herb.

Habitat: Along roadsides and hill slopes.

Status: Frequent. Weed.
Description: Annual erect strigose herb. Leaves simple, broadly lanceolate, chartaceous, strigose above. Flowers pale lilac or light blue, in axillary and terminal racemes. Calyx-lobes 5, obovate. Corolla campanulate; throat glandular; glands 5; lobes 5, ovate-rounded. Stamens 5. Fruit a depressed pyramid of 4 nutlets, glochidiate.

Uses: * Root decoction is a tonic and is used for digestive disorders.

Etymology: Amrada soppu and Amrada thappu (mango leaf) arose due to its characteristic smell.

Note: Mostly used as a digestive agent.

301. *Cyperus rotundus* L. (Plate 51 C)

Family: Cyperaceae

Vernacular Name: San: Bhadrakshi, Bhadramusta, Gangeya, Musta, Mustaka

Eng: Coco grass, Common nut sedge, Nut grass, Purple flat sedge

Kan: Konnarigadde, Thungegadde, Bhadramusthe, Bhadrahullu

Mal: Karimuttan, Kuzhimuthanga, Muthanga

Tulu: Taripanthi, Bhadramusti

Habit: Perennial herb.

Habitat: Weed in moist soil and irrigated lands.

Status: Common. Weed.

Uses: *Rhizome juice or decoction is given to children suffering from stomachache due to indigestion, also for diarrhoea, dysentery, vomiting, indigestion, shortage of urine and fever (if decoction is prepared by adding cumin and coriander seeds, the results are more promising). Rhizome decoction is used as a digestive tract stimulator. *Rhizome decoction is taken internally for malabsorption in children. *Crushed rhizome immersed in *Borassus flabellifer* toddy is kept in sunlight for 40 days and is given for malnutrition in children. Rhizome decoction is recommended for rheumatism and is a hepato tonic. Rhizome decoction with milk is used as a tonic for children and as breast milk purifier. *One handful rhizome and soaked raw rice paste with raw rice washed water is applied for 3 – 12 days in case of breast swelling, pain and hardened breast. *Rhizome extract with butter milk is recommended to arrest uncontrolled diarrhoea in children. *Dried rhizome powder mixed with *Albizia chinensis* bark powder or *Acacia sinuata* fruit powder is used for removing foul odour of sweating and for skin diseases. Rhizome decoction is a digestive, heart tonic, diuretic, increases perspiration and is thirst quencher. *Tuber, coriander and *Wattakaka volubilis* root paste is applied for abdominal spasm. Tuber and coriander extract is taken for liver disorders. *Crushed tuber decoction with milk is consumed for weakness and giddiness. Rhizome decoction is used with honey for three days in case of indigestion. *Rhizome, sandalwood, ginger, *Plectranthus vettiveroides, Hedyotis corymbosa* and *Vetiveria zizanioides* (in equal quantity) decoction is used for fever due to vitiated biliousness. *3 – 4 spoons of rhizome powder decoction are given (once in every 2 hrs) for thirst and burning sensation during fever. Tuber ground with water is applied over the chest before sleeping for a week in case of chest pain due to phlegm. *Tuber, *Mangifera indica* seed kernel and rock salt (1: 6:1) powder are given with buttermilk twice a day for dysentery. *Tuber, gum from *Bombax ceiba, Curcuma amada* rhizome, *Aegle marmelos* fruit pulp and ginger (in equal quantity) extract with buttermilk is recommended twice a day for diarrhoea. *Tuber and *Curculigo orchioides* tuber (in equal quantity) decoction is used twice a day for about 24 days in case of amoebiasis and malnutrition in children.
Etymology: Bhadrahullu (prosperous grass), Thungegadde (prominent or chief tuber) and Taripanthi (palm grass) are due to its diverse utility, characteristic tubers and habit.

Note: β-selinene, mustakone, cyperotundone, cyperolone, α-cyperone, cyperene 1 & 2, cyperol, α & β-rotunol, kobusone, pinene, cineole, iso-cyperol and isokobusone are the active constituents with tranquillizing and antipyretic activities (Jain et al., 1991; Dey, 1994; Sharma et al., 1998). It is one of the major ingredients of Mustakarista, Laghu rasnadi kashaya, Mustakadi kvatha, Asokarista, Mustakadi churna, Mustakadi lehya, Dhanyapancaka kvatha, Dhanyapancaka churna, Piyusavalli rasa, Gulma kalanaka rasa, Mahalaksadi taila, Sadanga paniya, Panchabhadra kvatha, Kiratiktadi kvatha, Sudarsana churna, Amritarista, Dhanyapancaka kvatha, Pippalyasava, Gokshuradi guggulu, Chandraprabha vati, Carnegryadi gharta and Vyaghryadi lehya (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). Rhizome powder is used to prepare coffee or tea. Rhizome extract is used in the preparation of incense sticks.

302. *Dalbergia horrida* (Dennst.) Mabb. var. *horrida* (Plate 51 D)

Syn: Dalbergia spinosa Roxb.; Dalbergia sympathetica Nimmo ex Graham.; Dalbergia multiflora Heyne ex Prain

Family: Papilionaceae

Vernacular Name: Kan: Parantu balli, Maradi balli
Mal: Anamullu, Jadavalli
Tulu: Parantolu, Parantu ballu

Habit: Large climbing shrub.

Habitat: Semi evergreen forests.

Status: Frequent.

Description: Large woody climber, with twisted branches; stem and branches armed with horrid spines. Leaves imparipinnate; leaflets 11 – 15, ovate-oblong, pubescent

Uses: *Leaf paste is applied for measles, rashes, urticaria, other skin diseases and breast pain. *Bark paste is applied externally for swellings. *Stem and leaf paste is applied for water oozing ulcers and skin diseases. *Leaf or twig paste with raw rice is applied for carbuncles in finger. *Bark and that of Terminalia bellirica cooked with rice is given for nerve rheumatism in cattle. *Bark decoction is used with honey for dry cough and without honey for rheumatism.

Etymology: Parantu balli and Parantu ballu (horrid climber) are due to presence of horrid spines and climbing nature. Anamullu (elephant spines) is due to its large horrid spines.

Note: It is used against bad omen or to ward off evil spirits. Branches are used as support for Coccinia grandis.

303. Dalbergia lanceolaria L. f. ssp. lanceolaria (Plate 51 E)

Family: Papilionaceae

Vernacular Name: San: Goraksa, Kapotavanka
Kan: Kanagina mara, Kaanagina mara, Bilibeeti, Hasirugoni
Mal: Kannanvaka, Ottutholi, Pachariai, Velleeti
Tulu: Boldu beeti

Habit: Large tree.

Habitat: Moist deciduous forests.

Status: Occasional.

Description: Large deciduous trees. Leaves imparipinnate; leaflets elliptic-oblong, sericeous when young. Flowers pale pink or rose, in axillary and terminal panicles. Sepals 5, puberulous. Petals 5; standard broad-ovate. Stamens 5 + 5. Fruit lanceolate, faintly nerved, dark green pod.
Uses: *Bark decoction increases digestive power. Leaf paste is applied for leprosy, septic ulcers and wounds. *Oil extracted from the seeds is used as a wound healer and also for rheumatism.

Etymology: Bilibeeti, Velleeti and Boldu beeti (white rose wood) are due to its resemblance with rose wood tree and whitish heart wood.

Note: Heart wood is used as a valuable timber.

304. *Dalbergia latifolia* Roxb. (Plate 51 F)

Syn: *Dalbergia emarginata* Roxb.

Family: Papilionaceae

Vernacular Name: San: Shishapa, Simsapa
    
        Eng: Indian rose wood, East Indian rose wood, Malabar rose wood
        Kan: Beete mara, Beeti mara, Ibidi, Todegatthi, Karibeeti
        Mal: Cholaveetti, Eeti, Kariveeti, Veeti
        Tulu: Beeti, Beetitha maro

Habit: Large tree.

Habitat: Mixed deciduous forests.

Status: Frequent.

Description: Large trees. Leaves imparipinnate; leaflets obovate-orbicular, coriaceous, puberulous below. Flowers white, on old wood or in axillary panicles. Sepals 5, puberulous. Petals 5, clawed; standard obovate. Stamens 9, monadelphous. Fruit oblong-lanceolate, prominently nerved pod.

Uses: *Seed oil is applied for septic wounds and ulcers. *Bark decoction is recommended for urinary disorders, rheumatism and also as wound healer.

Etymology: Karibeeti and Kariveeti (black rose wood) are due to its blackish heart wood.

Note: Heart wood is one of the most valued timbers.
305. *Dalbergia sissoo* Roxb. (Plate 52 A)

Syn: *Amerimnon sissoo* (Roxb.) O. Ktze.

Family: Papilionaceae

Vernacular Name: San: Aguru, Kapila-sinsapa, Shingshupa, Simsapa
   Eng: Sheesham, Shisham wood, Sissoo, Malabar black wood
   Kan: Agaru, Aguru, Bindi mara, Shishmabaage
   Mal: Himalayan-eetti, Iruvil, Seesam
   Tulu: Sissoo, Karimaro

Habit: Large tree.

Habitat: Planted along roadsides.

Status: Frequent.


Uses: *Seed oil is used as hair oil. *Bark decoction is given internally for headache.

Etymology: Kapila-sinsapa (brown rose wood) is due to its characteristic heart wood.

Note: Heart wood is a valuable timber. It is one of the ingredients of *Ayaskrti*, *Narasimha ghrta*, *Narasimha rasayana* and *Mahakhadira ghrta* (Sharma et al., 1998).

306. *Dalbergia volubilis* Roxb. (Plate 52 B)

Family: Papilionaceae

Vernacular Name: San: Sirisika
   Kan: Karalenki, Karalenki balli
Mal: Mrithi, Mryti  
Tulu: Karalenki

Habit: Woody climber.

Habitat: Forests and sacred groves.

Status: Frequent.


Uses: *Leaf juice is given for liver problems and stomach ulcers. *This is also used in veterinary treatment for liver disorders and rectum prolapse in cattle. *Leaf is chewed and the juice is swallowed for recovery from mouth ulcers or sores. Leaf decoction is taken for uterus prolapse, mouth ulcers and peptic ulcers. *Soup prepared from its leaves is highly used for jaundice. *Leaves are given as food to cattle at least three days a month to prevent digestive disorders, constipation, ovary and rectum prolapse. Tender shoot tip extract is consumed for constipation. *Tender shoot tip crushed with cumin seeds in cold milk is recommended internally for three days in case of mouth ulcers. *Leaf decoction with garlic and pepper seeds is given for asthma. *Bark extract in rice cooked water is given to cattle and the uterus or rectum washed with salt water is kept in Alocasia macrorrhiza leaf in case of rectal or uterus prolapse. *Leaf decoction is recommended internally and its juice is applied externally for uterus prolapse. *Stem peel cooked with rice is given for jaundice. *Leaf and bark extract in water is given with one spoon cumin seed powder for one month in case of over bleeding. *Roties* prepared by using its shoot tip fried in ghee is eaten for muscle spasm.

Etymology: Karalenki (intestine shrinking) and Karalenki balli (intestine shrinking climber) are due to its therapeutic efficacy for rectum prolapse.

Note: Much valued drug for gastrointestinal tract diseases. Tender soot is used as vegetable.
Syn: *Datura fastuosa* L.; *Datura fastuosa* L. var. *alba* (Nees) Clarke

Family: Solanaceae

Vernacular Name:  San: Dhatturah, Dhattura  
Eng: Devils weed, Jimson weed, Purple horn of plenty  
Kan: Datturi, Dattura, Kari ummattha, Ummattha  
Mal: Kariymmatta, Neelaummmam, Ummam  
Tulu: Kari umbuga, Kari umbugo

Habit: Undershrub.

Habitat: Waste places and along roadsides.


Description: Undershrub, with purple stem and branchlets. Leaves simple, large, broadly ovate, angled or irregularly toothed, unequal sided at base. Flowers large, solitary, axillary. Calyx long-tubular, herbaceous, 5-lobed. Corolla long-tubular, funnel-shaped, white, purplish outside. Stamens 5, included. Fruit globose, pendulous capsule, with short spines.

Uses: *Paste of its leaf, leaf of Tinospora cordifolia* and fruits of black gingelly cooked in cow milk is applied for herpes. *Boiled leaf juice is applied for mumps.*  
*Beedi* made from dried flower is smoked for getting relief from asthma. *Paste prepared by boiling its fruits containing gingelly seeds (after removing seeds, gingelly seeds are filled inside the fruit) in milk is applied for rheumatoid arthritis.  
*Paste prepared by mixing its leaf juice with jaggery is applied for swellings.

Etymology: Ummattha (intoxicating), Kari ummattha, Kariymmatta, Kari umbuga (black intoxicating plant) and Neelaummmam (blue or purple *Datura*) are due to its intoxicating fruits and dark or purplish plant body and flowers.

Note: It has all that properties similar to that of *Datura stramonium*. It is stronger and more effective. Fruits are hypotensive and spasmylytic (Jain *et al.*, 1991). It is
used in the preparation of Kankasava, Dhurdhuradi taila, Dhurdhurapatradi kera, Sutasekhara rasa, Jvarankusa rasa, Laksmivilasa rasa, Kanakasundara rasa, Dhatturaphala bhasma, Datturadi pralepa, Laghu visagarva taila, Dugdha vati, Piyusavalli rasa and Mrtasanjivini vataka (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). Tropane, hyoscyamine, hyoscine, dhaturametelin A & B, atropine and sesplamine are the active constituents (Dey, 1994; Sharma et al., 1998).

308. **Datura stramonium** L. (Plate 52 D)

Syn: *Datura stramonium* L. var. *tatula* Clarke.; *Datura tatula* L.; *Datura ferox* Nees.; *Datura wallichii* Dunal.

Family: Solanaceae

Vernacular Name: San: Dhattura, Dhatturah, Ghantapushpa, Kanaka, Madukara, Madana
Eng: Common thorn apple, Devil’s apple, Jimson weed
Kan: Ummattha, Bili ummattha, Bili dattura, Maddugunike
Mal: Ummam
Tulu: Umbugo, Umbuga

Habit: Undershrub.

Habitat: Wastelands and along roadsides.

Status: Common. Exotic, poisonous and weed.

Description: Undershrub, with green, glandular hairy stem and sparsely pubescent branchlets. Leaves simple, broadly ovate, shallowly lobed or irregularly dentate. Flowers white, solitary, axillary or at the forks of branches. Calyx long-tubular, herbaceous, 5-lobed. Corolla long-tubular, funnel-shaped, white, 10-toothed. Stamens 5, included. Fruit globose, straight capsule, with long slender spines.

Uses: *Root extract with its seed oil and lime juice is applied for snake bite. *Dried leaf and flower are smoked as beed* for asthma. Root powder paste is applied externally and taken internally for headache and epilepsy. *Seed paste is applied for
toothache. Seed powder is taken for viral fever, while its paste for urticaria, swellings and furuncles. Leaf juice is used in rabies treatment. *Paste of leaf boiled or cooked in milk is used externally for mumps. *Purified plant extract is given internally for rabid dog bite. Leaf decoction is consumed for asthma and bronchitis. *Leaf ground with ripe arecanut peel juice and mercury is applied for corns. *Paste prepared by grinding its leaf juice with marmali* tablet and Boswellia thurifera gum resin is applied for mumps. *Four drops of heated leaf juice are poured into each ear for mumps. Leaf paste is applied over hair for dandruff. Heated leaf paste is applied for rheumatism. Plant or fruit juice is applied for swellings (juice prepared from lime juice and sugar is the antidote for its poisoning). Purified fruit extract is used for mental disorders. *Leaf, garlic, Agave americana leaf juice, Aloe vera leaf juice and gingelly oil are ground together and is applied for abdominal spasm. *Leaf, Hedyotis corymbosa and a little salt are ground and heated with four parts of gingelly oil is applied for ulcers. *Paste of its leaf, betel leaf, dried Ocimum tenuiflorum leaf and impure sodium chloride fried in ghee is applied for ulcers or boils on the head. *Crushed seeds kept in Brassica juncea oil for a week are applied for rheumatism. *Oil prepared from leaf juice is applied over the head for headache and toothache. *Leaf juice mixed with equal quantity of gingelly oil is boiled by adding fenugreek powder. Later, pacche karpura* powder and lime juice are added and is applied for ring worm. *Fruits (after removing seeds) filled with sulphur are sealed with soil, heated in burning charcoal, ground with gingelly oil and are applied for all types of wounds and ulcers. *Dried seed powder filled inside the beedi* is smoked for asthma. *Seeds, Alstonia scholaris bark and Vernonia cinerea seeds (in equal quantity) powder heated with gingelly oil by adding a little turmeric powder is applied for eczema. *3 – 4 drops of oil prepared from its ripe fruit seed, clove, Ocimum tenuiflorum leaves and Caryota urens root boiled with coconut oil is used as ear drop for pus release from the ear. *Leaf juice is poured into the floor heated by burning cow dung flakes. This heated juice is applied for mumps and parotitis. *One drop of its leaf juice is used as eye drop for immediate relief from fever.

Etymology: Ghantapushpa (bell flower) is due to its characteristic flower. Kanaka (gold) as it is considered precious due to its diverse uses. Madukara, Madana and
Ummattha (intoxicating) arose from its intoxicating fruits. Bili ummattha (white intoxicating plant) and Bili dattura (white *Datura*) are due to its green stem and white flowers.

Note: It is used in the preparation of *Kankasava*, *Dhurdhuradi taila*, *Dhurdhurapatradi kera*, *Sutasekhara rasa*, *Jvarankusa rasa*, *Laksmivilasa rasa*, *Kanakasundara rasa*, *Dhatturaphala bhasma*, *Datturadi pralepa*, *Laghu visagarva taila*, *Dugdha vati*, *Piyusavalli rasa* and *Mrtasanjivini vataka* (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma *et al.*, 1998). Tropane, hyoscyamine, hyoscine, dhaturametelin A & B, atropine and sesplamine are the active constituents (Dey, 1994; Sharma *et al.*, 1998).

**309. Delonix elata** (L.) Gamble (Plate 52 E)

Syn: *Poinciana elata* L.

Family: Caesalpiniaceae

Vernacular Name:  
San: Siddhesvara  
Eng: White gulmohur, White gold mohur  
Kan: Neeranji, Vathanarayana, Sunkatthi mara, Siddhesvara  
Tulu: Vathanarayane, Siddhesvare

Habit: Medium-sized tree.

Habitat: Planted as avenue tree.

Status: Rare. Exotic.

Description: Medium-sized deciduous tree, with yellowish-white wood and warty branchlets. Leaves abruptly bipinnate; leaflets many, small, oblong elliptic. Flowers creamish yellow or yellowish white, in terminal corymbose racemes. Sepals 5. Petals 5, clawed; margins fimbriate. Stamens 10, much exerted. Fruit ob lanceolate, horned pod, brown in colour.

Uses: *Leaf paste is applied for rheumatic joints. Bark decoction is given for rheumatism.*
Etymology: Vathanarayana and Vathanarayane (god of rheumatism) clearly indicate its therapeutic efficacy against rheumatism.

Note: Leaf is used as leafy vegetable.

310. *Dendrobium barbatulum* Lindl. (Plate 52 F)

Family: Orchidaceae

Vernacular Name: Kan: Kallu hombale, Marada hombale
                     Mal: Vella ithhil
                     Tulu: Boldu opathimale

Habit: Epiphytic orchid.

Habitat: Forests and grasslands.

Status: Occasional.

Description: Epiphyte with terete stem. Leaves distichous, lanceolate or oblong-lanceolate. Flowers creamy white, appearing after the leaves have fallen off, in terminal long racemes. Sepals 3; dorsal sepals lanceolate; lateral ovate-lanceolate. Petals obovate; lip 3-lobed; side lobes ovate; midlobe obovate. Pollinia 4. Fruit oblong-ovoid, ribbed capsule.

Uses: *Whole plant decoction is given for rheumatism.

Etymology: Marada hombale (golden plantain of trees) and Boldu opathimale (white Rhynchostylis) are due to its epiphytic nature as well as resemblance of creamy inflorescence with that of plantain and *Rhynchostylis retusa*.

Note: It is used as a substitute for *Rhynchostylis retusa*.

311. *Dendrobium ovatum* (L.) Kranz. (Plate 53 A)

Syn: Epidendrum ovatum L.; Cymbidium ovatum (L.) Willd.

Family: Orchidaceae
Vernacular Name: Kan: Kallu hombale, Marada hombale  
Mal: Vella itthil, anantali-maravazha  
Tulu: Boldu opathimale

Habit: Epiphytic orchid.

Habitat: Forests and trees along roadsides.

Status: Common.

Description: Epiphyte with terete stem. Leaves distichous, lanceolate or oblong-lanceolate. Flowers cream coloured, appearing after the leaves have fallen off, in terminal long racemes. Sepals 3; oblong-lanceolate. Petals broader; lip 3-lobed; side lobes rounded; midlobe subquadrate. Pollinia 4. Fruit oblong-ovoid, ribbed capsule.

Uses: *Same as Dendrobium barbatulum.

Etymology: Marada hombale (golden plantain of trees) and Boldu opathimale (white Rhynchostylis) are due to its epiphytic nature as well as resemblance of creamy inflorescence with that of plantain and Rhynchostylis retusa.

Note: It is also used as a substitute for Rhynchostylis retusa.

312. *Dendrocalamus strictus* (Roxb.) Nees (Plate 53 B)

Syn: Bambusa stricta Roxb.

Family: Poaceae

Vernacular Name: San: Bansalochana, Vamsalochana  
Eng: Male bamboo, Solid bamboo  
Kan: Kibbidiru, Gandubidiru, Kiribidiru  
Mal: Cheriyamula, Kalmula, Illi, Kallanmula  
Tulu: Panjibeduru, Panjibedru

Habit: Perennial woody bamboo.

Habitat: Deciduous forests.
Status: Common.

Description: Perennial, unarmed, densely tufted, woody bushes, with solid culms. Leaf blades linear-lanceolate, stiff; leaf sheaths striate, glabrous; auricle short, ciliate with few waxy deciduous hairs; ligule narrow, serrate. Spikelets spiny, clustered in congested, globose heads in long spikes. Spikelets 1 – 3 flowered, bisexual. Glumes ovate, spinescent, many-nerved; lemmas ovate, ending in a sharp spine, surrounded by ciliate tufts of hairs; palea ovate-ovobvate, the lower ones 2-keeled. Lodicules absent. Stamens 3. Fruit ovoid-subglobose caryopsis.

Uses: *Leaf decoction is used as a cooling agent. *It is also used in the treatment of skin diseases, digestive disorders and bone fracture as an astringent agent.

Etymology: Kibbidiru, Kiribidiru and Cheriyamula (small bamboo) are due to its habit, which is the miniature of bamboo. Gandubidiru (male bamboo), Kalmula and Kallanmula (stony bamboo) arose from its culms which are very strong.

Note: Culms are much valued for basketry and handicrafts.

313. *Dendrophthoe falcata* (L. f.) Etting var. *falcata* (Plate 53 C)


Family: Loranthaceae

Vernacular Name: San: Bandaka, Vriksharohini, Vrksaruha
  Eng: Mistletoe
  Kan: Badanike, Bandarike, Marabhaksha
  Mal: Chuvanna ithikkanni, Ithikkanni, Ithil
  Tulu: Bandanukku, Bandanku

Habit: Parasitic shrub.

Habitat: Parasite on hosts like mango, jack and many other trees.

Status: Common. Poisonous.
Description: Large parasitic shrub. Leaves simple, ovate to lanceolate or elliptic-oblong, coriaceous. Flowers fascicled, unilateral, in axillary or terminal racemes. Calyx truncate, 5-toothed. Corolla cylindric; tube curved, constricted at the top, pink or yellowish-white; lobes 5, reflexed, green or yellowish. Stamens 5. Fruit ovoid drupe.

Uses: *Extract of the plant growing on *Saraca asoca* tree is given for 30 days to women suffering from leucorrhoea. *Paste prepared from the plant seen on *Strychnos* tree with turmeric is applied for skin diseases. *Decoction made from that seen on *Mangifera indica* is given as a blood purifier for menstrual disorders, mania and conception. *Paste prepared by grinding it present on *Vitex negundo* is applied for infection due to incorporation of spines into body (this expels spines or thorns). *Plant seen on *Strychnos* is cooked with rice and given to kill dogs. *Decoction prepared using plant growing on *Strychnos* tree, *Calycoperis floribunda* leaf and turmeric is used to wash septic wounds and ulcers. *Decoction prepared from plant growing on *Strychnos nux-vomica* tree is used as a wash for burns. *Paste prepared by drying its leaf decoction is applied for bed sore and all kinds of chronic ulcers (even for diabetic patients). *Plant paste is also used in bone setting after bone fracture. *The plant growing on *Vitex negundo* and *Calotropis gigantea* is used for treating cancerous ulcers. *Plant extract is used as ear drop for earache. *Paste made from the plant growing on *Strychnos* tree is applied for wounds and ulcers while the extract of plant growing on *Artocarpus heterophyllus* is used for diabetes. *Paste prepared from the plant growing on *Vitex negundo* is applied for all types of swellings.

Etymology: Vriksharohini, Vrksaruha (sitting on tree) and Marabhaksha (wood or tree eater) clearly indicate its parasitic nature. Chuvanna itthikkanni (red mistletoe) is due to its characteristic flowers.

Note: Quercetin, quercetrin, gallic acid, chebulic acid, β-amyrin-o-acetate, oleonolic acid, methyl ester acetate, β-sitosterol, stigmasterol, catechin and leucocynidin are the active constituents. It is used in the preparation of *Mutravirecaniya kashaya* and *Mutravirecaniya churna* (Sharma et al., 1998). It is believed that its therapeutic
efficacy is greatly influenced by the chemical composition of the host. Plant present on *Calotropis gigantea* is used in black magic.

314. *Derris brevipes* (Benth) Baker var. *brevipes* (Plate 53 D)

Syn: *Derris heyneana* Benth. var. *brevipes* Benth.

Family: Papilionaceae

Vernacular Name: Eng: Hog creeper  
Kan: Handi balli, Eliballi  
Mal: Mullamaram, Nanchuvalli, Karukody  
Tulu: Panji ballu, Eliballu

Habit: Scandent shrub.

Habitat: Evergreen and semi evergreen forests.

Status: Occasional.


Uses: *Leaf paste is applied for furuncles and tiger spider bite. *Paste prepared by grinding its root along with *Vernonia anthelmintica* seeds, very young tender coconut, turmeric, granite rock powder and *Wrightia tinctoria* leaf in rice cooked water is applied for furuncles, carbuncles and scabies. *Bark decoction is taken internally while paste is applied externally for snake bites and liver disorders. *Bark decoction is used internally and its leaf paste is applied on the head for biliousness.

Etymology: Handi balli and Panji ballu (pig vine) arose as this plant was being used in the past to catch the pigs. Eliballi and Eliballu (rat vine) are due to its characteristic leaves which resemble rat.

Note: Bark extract is used as fish poison.
315. *Derris scandens* (Roxb.) Benth. (Plate 53 E)

Syn: *Dalbergia scandens* Roxb.

Family: Papilionaceae

Vernacular Name: Eng: Hog creeper  
Kan: Handi balli, Eliballu  
Mal: Poonjali, Ponnamvalli  
Tulu: Panji ballu, Eliballu

Habit: Scandent shrub.

Habitat: Evergreen and semi evergreen forests.

Status: Frequent.

Description: Large scandent shrub. Leaves imparipinnate; leaflets 5 – 19, obovate-oblong, thin-coriaceous. Flowers white to pink, in terminal and axillary racemes; nodes 3 – 4-flowered. Calyx campanulate, 5-toothed. Corolla white to pink, exerted; petals 5. Stamens monadelphous. Fruit oblong, 1 – 5 seeded pod, winged along the upper suture.

Uses: Same as *Derris brevipes* var. *brevipes*.

Etymology: Same as *Derris brevipes* var. *brevipes*.

Note: Bark extract is also used as fish poison.

316. *Desmodium gangeticum* (L.) DC. (Plate 53 F)

Syn: *Hedysarum gangeticum* L.

Family: Papilionaceae

Vernacular Name: San: Ansumati, Salaparni, Saliparni, Shalaparni, Shaliparni  
Kan: Ondele honne, Salaparni, Kolakunaru, Orile  
Mal: Orila, Pulladi  
Tulu: Onjire
Habit: Undershrub.

Habitat: Shaded places.

Status: Occasional.

Description: Erect undershrub, with pubescent branches. Leaves 1-foliolate; leaflet ovate to lanceolate. Flowers small, in terminal racemes. Calyx campanulate, 5-toothed. Corolla exerted, violet or white; standard broad. Stamens 9 + 1. Fruit 6 – 8 jointed pod, lower suture deeply indented; joints reticulate, with hooked hairs.

Uses: *Root bark is used to prepare a coffee which acts as a general health drink. Root decoction is given for burning sensation in the body, nervous debility, cough, bronchitis, rheumatism, gastritis and as a general tonic. *Whole plant paste with rice washed water is applied all over the body for urticaria and rashes. *Root decoction is used for chest pain due to the small size of heart valve. *Root and onion boiled in water reduced by adding milk is given by adding sugarcandy at night after food for heart problems, chest pain, digestive and breathing problems. *Paste prepared by grinding leaf with black gram soaked in water is applied for bone fracture or bone pain. Root decoction is recommended for tridoshas*, rheumatism, vatarakta*, fever, worms, urinary disorders, bleeding piles, tuberculosis, vomiting and dysentery as a tonic. *Root decoction is used as a health tonic during 4th month of pregnancy. *Leaf, Allophylus cobbe leaf, root of Salacia chinensis and sandalwood paste with tender coconut husk juice is applied for urticaria and herpes.

Etymology: Ondele honne (single leaved Kino tree), Orile, Orila and Onjire (single leaf) are due to its unifoliolate leaves and resemblance of leaflet with that of Kino tree, Pterocarpus marsupium.

Note: One of the ingredients of Dasamula*, widely used for rheumatism and gas trouble. It is used in the preparation of Dasamularista, Chyavanaprasha, Dhanvantara kulambu, Indukanta ghrta, Amrtraprasa ghrta, Dasamulasatpala ghrta, Dhanvantara taila, Salaparnyadi kvatha, Dasamula kvatha, Sudarsana churna, Narayana taila, Maha visagarbha taila and Mahanarayana taila (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998).
**317. Desmodium heterocarpon** (L.) DC. (Plate 54 A)

Syn: *Hedysarum heterocarpon* L.; *Hedysarum polycarpum* Poir.; *Desmodium polycarpum* (Poir.) DC.

Family: Papilionaceae

Vernacular Name: San: Salaparni
   Kan: Kaadu moovile
   Mal: Nilathuvara
   Tulu: Kattumoojire

Habit: Undershrub.

Habitat: In hedges and shaded places.

Status: Common. Weed.

Description: Erect or suberect undershrub. Leaves 3-foliolate; terminal leaflet obovate to oblanceolate, pubescent beneath; side leaflets smaller. Flowers small, in terminal and axillary dense racemes. Calyx campanulate, glabrescent, 5-toothed. Corolla exerted, blue or purple. Stamens 9 + 1. Fruit linear, 6 – 8 jointed pod, brown-hairy on the sutures.

Uses:
* Coffee prepared using its root bark is used as a health drink. Whole plant decoction is taken for rheumatism, weakness, gastritis and as general tonic. *Oil prepared from plant juice is used for bone setting after bone fracture. *Whole plant paste with rice washed water is applied externally for urticaria and rashes. *Root and leaf juice is given with sugar for poisons (plant origin) that entered body through food. *Root decoction with milk is consumed by adding sugarcandy at night for bone growth in children, bone fracture, heart diseases, breathing problems, piles, diarrhoea, vomiting and pain in pregnant woman.

Etymology: Kaadu moovile, Kattumoojire (wild three leaved plant) and Nilathuvara (ground pigeon pea) are due to its 3-foliolate leaves, wild nature, resemblance of
leaves with that of pigeon pea and use as a substitute for three leaved plant, *Pseudarthria viscida*.

Note: Occasionally used as a substitute for *Pseudarthria viscida*.

**318. *Desmodium heterophyllum* (Willd.) DC. (Plate 54 B)**

*Syn: Hedysarum heterophyllum* Willd.

*Family: Papilionaceae*

*Vernacular Name: San: Salaparni
Kan: Kaadu moovile
Tulu: Kattumoojire*

*Habit: Trailing herb.*

*Habitat: Moist shaded places.*

*Status: Frequent. Weed.*


*Uses: *Root decoction is used as a carminative, diuretic and tonic. *It is also used for cough. *Leaf gruel with rice is given to increase lactation in ladies.*

*Etymology: Kaadu moovile and Kattumoojire (wild three leaved plant) are due to its 3-foliolate leaves, wild nature and use as a substitute for three leaved plant, *Pseudarthria viscida*.

*Note: Occasionally used as a substitute for *Pseudarthria viscida*.*

**319. Desmodium laxiflorum** DC. (Plate 54 C)

*Syn: Desmodium recurvatum* (Roxb.) Graham ex Wight & Arn.; *Hedysarum recurvatum* Roxb.
Family: Papilionaceae

Vernacular Name: San: Prsniparni, Salaparni
    Kan: Otte gida, Ondele
    Mal: Orila, Unda-orila
    Tulu: Onjire

Habit: Undershrub.

Habitat: Moist shaded places and forest undergrowths.

Status: Occasional.

Description: Erect undershrub, with appressed-pubescent branches. Leaves 3-foliolate; leaflets membranous, ovate elliptic, silky pubescent beneath. Flowers small, fascicled, in slender axillary racemes. Calyx campanulate, strigose, 5-toothed. Corolla exerted; standard white; wings and keel blue. Stamens 9 + 1. Fruit linear, 6 – 10 jointed pod, covered with minute hooked hairs.

Uses: Same as Desmodium gangeticum.

Etymology: Ondele, Orila and Onjire (single leaf) are due to the resemblance of its leaflets with that of Desmodium gangeticum.

Note: It is used as a substitute for Desmodium gangeticum in the preparation of Dasamularista, Chyavanaprashra, Dhanvantara kulambu, Indukanta ghrtar, Amrataprasa ghrtar, Dasamulasatpalaka ghrtar, Dhanvantara taila, Salapanyadi kvatha, Dasamula kvatha, Sudarsana churna, Narayana taila, Maha visagarbha taila and Mahanarayana taila (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998).

320. Desmodium motorium (Houtt.) Merr. (Plate 54 D)

Syn: Codariocalyx motorium (Houtt.) Ohashi; Hedysarum motorium Houtt.; Desmodium gyrans (L. f.) DC.

Family: Papilionaceae
Vernacular Name: Eng: Indian telegraph plant, Indian telegraphic plant  
Kan: Nagatagare, Telegraph gida, Elemudure  
Mal: Ramanamapacha, Thozhukanni  
Tulu: Nagatabare

Habit: Subshrub.

Habitat: Moist deciduous forests.

Status: Occasional.

Description: Erect subshrub, with grooved branchlets. Leaves 3-foliolate; leaflets elliptic-ovate or linear-lanceolate, appressed pubescent below. Flowers pink, in axillary or terminal racemes. Calyx campanulate, membranous, 5-toothed. Corolla exerted; standard broadly obovate. Stamens 9 + 1. Fruit oblong, sparsely pubescent, reticulately veined pod.

Uses: *Leaf paste with rice cooked water or lime juice is applied for proper growth and development of children. *Root decoction is given along with rock salt for indigestion, fever and dysentery. Whole plant decoction is recommended for biliousness. *Plant decoction is recommended for malabsorption of food and eye diseases.

Etymology: Nagatagare and Nagatabare (snake Senna) and Ramanamapacha (Rama muttering herb) are due to its characteristic jerking movement.

Note: Lateral two leaflets move spontaneously by jerks, hence the name ‘Telegraphic plant’.

321. *Desmodium oojeinense* (Roxb.) Ohashi (Plate 54 E)

Syn: *Dalbergia oojeinensis* Roxb.; *Ougeinia dalbergioides* Benth.; *Ougeinia oojeinensis* (Roxb.) Hochr.

Family: Papilionaceae

Vernacular Name: San: Syandanah, Rathadrumah, Vanjula, Tinisa, Tinisha
Eng: Sandan
Kan: Bettahonne, Kalmuthuga, Karimuttala, Malehonne
Mal: Malavenga, Nemi, Thodukara
Tulu: Malebengo

Habit: Medium-sized tree.

Habitat: Mixed deciduous forests.

Status: Rare.

Description: Medium-sized, deciduous tree, with grey or light brown bark. Leaves 3-foliolate; leaflets broadly-elliptic or obliquely ovate, minutely pubescent beneath. Flowers small, light pink to white, fascicled in racemes on leafless branches. Calyx campanulate, pubescent, 5-toothed. Corolla exerted. Stamens 9 + 1. Fruit flat, jointed, reticulately veined pod.

Uses: *Resin obtained from the bark is powdered and is given for gastrointestinal disorders.

Etymology: Bettahonne, Malehonne, Malavenga and Malebengo (hill Kino tree) are due to its restriction to the forests and resemblance of leaflets with that of *Pterocarpus marsupium*. Rathadrumah (cart tree) is due to its characteristic habit.

Note: Wood is a valuable timber.

**322. *Desmodium triangulare* (Retz.) Merr. (Plate 54 F)**

Syn: *Hedysarum triangulare* Retz.; *Desmodium cephalotes* (Roxb.) Wall. ex Wight & Arn.

Family: Papilionaceae

Vernacular Name: San: Prsniparni
Kan: Kaadu moovile
Mal: Kattu moovila
Tulu: Kattu moojire
Habit: Shrub.

Habitat: Forest undergrowths.

Status: Common.


Uses: *Same as Desmodium heterocarpon.

Etymology: Kaadu moovile, Kattu moovila and Kattumoojire (wild three leaved plant) are due to its 3-foliolate leaves, wild nature and use as a substitute for three leaved plant, Pseudarthria viscida.

Note: Usually used as a substitute for Pseudarthria viscida.

323. Desmodium triflorum (L.) DC. (Plate 55 A)

Syn: Hedysarum triflorum L.

Family: Papilionaceae

Vernacular Name: San: Hamsapadi, Tripadi
Eng: Matty Desmodium
Kan: Nelaparande, Kaadu pullampurache, Kaadu menthe
Mal: Cherupulladi, Nilamparanda, Nilampulladi
Tulu: Nelaparande, Nelapparande

Habit: Trailing herb.

Habitat: Moist places.

Status: Common. Weed.

Description: Wiry trailing herb, spreading over the ground. Leaves 3-foliolate; leaflets subequal, obovate. Flowers axillary, 1 – 3 together. Calyx campanulate, 5-

Uses: *Plant ground in milk is given as a general tonic for ladies. Plant decoction is used for rheumatism and arthritis. Plant extract is recommended to increase the digestive power of children. Whole plant decoction is consumed as a tonic for weakness. It also has hepato tonic property and is useful for gas trouble. Whole plant decoction is used for leucorrhoea. *Whole plant ground with cardamom in fresh milk is recommended at early morning in empty stomach for two weeks in case of indigestion in children (age group 3 – 6). *Whole plant extract with cardamom, *Hyoscyamus niger, Cuminum cuminum and Nigella sativa seeds are given for three days each for the same purpose. *Whole plant decoction with coriander, fenugreek, *Hyoscyamus niger and *Nigella sativa seeds in milk is given at night with ghee for increasing lactation. *Whole plant juice boiled with *Aristolochia indica leaf extract in gingelly oil is applied for all types of wounds and boils in children. *Whole plant paste is applied for expelling glass pieces or thorns form the body.

Etymology: Hamsapadi (goose foot) and Tripadi (three footed) are due to its characteristic trifoliolate leaves. Kaadu menthe (wild fenugreek) as its leaves resemble that of fenugreek and wild nature. Nelaparande, Nilamparanda and Nelapparande (spreading over ground) indicate its growth pattern and matty habit.

Note: It is used in the preparation of Vidaryadi ghrta, Vidaryasava, Manasamitra vataka and Madhuyastyadi taila (Sivarajan & Balachandran, 1996).

324. *Desmodium triquetrum* (L.) DC. (Plate 55 B)

Syn: *Hedysarum triquetrum* L.; *Tadehagi triquetrum* (L.) Ohashi

Family: Papilionaceae

Vernacular Name: Kan: Nariyele gida, Molada gida
Mal: Adakkapanal, Adakkapana, Adakkachokki
Tulu: Kudka bacchire, Kudika thappu

Habit: Undershrub.
Habitat: Moist places.

Status: Common.

Description: Erect undershrub, with triquetrous branches. Leaves 1-foliolate with broadly winged petioles; leaflet ovate-lanceolate, hairy on the nerves beneath. Flowers small, in terminal racemes. Calyx campanulate, 5-toothed. Corolla exerted, violet. Stamens 9 + 1. Fruit 6 – 8 jointed, appressed pubescent pod.

Uses: *Leaf juice is given internally for piles. *Leaf paste is applied for herpes and rashes. *Leaves are chewed as a mouth cleaning agent and blood purifier. *Leaf juice is poured into eye for improving eye sight. Plant decoction is used for blood disorders and rheumatism. *Plant paste is applied externally for cuts, wounds and for pain. *Leaf juice is applied for bruises and naroli (green swelling here and there).

Etymology: Nariyele gida and Kudka bacchire (jackal betle leaf) arose as the leaves are used as an alternative to betle leaf for chewing, especially by the forest inhabitants. Molada gida (rabbit plant) arose as its leaves are the favourite food of rabbit.

Note: Leaf is chewed like betel leaves (alternative to betle leaf). Leaf is used in folk ritual Kule madimme*. It is often used as a substitute for Desmodium gangeticum. Leaf is chewed with that of Lantana camara which gives same effect as that of betel morsel.

325. Dichrostachys cinerea (L.) Wight & Arn. (Plate 55 C)

Syn: Mimosa cinera L.

Family: Mimosaceae

Vernacular Name: San: Bahuvaraka, Shami, Vallataru, Vellantarah, Viravriksha
  Eng: Marabou thorn, Kalahari Christmas tree, Princess’s earrings
  Kan: Edatari, Vadavarada gida, Shamivrksha, Shami
  Mal: Veeravriksham, Vidatthal, Vedathala, Vanni
  Tulu: Shami

421
Habit: Small tree.
Habitat: Dry areas, also cultivated.
Status: Occasional.

Description: Much branched thorny tree; branchlets often ending in spines. Leaves bipinnate; pinnae 4 – 10 pairs, with stipellate glands between each along the hairy rachis; leaflets 12 – 15 pairs, linear-oblong. Flowers polygamous, crowded in dense axillary spikes; upper flowers yellow, bisexual; lower white or pink, neuter, with long filiform staminodes. Calyx minute, 5-toothed. Corolla connate below; petals 5. Stamens 10. Fruit irregularly twisted, 6 – 10 seeded, linear pod.

Uses: *Leaf (10 gm) ground with asafoetida (about the size of a green gram seed) in rice washed water is given to drink for dysmenorrhoea. Bark decoction is used for rheumatism and its paste for rheumatism and scorpion sting. *Leaf ground with asafoetida in butter milk is consumed for stomachache during menses. *Tender leaf paste is applied for eye diseases. *Leaf, asafoetida and jaggery are ground, dissolved in milk and are given for three days during menses (in three cycles) for stomachache and backache during menses, also helps in conception. *In the treatment of uterine bleeding garlic is used in place of asafoetida.

Etymology: Bahuvaraka (many disease remover) and Shami (appeasing) are due to its diverse therapeutic efficacy.

Note: It is an integral part of traditional rituals.

326. *Dillenia indica* L. (Plate 55 D)

Syn: *Dillenia speciosa* Thunb.

Family: Dilleniaceae

Vernacular Name: San: Bhavya, Bhavyam, Ruvya
Eng: Dillenia, Elephant apple, Hondapara tree
Kan: Kaltega, Nayitega, Bettakanigala, Anemucchilu
Mal: Syalita, Chalita, Valapunna
Tulu: Anemucchiru, Anemucchire
Habit: Medium-sized tree.

Habitat: Gravelly river banks in evergreen forests.

Status: Rare.

Description: Medium-sized evergreen tree, with smooth bark, peeling off in thin hard scales; young branches appressed silky-hairy. Leaves simple, large, oblong to ob lanceolate, bright green above, silky-hairy below. Flowers solitary, terminal, fragrant; pedicel silky-hairy. Sepals 5, obovate. Petals 5, recurved over sepals, obovate, milky white. Stamens numerous, in 2 distinct groups, with incurved anthers. Carpels 15 – 20, narrowly lanceolate. Fruit globose, yellowish, pseudocarp; fruiting carpels embedded in the pulp.

Uses: *Bark cooked with rice is given for shoulder dislocation in cattle. *It is also used to increase lactation and to prevent threatened abortion in cattle. *Bark decoction or by cooking it with rice is given to increase breast milk, sexual vigour in ladies and as a general tonic for urinary disorders, dyspnoea and malnutrition.

Etymology: Kaltega (rock teak), Nayitega (dog teak), Anemucchilu and Anemucchiru (elephant Dillenia) arose due to its habit which resembles teak, gravelly river bank habitat and larger size of fruits.

Note: Fruits are used as vegetable. It is a tonic, laxative and CNS depressant (Sharma et al., 1998).

327. Dillenia pentagyna Roxb. (Plate 55 E)

Family: Dilleniaceae

Vernacular Name: San: Aksikiphala, Bhavya, Punnaga
Eng: Dillenia
Kan: Maletega, Kaltega, Kaadukanigalu, Bettakanigalu, Mucchiru
Mal: Kattupunnakai, Malampunna, Naithekku, Pattipunna, Valapunna
Tulu: Mucchiru, Mucchire
Habit: Medium-sized tree.

Habitat: Evergreen and semi evergreen forests.

Status: Frequent.

Description: Medium-sized deciduous tree. Leaves simple, large, pinnately veined, oblong-lanceolate, narrowed at base, densely hairy beneath when young; petioles channeled and sheathing. Flowers yellow, appearing before the leaves, fascicled on lateral tubercles on old wood. Sepals 5, orbicular, brown. Petals 5, obovate. Stamens numerous, in many whorls. Carpels 5. Fruit yellow pseudocarp, with fleshy sepals.

Uses: *Bark ground in salt water is applied for eczema and ring worm. Bark cooked with rice is given for dyspnoea, debility and malnutrition. *Bark cooked with rice or its decoction is used as a tonic for ovarian diseases, dry cough, dyspnoea and general debility. *Bark cooked with rice is given to cattle to increase weight and make them stronger. *Bark cooked with rice is used for swellings. Leaf and bark decoction is recommended for rheumatism. *Bark crushed and mixed with bran is given for loose motion in cattle. *Bark decoction is the best for backache. Fruit extract is taken for biliousness.

Etymology: Maletega (hill teak) and Naithekku (dog teak) are due to its restriction to the forests and habit which resembles teak. Kattupunnakai (wild Calophyllum fruit), Malampunna (hill Calophyllum) and Pattipunna (dog Calophyllum) arose from the resemblance of its fruits with that of Calophyllum inophyllum.

Note: Wood is used for making flag post of temples. Fruits are used as vegetable. Bark is hypotensive (Jain et al., 1991).

328. *Dioscorea alata* L. (Plate 55 F)

Syn: *Dioscorea globosa* Roxb.

Family: Dioscoreaceae

Vernacular Name: San: Alukam, Dandalu, Kandaka, Raktaluka

Eng: Asiatic yam, Greater yam, Yam, Water yam
Habit: Climbing herb.

Habitat: Cultivated, also run wild along hedges.

Status: Common.

Description: Glabrous climber; tubers very large; stems twining to the right, acutely angled or winged, with axillary bulbils. Leaves simple, cordate-oblong, with deep basal sinus, 7 – 9 nerved. Flowers small, dioecious. Male flowers in narrow axillary panicles. Perianth campanulate, 6-lobed. Stamens 6. Female flowers in simple spikes. Fruit broadly obcordate capsule.

Uses: *Leaf juice is applied for scrotal swelling. *Leaf paste is applied for scorpion bite. Cooked tuber is consumed for diarrhoea, digestive disorders and as a tonic.

Etymology: Dandalu (with pole or rod), Kandaka (bulbous root), Toonagenasu (pole tuber) and Hebbugenasu (large mould tuber) arose from its thick, large and deep rooted tubers.

Note: Leaf is used to clean water. It is rich in arsenic, hence it is boiled in water and the water is discarded. Cooked tubers are edible.

329. *Dioscorea belophylla* Voigt. (Plate 56 A)

Family: Dioscoreaceae

Vernacular Name: Eng: Wild yam

Kan: Kaadu toonagenasu

Mal: Kattu kaachil

Tulu: Kattu toonakerengu

Habit: Climbing herb.
Habitat: Along hedges.

Status: Occasional.

Description: Glabrous climber; tubers small, sub-fusiform; stems twining to the right. Leaves simple, broad, variable, ovate, cordate or hastate, glabrous, 9-nerved. Flowers small, dioecious. Male flowers in spikes, 1 – 2 together. Perianth campanulate, 6-lobed. Stamens 6. Female flowers in axillary spikes, solitary or 2 together. Fruit broad, obovate capsule.

Uses: *Gruel prepared by cooking its tuber with rice is recommended for intestinal worms, piles, fistula and skin diseases.

Etymology: Kaadu toonagenasu, Kattu kaachil and Kattu toonakerengu (wild yam) are due to its wild nature.

Note: Cooked tubers are edible.

330. Dioscorea bulbifera L. (Plate 56 B)

Syn: Dioscorea bulbifera L. var. vera Prain & Burkill

Family: Dioscoreaceae

Vernacular Name: San: Kandaka, Shambarakanda, Sukandaka, Varahikanda
Eng: Air potato, Aerial yam, Bulb bearing yam, Potato yam
Kan: Heggenasu, Kuntagenasu, Handigadde
Mal: Alanthal, Kattukaachil, Pannikizhangu
Tulu: Toonakerengu

Habit: Climbing herb.

Habitat: Along hedges.

Status: Frequent.

Description: Large glabrous climber; tubers solitary, small; stems twining to the left, with bulbils in the leaf-axils. Leaves simple, broadly ovate to suborbicular, 7 – 11

Uses: *Cooked tuber is recommended for diarrhoea, digestive disorders and as nutritive food.

Etymology: Kandaka (bulbous root), Sukandaka (auspicious bulbous root), Varahikanda (boar child), Handigadde and Pannikizhangu (boar tuber), Heggenasu (superior or greater tuber), Kuntagenasu and Toonakerengu (pole tuber) and Kattukaachil (wild yam) are due to its characteristic tuber with diverse uses.

Note: The water in which the tuber is boiled is discarded before cooking as it is rich in arsenic. Cooked tubers are edible. Steroidal saponins and diosbulbine are the active constituents with alterative action. It is used in the preparation of Vastyamayanaka ghṛta, Narasimha churna and Pancanimba churna (Sharma et al., 1998).

331. *Dioscorea hispida* Dennst. (Plate 56 C)

Syn: Dioscorea daemona Roxb.

Family: Dioscoreaceae

Vernacular Name: San: Hastyaluka

Eng: Tiger’s root yam

Kan: Kaadu toonagenasu

Mal: Bolkande, Podava-kizhangu, Podukkilangu, Venni

Tulu: Kattu toonakerengu

Habit: Climbing herb.

Habitat: Along hedges.

Status: Common. Weed.
Description: Large climber; tubers lobed; stems twining to the left, prickly. Leaves 3-foliolate; leaflets broadly cuneate-ovate, base tapering; lateral leaflets very oblique, sometimes shortly 2-lobed, pubescent. Flowers small, dioecious. Male flowers in dense, cylindric spikes, clustered on long prickly pubescent rachis. Perianth campanulate, 6-lobed. Stamens 6. Female flowers in solitary, axillary spikes. Fruit quadrately oblong capsule; seeds winged at base.

Uses: *Tuber paste is applied externally for swellings. *Gruel prepared from the tuber is given for piles and digestive disorders.

Etymology: Kaadu toonagenasu and Kattu toonakerengu (wild yam) are due to its wild nature and edible tubers.

Note: Cooked tubers are used as food during famine.

332. *Dioscorea oppositifolia* L. (Plate 56 D)

Syn: *Dioscorea oppositifolia* L. var. *linnaei* Prain & Burkill

Family: Dioscoreaceae

Vernacular Name: San: Amladraka, Sarpakhya
    Eng: Cinnamon vine
    Kan: Inasara, Kaadugenasu, Hakkigenasu, Naregenasu
    Mal: Kaachil, Kanjirakizhangu, Naranzikzhangu, Naorankizhangu, Vellakkizhangu
    Tulu: Nare, Nare kande

Habit: Climbing herb.

Habitat: Disturbed forests and hedges.

Status: Frequent.

Description: Large climber; tubers many, cylindrical; stems twining to the right. Leaves simple, opposite, lanceolate to elliptic-oblong, glabrous. Flowers small, dioecious. Male flowers in spikes, fascicled on a slender rachis. Perianth
campanulate, 6-lobed. Stamens 6. Female flowers distant, in axillary, solitary or fascicled spikes. Fruit pendulous, broad capsule, with winged seeds.

Uses: *After cooking, its nutritive tubers are eaten to increase longevity. *It is also useful for bleeding piles.

Etymology: Kaadugenasu (wild tuber), Kanjirakizhangu (Strychnos tuber), Naregenasu and Nare kande (grey tuber) are due to its wild edible tubers, leaves resembling that of Strychnos nux-vomica and characteristic greyish tubers.

Note: Tubers are eaten after cooking.

**333. Dioscorea pentaphylla L. (Plate 56 E)**

Syn: Dioscorea pentaphylla L. var. communis Prain & Burkill.; Dioscorea pentaphylla L. var. linnaei Prain & Burkill

Family: Dioscoreaceae

Vernacular Name: San: Kantakalu

Eng: Fiji yam, Cowan yam

Kan: Kaadugumbala, Adavi gummathiga

Mal: Kattukizhangu, Noorakizhangu, Marakkizhangu, Narunnakizhangu

Tulu: Kattu kumbudo

Habit: Climbing herb.

Habitat: Along hedges.

Status: Common. Weed.

Description: Large climber; tubers oblong; stems twining to the left, prickly, with bulbils in the leaf-axils. Leaves 3 – 5-foliolate; leaflets elliptic-lanceolate, pubescent beneath. Flowers small, dioecious. Male flowers in spikes, on axillary or terminal panicles, tomentose. Perianth campanulate, 6-lobed. Stamens 3, alternating with 3 staminodes. Female flowers in axillary, slender, 2 – 3-nate racemes. Fruit oblong capsule; seeds winged at base.
Uses: *Cooked tubers are recommended for piles. It is also useful for diarrhoea, digestive disorders and is nutritive.

Etymology: Kaadugumbala, Kattu kumbudo (wild ash gourd), Kattukizhangu (wild tuber) and Marakkizhangu (tree tuber) are due to its characteristic tubers which are oblong, wild in nature and hard.

Note: Cooked tubers are edible.

334. *Dioscorea wallichii* Hook. f. (Plate 56 F)

Family: Dioscoreaceae

Vernacular Name: Eng: Wild yam  
Kan: Balligenasu, Kaadu toonagenasu  
Mal: Kattukizhangu, Purakilangu, Narukizhangu, Varakizhangu  
Tulu: Kattu toonakerengu

Habit: Climbing herb.

Habitat: Along hedges.

Status: Common. Weed.

Description: Large glabrous climber; tubers long; stems twining to the right, prickly below. Leaves simple, broadly ovate or suborbicular, glabrous. Flowers small, dioecious. Male flowers in spikes, on axillary and terminal spreading panicles. Perianth campanulate, 6-lobed. Stamens 6. Female flowers in axillary, solitary or paired spikes. Fruit subcordate capsule; seeds winged all around.

Uses: *Tuber powder is applied for ulcers.*

Etymology: Balligenasu (rope tuber), Kattukizhangu (wild tuber), Kaadu toonagenasu and Kattu toonakerengu (wild yam) arose from its wild nature and long, narrow tubers.

Note: Cooked tubers are used as food during famine.
335. *Diospyros buxifolia* (Blume) Hiern (Plate 57 A)

Syn: *Diospyros microphylla* Bedd.; *Leucoxylum buxifolium* Blume

Family: Ebenaceae

Vernacular Name: Kan: Kunchiganamara, Huliyuguru  
Mal: Elichevian, Malamuringa, Kattu thuvara, Pulinakham  
Tulu: Puliyuguru

Habit: Large tree.

Habitat: Evergreen and semi evergreen forests.

Status: Frequent.

Description: Lofty, often buttressed tree; young branches covered with yellow hairs. Leaves simple, elliptic-ovate, acute at the ends, pubescent beneath. Flowers unisexual, dioecious. Male flowers small, 1 – 3 together in small axillary cymes. Calyx minute, 4-lobed. Corolla white, urceolate; lobes 4, ciliate on the margins. Stamens 16; filaments united in pairs; pistillode hirsute. Female flowers solitary, axillary. Fruit ovoid drupe, purple when ripe.

Uses: *Bark powder is applied over ulcers. *Bark extract with pepper seeds is recommended for blood dysentery.

Etymology: Kunchiganamara (split pigeon pea seller’s tree), Kattu thuvara (wild pigeon pea),  
Huliyuguru, Pulinakham and Puliyuguru (tiger’s nail) arose as the seeds resemble that of pigeon pea, wild nature and resemblance of leaves with tiger’s nails.

Note: Often grown as ornamental tree.

336. *Diospyros candolleana* Wight (Plate 57 B)

Syn: *Diospyros canarica* Bedd.

Family: Ebenaceae
Vernacular Name: San: Nila-vriksha  
Eng: Black ebony  
Kan: Karemara, Kari  
Mal: Kari, Karimaram  
Tulu: Karimaro

Habit: Medium-sized tree.

Habitat: Semi evergreen forests and sacred groves.

Status: Frequent.


Uses: *Fruit juice is applied for bruises and sprains. *Raw fruit is used for stomachache and stomach ulcers. *Ripe fruit is chewed for mouth ulcers and sore throat. *Seed oil paste with ginger and cumin seeds is used for swellings. Seed oil is used as a laxative.

Etymology: Karemara, Karimaram and Karimaro (black tree) are due to its characteristic dark coloured bark.

Note: Wood is a valued timber.

337. Diospyros malabarica (Desr.) Kostel (Plate 57 C)

Syn: Diospyros peregrina (Gaertn.) Gurke.; Diospyros embryopteris Pers.; Garcinia malabarica Desr.

Family: Ebenaceae

Vernacular Name: San: Sphurjaka, Tinduka, Tinduki, Tindula
Eng: Gaub persimmon, Indian persimmon
Kan: Antinamara, Olletupre, Tinduka, Holetupre, Bandhada mara
Mal: Panachi, Panancha, Vananji
Tulu: Bando, Bandatha maro

Habit: Medium-sized tree.

Habitat: Along river banks and semi evergreen forests.

Status: Frequent.


Uses: *Bath with its bark decoction is recommended for skin diseases.  *Bark decoction with honey is taken for stomachache.  *Leaf decoction is used to wash eyes during eye diseases.  *Bark powder or decoction mixed with coconut milk and rice cooked water is recommended as a tonic during fever.  *Leaf, bark and fruit tambuli* is given to strengthen digestive tract. Fruit juice is applied externally for sprains and ankle twists while internally for diarrhoea and indigestion.  *Oil extracted from the seed is used for burning in palms and legs, also to arrest diarrhoea. Bark decoction is used to wash wounds and ulcers while that of leaf for eye diseases.  Bark extract is a cooling agent, constipating in diarrhoea, used for itches, burning sensation, bleeding piles and leucorrhoea. Leaf decoction is diuretic.  *Flower extract is given for spleen enlargement. Bark decoction is useful for gastric ulcers and promotes growth of bones.

Etymology: Antinamara (gum tree), Bandhada mara and Bandatha maro (bonding tree) arose as its viscid fruit pulp is used as paper adhesive.

Note: Fruits are used as fish poison. Wood is a valuable timber.
338. *Diospyros montana* Roxb.  (Plate 57 D)

Family: Ebenaceae

Vernacular Name: San: Kupilu, Tumala, Visamusti, Vishatinduka
Eng: Mottled ebony, Bombay ebony, Mountain persimmon
Kan: Bilarada mara, Jagalaganta, Balgane, Balukunike
Mal: Bali, Malyakathitholi, Manjakara, Nanchimaram
Tulu: Balgane

Habit: Medium-sized tree.

Habitat: Moist deciduous forests.

Status: Occasional.


Uses: *Root bark ground with lime juice is given for three days to expel urinary, kidney and bladder stones. *Bark cooked with rice or its juice is taken for jaundice. *Bark extract with lime juice is consumed for kidney and bladder stone.

Etymology: Visamusti (handful poison) and Vishatinduka (poison persimmon) arose as its fruits are used as fish poison.

Note: Roots are much valued drug for urinary calculi.

339. *Diploclisia glaucescens* (Blume) Diels (Plate 57 E)

Syn: *Cocculus glaucescens* Blume.; *Cocculus macrocarpus* Wight & Arn.

Family: Menispermaceae

Vernacular Name: Kan: Malethangi
Mal: Vattavalli, Vattoli, Malathangi
Tulu: Kalanje booru, Malethangi

Habit: Woody straggler.

Habitat: Along the hedges and hill tracts.

Status: Common.

Description: Large woody straggler, with flattened stem. Leaves simple, broadly ovate or suborbicular, glaucous beneath, with 5 basal nerves. Flowers small, unisexual, yellow, fascicled or umbelled in pendulous panicles, on old branches and stems. Sepals 6, in 2 whorls, thin, marked with spots and purple lines. Petals 3-lobed; middle lobe emarginate and the laterals embracing the stamens. Stamens 6. Ovaries oblong, on short gynophore. Fruit obovoid, curved, transversely ribbed, glaucous druplets.

Uses: Leaf powder is applied for venereal diseases, scrotal, testicle swelling and hernia. *Plant juice or decoction is given for cough in small children. *For the same purpose, the plant is tied around waist as a thread. *Root is pressed over joints for joint pain. *Leaf along with that of Calycopteris floribunda and Jasminum malabaricum are made into a decoction and is used as bath for swelling and pain.

Etymology: Malethangi, Malathangi and Malethangi (hill holder) arose as it straggles along hill tracts and prevents soil erosion and landslides. Kalanje booru (kalanja’s vine) arose as roots of this plant are usually given as medicine by the Aati kalanja* (traditional art form performed in the month of Aati*) performers.

Note: Roots are much valued for children’s diseases.

340. *Diplocyclos palmatus* (L.) Jeffrey (Plate 57 F)

Syn: Bryonia palmata L.; Bryonia laciniosa L.

Family: Cucurbitaceae

Vernacular Name: San: Chitraphala, Lingaja, Lingi, Lingini, Sivavalli
Kan: Lingatonde balli, Lingatonde, Shivalinga
Mal: Iyiviralikkova, Namakai, Neyyunni, Pambuvalli,
Sivalingakkaya
Tulu: Lingatonde

Habit: Climbing herb.

Habitat: Along hedges and thickets.

Status: Common.


Uses: *Seeds ground in milk are given as a sexual tonic. It also increases fertility. *Whole plant paste is applied for furuncles and carbuncles. *Leaf juice mixed with milk is taken for biliousness. *Leaf juice with honey or sugar is consumed for cough and gas trouble.

Etymology: Chitraphala and Namakai (ornamental fruit) arose from its bluish-green fruits with white strips. Iyiviralikkova (five fingered gherkins) is due to its palmately lobed leaves and fruits resembling that of gherkins. Lingaja (one with phallus), Lingatonde balli (phallus gherkins vine), Lingatonde (phallus gherkins), Shivalinga (Siva’s phallus) and Sivalingakkaya (Siva’s phallus fruit) are the clear indicators of its seeds which resemble Siva’s phallus and fruits with that of gherkins.

Note: Leaves are used as vegetable. It is much valued drug for conception.

341. *Dipteracanthus patulus* (Jacq.) (Plate 58 A)

Syn: *Ruellia patula* Jacq.

Family: Acanthaceae
Vernacular Name: San: Nirvishi  
Kan: Nirvishi, Nirvisha  
Mal: Upu-dali  
Tulu: Nirvisho

Habit: Herb.

Habitat: Found only in cultivation.

Status: Occasional.


Uses: *Leaf paste is applied externally for wounds, cuts, poisonous bites and skin diseases.

Etymology: Nirvishi, Nirvisha and Nirvisho (without poison or poison remover) clearly indicate its therapeutic efficacy against poisonous bites.

Note: Much valued plant for poisonous bites.

342. *Dipterocarpus indicus* Bedd. (Plate 58 B)

Syn: *Dipterocarpus turbinatus* sensu Dyer.

Family: Dipterocarpaceae

Vernacular Name: Eng: Oil tree  
Kan: Ennemara, Googemara, Maradenne, Challane  
Mal: Arayanjili, Kalpayin, Kankanjili, Vella-ayini  
Tulu: Ennetha maro

Habit: Large tree.

Habitat: Evergreen forests.

Status: Occasional.
Description: Large evergreen tree, with light brown bark and appressed-tomentose young shoots. Leaves simple, ovate, coriaceous, nerves prominent below. Flowers in axillary 3 – 8 flowered racemes, white tinged with pink, fragrant. Calyx 5-lobed; the 2 longer ones oblong, distinctly 3 – 5 nerved, developing into oblong larger wings in fruit; outer 3 deltoid or orbicular, forming a crown around apex of nut. Petals 5, narrowly oblong, white tinged with pink. Stamens numerous, in a ring around the ovary. Fruit glaucous, brownish nut, enclosed in calyx tube.

Uses: *Seed oil and gum resin are used for paralysis, leprosy and indolent ulcers.*

Etymology: Ennemara, Ennetha maro (oil tree) and Maradenne (tree oil) arose as an oleoresin is extracted from its wood.

Note: Wood is a much valued timber. Oleoresin is extracted from the wood. Oleoresin has garjanic acid, humulene, β-caophyllene and cadalene as active components with stimulant and diuretic actions (Sharma et al., 1998).

343. *Dodonaea viscosa* (L.) Jacq. (Plate 58 C)

Syn: *Dodonaea angustifolia* L. f.

Family: Sapindaceae

Vernacular Name: San: Aliar, Sanatta
- Eng: Hop seed bush, Switch sorrel
- Kan: Angaraka, Andara gida, Bandarike, Hangarike, Hangaralu
- Mal: Aattotta, Vrali, Krali, Unnatharuvi
- Tulu: Hangaralu

Habit: Shrub.

Habitat: Evergreen and dry deciduous forests.

Status: Occasional.


Uses: *Leaf decoction is recommended for burns, swelling and wounds.

Note: Even the green stems and leaves readily catch fire.

344. *Dolichos trilobus* L. (Plate 58 D)

Syn: *Dolichos falcatius* Klein ex Willd.

Family: Papilionaceae

Vernacular Name:  San: Nispavah  
Eng: Wild lablab bean  
Kan: Kaadavare  
Mal: Kattamara, Kattumuthira  
Tulu: Kattabare

Habit: Twining herb.

Habitat: Along bushes in evergreen forests.

Status: Occasional.

Description: Twining herbs. Leaves 3-foliolate; terminal leaflet ovate-rhomboid; laterals ovate-lanceate, sparsely puberulous. Flowers in axillary racemes. Calyx campanulate, lobes 5; upper 2 lobes connate. Corolla violet, exerted; petals 5; standard orbicular, auricled and appendaged. Stamens 9 + 1. Fruit falcate pod.

Uses: *Whole plant decoction is given for fever with shivering and cough.*

Etymology: Kaadavare, Kattamara, Kattabare (wild lablab bean) and Kattumuthira (wild horse gram) arose due to its close affinity with lablab bean and horse gram plant.

Note: Fruits and seeds are edible.
**345. *Dracaena terniflora*** Roxb. (Plate 58 E)

Syn: *Dracaena terminalis* Wight

Family: Agavaceae

Vernacular Name: Kan: Kempu beru
Mal: Manjakkantha
Tulu: Kemputha beru

Habit: Shrub.

Habitat: Forest undergrowths.

Status: Frequent.

Description: Sub scandent shrub. Leaves simple, crowded, subterminal, elliptic-lanceolate, narrowed to the base, with widened amplexicaul base. Flowers in terminal, rarely axillary racemes. Perianth funnel-shaped, white, cleft into 6 narrow lobes. Stamens 6. Fruit globose, red berry.

Uses: *Root extract in tender coconut water is given for skin rashes, erysipelas and urticaria.* *Root and sandalwood ground in rice washed water is used for blood discharge through urine, urine block and genito urinary diseases.* *Root extract with lime juice is consumed for pit viper bite.* *Root decoction is given by adding sugar and milk for protein discharge through urine.* *The same is used twice a day for a week for biliousness and related itches in the body.

Etymology: Kempu beru and Kemputha beru (root for erysipelas) clearly indicate its therapeutic efficacy.

Note: Root is highly used for skin diseases.
346. *Drosera indica* L. (Plate 58 F)

Family: Droseraceae

Vernacular Name: San: Kriminashini  
Eng: Sundew plant  
Kan: Kriminashini, Huluhiduka, Seethasru  
Mal: Theeppullu, Akara-puda  
Tulu: Seethasru

Habit: Herb.

Habitat: Open, moist places associated with grasses.

Status: Common.


Uses: *Whole plant extract is used to arrest bleeding from wounds.*

Etymology: Kriminashini (insect destroyer) and Huluhiduka (insect catcher) arose from its insectivorous nature. During early morning the dew over this plant leaves gives a picturesque view, hence the name Seethasru (Seetha’s tears).

Note: It is an insectivorous plant.

347. *Drynaria quercifolia* (L.) J. Sm. (Plate 59 A)

Family: Polypodiaceae

Vernacular Name: Kan: Marachapparike, Hanumanapada, Hanumana hastha  
Tulu: Kolantre

Habit: Epiphytic fern.

Habitat: Forest trees and also trees of plains.
Status: Common. Poisonous.

Description: Epiphytic fern. Rhizome short, thick, fleshy, creeping, densely clothed with reddish brown soft scales. Fronds 2 types; sterile fronds small, concave, becoming brown on aging; fertile fronds long stalked, deep pinnately lobed, leathery, with network of small quadrangular areoles with or without free vein sori.

Uses: *Rhizome after removal of hairs is boiled with rice and given for jaundice (plant growing on Strychnos tree gives better result). *Stem of the plant growing on Strychnos nux-vomica tree is cooked with rice, ground into a paste and is applied on the head for three days in case of jaundice. *Rhizome and fruit of Smilax zeylanica cooked in rice cooked water are ground into a paste and is applied over the head for jaundice. *Rhizome ground in buttermilk is taken for tumour in stomach. *Rhizome decoction with milk or dosa* prepared using it is given for ovarian or uterine disorders.

Etymology: Marachapparike (wood cover), Hanumanapada (Hanumantha’s feet) and Hanumana hastha (Hanumantha’s hand) arose as its sterile fronds cover the host stem on which they grow and fertile fronds sharing resemblance with the limbs.

Note: Rhizome is much valued for jaundice.

348. Drypetes roxburghii (Wall.) Hurusawa (Plate 59 B)

Syn: Putranjiva roxburghii Wall.

Family: Euphorbiaceae

Vernacular Name: San: Aksaphala, Kumarabeeja, Putrajivah, Putranjivah
Eng: Officinal Drypetes
Kan: Putranjeeva, Putranjeevi
Mal: Ekkoli, Poothilanji, Ponkulam, Puthrajeevi
Tulu: Puthronji

Habit: Medium-sized tree.

Habitat: Evergreen forests and sacred groves.
Status: Occasional.


Uses: *Bark ground in water is applied for swellings with pain and swelling in neck. For same purpose, leaf paste with water is also applied. *Seed pulp and cumin seeds ground in fresh milk are used at morning from the 4th day of menses for all types of menstrual disorders. Bark decoction is used for vomiting, phlegm, biliousness, fever, lymph node swelling, as body heat remover and for infertility both in ladies and men. *Seed kernel extract in milk is given from first day of menses to the 4th day for conception. *Bark, Aegle marmelos root and Celastrus paniculatus root ground with water are given once a day for 15 days in case of DUB in pregnant woman. *Ripe fruit pulp ground with water is taken with jaggery for leucorrhoea. Bark paste with water is applied for swellings due to blood disorders. *Seed kernel, clove and long pepper seeds ground with lime juice is used as anjana for giddiness. *Gruel prepared by cooking its leaf pieces with rice is given once a day for DUB and malabsorption in cattle.

Etymology: Putrajivah, Putranjivah, Putranjeeva, Putranjeevi and Puthrajeevi (giving life to child) clearly indicate its therapeutic efficacy.

Note: Seeds are highly used for conception.

349. *Ecbolium ligustrinum* (Vahl.) Vollesen var. *ligustrinum* (Plate 59 C)

Syn: Ecbolium linneanum Kurz.; Ecbolium viride (Forssk.) Alston var. laetevirens (Vahl.) Raizada

Family: Acanthaceae

Vernacular Name: San: Sahacarah

Eng: Blue fox tail

Kan: Kappukarni, Kappubobbi, Kappubobbili
Mal: Koranda, Neelakarinkurunji, Odiyamadantha  
Tulu: Kappukarni

Habit: Undershrub.

Habitat: Wastelands and forest undergrowths.

Status: Frequent. Weed.

Description: Erect undershrub. Leaves simple, elliptic-lanceolate, acute at the ends. Flowers in dense terminal spikes; bracts large, foliaceous, broadly lanceolate, pubescent. Calyx 5-partite; lobes linear-lanceolate. Corolla bluish-green; limb 2-lipped; upper narrow, shortly 2-fid; lower 3-lobed, spreading. Stamens 2. Fruit clavate, pubescent, ovoid capsule; seeds discoid, densely tuberculate.

Uses: *Leaf decoction is given for urine block and other urinary diseases. *Root decoction is used for rheumatism and bladder stones. *Plant paste is applied to wounds and cuts as a wound healer. *Leaf juice is used internally for jaundice.

Etymology: Neelakarinkurunji (blue *Strobilanthes*) is due to its blue flowers and close affinity with *Strobilanthes*.

Note: It is used as a substitute for *Barleria* in the preparation of *Sahacaradi taila*, *Sahacaradi kashaya* and *Brhat rasnadi kashaya* (Sivarajan & Balachandran, 1996).

**350. Eclipta prostrata** (L.) L. Mant. (Plate 59 D)

Syn: *Eclipta alba* (L.) Hassk.; *Verbesina prostrata* L.

Family: Asteraceae

Vernacular Name: San: Bhrngaraja, Bhrngarajah, Kesharaja  
Eng: False daisy, Trailing Eclipta  
Kan: Garga, Garuga, Garugada soppu  
Mal: Kaithonni, Kanjunni, Kayyunni  
Tulu: Gargo, Karikodi

Habit: Prostrate herb.
Habitat: Damp places.

Status: Common. Weed.

Description: Erect or prostrate herb, rooting at the nodes. Leaves simple, elliptic-lanceolate, sparsely strigose with appressed hairs. Heads heterogamous, 1 – 2 on short peduncles in axils of upper leaves; involucral bracts 8, ovate. Receptacle flat, paleaceous. Ray florets numerous, 2-seriate, white, female. Disk florets fewer, tubular, white, limb 4 – 5-lobed. Fruit cuneate, 3-angled, sparsely pubescent achene.

Uses: Oil prepared from plant juice is used as hair oil for proper growth and colour of hair, also to prevent hair fall. *Oil prepared using this plant along with Vernonia cinerea in gingelly oil is applied for hair fall. *Plant is used for preparing a tambuli* which is useful for gastritis (to normalize digestive system). *Plant paste with gingelly oil is applied for elephantiasis. Root extract is consumed to induce vomiting and purgation. Leaves boiled in oil are used for swellings, infections, indigestion, biliousness, worms and scorpion bite. Plant extract is rich in iron, liver protector, expels phlegm and is useful for cough. *Whole plant decoction is used as an expectorant in cough. Plant juice is used as eye drop for eye diseases. *Plant paste with butter is applied over forehead for headache. *Plant, Centella asiatica and Cynodon dactylon juice boiled with equal quantity of coconut oil (reduced to half) is applied for premature whitening of hair, hair fall and for blackening the hairs. *Heated plant juice mixed with honey is given for phlegm, phlegm in stool and cough in small children. *Shoot tip extract mixed with honey is given as sour to children while oil prepared from this plant juice is used for massaging their body. Plant paste or juice is applied externally for allergies. *Oil prepared from plant juice is applied over the head for malnutrition in children. Plant juice is used for tinea versicolor. *Plant juice is consumed for rectum prolapse. *A piece of cloth dipped in plant juice is inserted into vagina to decrease its size. Plant is rich in micronutrients as well as iron. Whole plant paste with gingelly oil is applied for headache, rhinitis and sleeplessness. Plant juice is taken with honey to expel phlegm. *Tambuli* prepared from it is given to women after delivery, for constipation and diarrhoea. Leaf juice mixed with honey is used for phlegm and breathing problems. Oil
prepared from plant juice is used as hair oil for sleeplessness, swelling, septic wounds and ulcers. *Plant juice mixed with hot water is consumed (every morning) for leucoderma. *Dried plant powder is used as nasya for headache. *Four spoon plant juice mixed with one cup milk is taken at morning for one month to increase quality and quantity of semen. *Plant juice mixed with sugar and pepper powder is consumed for jaundice while with honey for phlegm and asthma. *Paste prepared by mixing its shoot tip powder with Lagerstroemia speciosa bark powder is applied for baldness. *Juice is heated with that of Artemisia vulgaris and applied on the head for cold. *Plant juice mixed with equal quantity of goat milk is heated in sunlight and used as nasya for fits and giddiness. *Plant juice mixed with Vitex negundo leaf juice is used as nasya for snake bite. *Plant juice heated with seed oil of Hydnocarpus pentandra (4:1) is applied for ring worm and itches. *Leaf juice, gooseberry juice, milk and gingelly oil (1:1:4:2) are heated by adding about 25 gm Glycyrrhiza glabra rhizome powder. This oil is applied on the head and all over the body before bed time for increasing memory power, proper growth of hair, eye disorders and sleeplessness. *Whole plant, pepper, Trachyspermum ammi, cumin seeds and ginger ground with butter milk are heated and taken once a day for jaundice. *Flower juice is swallowed twice a day for thrush and cracks in mouth. *Whole plant juice mixed with milk (2:5) is given once a day for dysentery. *About 50 gm cumin seed powder is added to plant and green Lagenaria siceraria fruit piece juice heated with gingelly oil (1:1) and is used as hair oil for sleeplessness. *Juice boiled with equal quantity of gingelly oil and one pepper seed is applied as hair oil to improve vision, for cold and fever in children. *Camphor and cumin seed powder are added to the heated mixture of tender shoot tip juice, Vernonia cinerea juice and gingelly oil (in equal quantity) which is used as hair oil for hair fall and premature whitening of hairs.

Etymology: Kesharaja (king of hairs) and Karikodi (black shoot tip) are due to its therapeutic efficacy and morphology. It is highly used in the preparation of hair oil and is a much valued drug in hair care. Its tender shoot has a blackish tinge.

Note: Ecliptine, wedelolactone, α-terthienylmethanol, β-amyrin, stigmasterol and nicotine are the active constituents with hepato tonic action (Kapoor, 1990; Sharma
et al., 1998). It is used in the preparation of Bhrngamalakadi taila, Bhrngaraja taila, Nilibhrngadi taila, Bhrngarajasava, Narasimha rasayana, Mahatraiphala ghrta, Sadabindu taila, Bhrngarajadi churna, Bhrngaraja ghrtas and Tekaraja maricas (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). Much used in religious rituals. Tender shoot is used as vegetable.

351. *Eichhornia crassipes* (Mart.) Solms (Plate 59 E)

Syn: *Pontederia crassipes* Mart.

Family: Pontederiaceae

Vernacular Name: San: Jalakumbhi, Variparni

   Eng: Water hyacinth
   Kan: Antara taavare, Antaragange, Pishachi thaavare
   Mal: Kulavazha, Kakapola
   Tulu: Antaragange

Habit: Aquatic herb.

Habitat: Weed in ponds, canals and ditches.

Status: Common. Exotic and weed.

Description: Free floating herb, sometimes rooting in mud. Leaves in a rosette, erect, ovate to orbicular; petioles much inflated about the middle. Flowers in spicate racemes; scape with conspicuous sheath near middle. Perianth violet-blue, funnel-shaped; limb 2-lipped; upper lobe larger with a patch of blue having yellow spot in centre. Stamens 6. Fruit ovoid-oblong capsule.

Uses: *Plant extract in milk is given for urinary disorders, leucorrhoea, dry cough, to normalize excretion and urine block. *This preparation is taken for seven days from the day of menses for infertility problems. *Plant cooked with rice and coconut milk is consumed for indigestion while with rose water and sugar is recommended for cough. *Root decoction is a purgative. *Whole plant extract is used as a general health tonic. *Oil prepared from plant juice is used as hair oil for cold and cough.
Etymology: Jalakumbhi (water pot), Antara taavare (aerial lotus), Pishachi thaavare (demon lotus) and Kulavazha (pond plantain) are due to its free floating habit, appearance resembling pot or plantain and rapid colonization.

Note: Plant is used in the preparation of white copper bhasma*. It is used as a substitute for *Pistia stratiotes*.

352. *Elaeagnus conferta* Roxb. (Plate 59 F)

Syn: *Elaeagnus latifolia* Bedd.

Family: Elaeagnaceae

Vernacular Name: Kan: Hittele, Hulige, Kaadudrakshi
   Mal: Kattumunthiringa, Palga
   Tulu: Adichappu, Kattudrakshi

Habit: Straggling shrub.

Habitat: Semi evergreen forests.

Status: Frequent.

Description: Large thorny straggling shrub, with stellate and peltate silvery or coppery brown scales. Leaves simple, ovate or elliptic-lanceolate, densely covered with silvery and coppery scales beneath. Flowers in axillary, few-flowered cymes. Perianth-tube silvery, tubular, upper part with 4 lobes, deciduous. Stamens 4. Fruit ovoid-oblong drupe, red when ripe.

Uses: *Leaf paste is applied externally for swellings. *Oil prepared from leaf juice is applied over the head for rhinitis, running nose and ENT problems. *Leaf, *Oroxylum indicum* bark, *Trachyspermum ammi* seeds, pepper seeds and garlic powder dissolved in rice washed water is given to drink and their paste is applied all over the body for weakness of legs in cattle. *Crushed stem bark boiled with water is given once a day for three days in case of over salivation in cattle.
Etymology: Kaadudrakshi, Kattumunthiringa and Kattudrakshi (wild grape) are due to its wild nature and resemblance of edible fruits with the grapes. Adichappu (lower or beneath leaf) arose due to the characteristic colouration of the undersurface of leaves (clothed with silvery and coppery scales).

Note: Ripe fruits are edible.

353. *Elaeis guineensis* Jacq. (Plate 60A)

Family: Arecaceae

Vernacular Name: Eng: Oil palm, African oil palm, Jacquin  
                         Kan: Enneppane  
                         Mal: Ennappana  
                         Tulu: Enneppane

Habit: Tall palm.

Habitat: Cultivated.

Status: Occasional. Exotic.

Description: Erect tall palm, with persistent leaf bases and prominent leaf scars arranged spirally on the trunk. Leaves spreading to drooping, pinnate; leaflets 200 – 300, linear, rigid; petioles spiny. Spadix from the leaf axils, monoecious, with 100 – 200 branches. Spathes 2, deciduous. Male flowers single or in pairs, in recemes on branchlets; sepals 3; petals 3; stamens 6. Female flowers subtended by 2 – 3 small bracts; sepals 3; petals 3; ovary 3-celled. Fruit green drupe turning orange or orange brown when ripe; mesocarp fibrous.

Uses: *Oil extracted from its seeds is applied externally for rheumatism.*

Etymology: Enneppane and Ennappana (oil palm) arose as edible oil is extracted from its inflorescence axis.

Note: Inflorescence axis is used for palm oil extraction.
354. *Elaeocarpus serratus* L. var. *serratus* (Plate 60 B)

Syn: *Elaeocarpus oblongus* Gaertn.

Family: Elaeocarpaceae

Vernacular Name: San: Aravata, Chirbilva, Ciribilvah  
Eng: Wild olive tree, Ceylon olive 
Kan: Guddada renje, Guddarenje, Henalthade  
Mal: Bhadraksham, Karamavu, Nallakara, Perinkara, Valiyakara  
Tulu: Guddetha renje

Habit: Medium-sized tree.

Habitat: Semi evergreen forests.

Status: Occasional.

Description: Medium-sized tree. Leaves simple, elliptic-obovate, glabrous, with 2 small glands at either side of the apex. Flowers in axillary racemes, white; pedicels tomentose. Sepals 5, narrow, ovate, glabrous. Petals 5, laciniate half way down. Stamens many; anthers with a tuft of stiff hairs at top. Fruit oblong-obovate drupe; pyrenes tuberculate.

Uses: *Bark decoction is given for leucorrhoea, swellings, acts as a blood purifier and menstrual regulator. *Bark decoction boiled with gingelly oil is applied for rheumatism. *Leaf paste is applied for septic wounds and ulcers. *Bark decoction is recommended in small dose for rheumatism and rheumatic swellings.

Etymology: Guddada renje, Guddarenje and Guddetha renje (hill *Mimusops*) are due to its restriction to the forests and fruits resembling that of *Mimusops elengi*. Nallakara (good *Canthium*), Perinkara and Valiyakara (larger *Canthium*) are due to its edible fruits which are much larger than that of *Canthium*.

Note: It is often used as a substitute for the drug Chirbilva (*Holoptelea integrifolia*).
355. *Elaeocarpus sphaericus* (Gaertn.) Schumann (Plate 60 C)

Syn: *Elaeocarpus angustifolius* Blume

Family: Elaeocarpaceae

Vernacular Name: San: Rudraksha, Bhootanasana, Neelakandaksha, Sivapriya, Sivaksha
Kan: Rudraksha, Rudrakshi
Mal: Rudraksham
Tulu: Rudrakshi

Habit: Medium-sized tree.

Habitat: Cultivated in gardens.

Status: Occasional.


Uses: *Tender leaf decoction mixed with cumin seed decoction is taken for blood dysentery.*

Etymology: Rudraksha, Neelakandaksha, Sivaksha, Rudrakshi, Rudraksham (Shiva’s eye) and Sivapriya (favourite of Shiva) arose due to the resemblance of tubercled seeds with the human eye balls. It is considered sacred to lord Shiva.

Note: Seeds are used in synonymous with that of *Elaeocarpus ganitrus*. Seeds are used in rituals. It is used in the preparation of *Gorocanadi vati, Cukkumtippalyadi gutika, Dhanvantara gutika, Svarnamukladi gutika* and *Mrtasanjivani gutika* (Sharma *et al.*, 1998).
356. *Elaeocarpus tuberculatus* Roxb. (Plate 60 D)

Syn: *Monocera tuberculata* (Roxb.) Wight & Arn.

Family: Elaeocarpaceae

Vernacular Name: San: Rudraksha, Vana rudraksha
   Kan: Dandele, Dandlemara, Bhootarudrakshi, Kadambola
   Mal: Adraksham, Ammakkara, Chembaramaram, Karamaram,
       Kodavasi
   Tulu: Katturudrakshi

Habit: Medium-sized tree.

Habitat: Evergreen and semi evergreen forests.

Status: Frequent.


Uses: *Seed extract with water is used to reduce high blood pressure.*

Etymology: Vana rudraksha (forest Shiva’s eye), Bhootarudrakshi (demon Shiva’s eye) and Katturudrakshi (wild Shiva’s eye) arose from its wild nature, restriction to the forests and use of seeds as a substitute for that of *Elaeocarpus ganitrus* or *Elaeocarpus sphaericus*.

Note: Seeds are used as beads for religious chains.

357. *Elephantopus scaber* L. (Plate 60 E)

Family: Asteraceae

Vernacular Name: San: Adhomukha, Darvi, Gojihva, Hastipadi
Eng: Prickly leaved elephant’s foot
Kan: Aaneyadi, Ettinanlige gida, Nelamucchilu, Nelaganigalu
Mal: Aanachuvadi, Aanayadiyan, Ottaveran, Thomunji
Tulu: Nelamucchire, Maddithappu

Habit: Herb.

Habitat: Shady places.

Status: Common.

Description: Stiff herb; stem dichotomously branched, strigose, with appressed white hairs. Radical leaves oblanceolate, base narrowed into an obscure petiole, hairy; cauline leaves shorter, ovate or oblong. Heads homogamous, discoid, many-flowered, clustered at the apices of branches; involucral bracts 8 – 10, 2-seriate. Florets purple. Calyx 5-toothed. Corolla tubular; limb deeply cleft into 5 linear-lanceolate lobes. Stamens 5. Fruit oblong, 10-ribbed achene, with bristly pappus.

Uses: *Root stock ground with cumin seeds in gingelly oil is given in empty stomach for backache. *Paste of leaf fried in coconut oil is used for bruises. *Whole plant decoction is given for urinary diseases and as a diuretic agent for shortage of urine. *Plant extract with cumin seeds in milk is taken to increase lactation (it has abortive action). *Rhizome ground in castor oil is smeared over the tongue during labour pain (results in delivery within half an hour). Root or leaf decoction is consumed for burning during urination. *Paste of root stock (cleaned) cooked with rice washed water is applied and tied for 2 – 3 days in case of warts. *Root stock covered with banana leaf is given a coating with soil, burnt over charcoal and made into a paste with salt and cooked rice. This paste is applied for warts. *Root stock cooked with rice is given to eat in case of stomachache due to food poisoning. Whole plant decoction is used as a pain reliever. *Whole plant paste is applied for pus release from furuncles and pain. *Root stock heated in coconut oil is crushed and applied for muscle spasm. *Root stock crushed with salt is heated and pressed over the body for swellings. Plant extract (in small dose) is used for worms and phlegm. *Whole plant cooked with rice is given as a tonic to increase lactation in
cattle. Root stock extract with milk is consumed for cough. *Plant paste with cumin seeds is applied on the head for dry cough. *Plant paste is applied to expel maggots from the wounds. *Whole plant crushed in rice cooked water is recommended for urine block. *Paste of steam cooked root stock with salt is applied for swellings inside the body and lymph node swellings. *Root crushed with pepper is filled into dental cavities for toothache. *Cooked plant is used as a food for cattle to increase their body weight and milk yield as it is rich in Na, K, Mg, Ca and Fe. *Whole plant juice is used as an antidote for mercury poisoning and rabid dog bite. Leaf and root decoction is recommended for heart problems, urine block, vomiting, dysentery, swollen intestine and urinary stones.

*Gruel prepared by cooking rice with its root decoction, coconut milk and jaggery is taken for 12 days (after head massage) for rickets in children. *Root (heated several times in *Calotropis gigantea* latex) ground in gingelly oil is heated in sunlight and is applied for scabies and blisters. *Root is tied to the opposite side ear before sunrise for migraine. *Root, *Aristolochia indica* root, *Abelmoschus manihot* root, ginger, *Lagenaria siceraria* fruit stalk and *Ficus religiosa* bark (in equal quantity) are ground with cardamom seeds, made into a decoction and used twice a day for amoebiasis. *Root, coriander and cumin seeds decoction is given with sugar for 4 – 5 days in case of breathing difficulty in children. *Whole plant pieces mixed with rice bran is used as fodder to increase lactation in cattle. Plant decoction is used internally for hyperacidity and as a haemostatic in case of piles. *Root stock paste (with cumin seeds) dissolved in gingelly oil is used internally at morning in empty stomach for 3 – 6 days in case of backache. *Root stock and cumin seeds are chewed and the air is passed into the eyes in the case of cataract.

Etymology: Gojihva (cow tongue) and Ettinanalige gida (bull’s tongue) arose as the radical leaves share resemblance with tongue of cattle. Hastipadi, Aaneyadi, Aanachuvadi and Aanayadiyan (elephant’s foot) is due to the characteristic arrangement of radical leaves. Nelamuchihu, Nelaganigalu and Nelamucchire (ground *Dillenia*) are as the radical leaves show resemblance with that of *Dillenia*. 

454
Its leaves are often cooked with rice and given to cattle as fodder, hence the name Maddithappu (fodder leaf).

Note: Epifriedelinol, lupeol, stigmasterol, triacontan-1-ol, dotriacontan-1-ol, dilactones, deoxyelephantopin and iso-deoxyelephantopin are the active constituents (Jain et al., 1991). Plant is used for preparing tambuli*. Tender plant is used as vegetable.

358. Elettaria cardamomum (L.) Maton (Plate 60 F)

Syn: Amomum cardamomum L.; Alpinia cardamomum (L.) Roxb.

Family: Zingiberaceae

Vernacular Name: San: Ela
   Eng: Cardamom
   Kan: Yalakki, Elakki
   Mal: Elakkaya, Ellam, Elam, Elattari
   Tulu: Elakki, Elasri

Habit: Erect herb.

Habitat: Cultivated.

Status: Common.

Description: Erect herb, with thick, horizontal root stock and small leafy stem. Leaves linear-lanceolate, pubescent below. Flowers white, in lax panicles from the base of leafy stem. Calyx tubular, split on one side, 3-lobed. Corolla 3-lobed; lateral lobes oblong, upper apically concave; labellum obovate; lip white striped with violet. Staminodes short. Fruit trigonous, aromatic, striate capsule.

Uses: *Seed powder is given with tender coconut water for urine block and to arrest vomiting. Seed decoction is used for stomachache and febrile conditions. Seed decoction is a tonic, given for gas trouble and to normalize excretions. *Its paste is applied externally for leucoderma and elephantiasis. Seed decoction expels phlegm, used for biliousness, cough and digestive disorders. *Seed is chewed and water or
milk is drunk to arrest vomiting. Seed coat decoction is recommended for vomiting. *Seed powder in butter milk is used as antidote for food poisoning or indigestion caused by cashew nuts (fried in oil). *Cardamom, *Taxus baccata* leaf, long pepper, sugarcandy, *Glycyrrhiza glabra* rhizome, *Phoenix dactylifera* fruit and seeded grape powder decoction is consumed with milk for chest pain appearing at the starting stage of tuberculosis. *Seed paste with ghee is applied for septic wounds. *Seed powder dissolved in hot water is consumed for vomiting in children (during journey).

Note: Seed is much valued condiment. It is used in the preparation of *Eladi modaka, Eladi churna, Sitopaladi churna, Eladi arista, Eladi gutika, Eladi kvatha, Lavanabhaskara churna, Talisadi churna, Pippalayasava, Astanga lavana, Khadirarista, Candanadi vati* and *Chandraprabha vati* (Dey, 1994; Sharma *et al.*, 1998). Cineol, terpineol, terpinene, limonene, sabinone, sabinene and borneol are the active constituents with laxative, diuretic and carminative properties (Kapoor, 1990; Dey, 1994).

359. *Eleusine coracana* (L.) Gaertn. *(Plate 61 A)*

Syn: *Cynosurus coracana* L.

Family: Poaceae

Vernacular Name: San: Ragi, Rajika, Nrtyakundalah
            Eng: Finger millet, African millet
            Kan: Ragi, Raagi
            Mal: Kora, Mutthari, Panjapullu, Ragi
            Tulu: Raagi

Habit: Annual grass.

Habitat: Cultivated.

Status: Occasional.
Description: Annual grass, with erect, stout, compressed culms. Leaves distichous, linear; sheaths compressed, bearded at mouth. Inflorescence 4 – 7 digitately arranged spikes at the culm apex, usually incurved, hairy at base; rachis broad, margins scabrid. Spikelets densely imbricate in 2-rows, 3 – 6-flowered. Glumes 2, membranous, ovate-oblong, persistent; paleas winged on keels. Lodicules 2. Stamens 3. Fruit globose, rugose, dark-brown caryopsis.

Uses: *Use of seeds as food is beneficial for weakness due to its high food value. It helps to normalize human excretory system. *Ground seeds are eaten after cooking for leucorrhoea and gastritis. *Milk from ground seeds boiled with milk is taken for burning sensation in stomach after urination.

Etymology: Nrtyakundalah (dancer’s anklet) as the digitate spikes give an appearance of dancer’s anklets.

Note: Seeds are highly nutritious. Orientin, isoorientin, vitexin, isovitexin, violanthin, lucenin-1, tricin and β-sitosterol are the active components. It is used in preparations like Amlapittantaka modaka, Amrta guggulu, Asvaghndhadi lehya, Kusthadi kvatha and Katutumbyadi taila (Sharma et al., 1998).

360. *Eleusine indica* (L.) Gaertn. (Plate 61 B)

Syn: *Cynosurus indicus* L.

Family: Poaceae

Vernacular Name: San: Nandimukhi

Eng: Crab grass, Crow-foot grass, Goose grass

Kan: Hakkikalina hullu, Hecchuli hullu, Kaadu raagi

Mal: Kattu muthari

Tulu: Kattu raagi

Habit: Tufted grass.

Habitat: Damp places.

Status: Common. Weed.
Description: Tufted annual grass, with erect slightly compressed culms. Leaves distichous, flat, linear, sparsely hairy; sheaths compressed. Inflorescence 2 – 9 digitately arranged spikes at the culm apex, straight; rachis slender, glabrous. Spikelets densely imbricate in 2-rows, 3 – 6-flowered. Glumes 2, membranous; lower oblong; upper ovate-oblong. Lemmas ovate-oblong. Lodicules 2. Stamens 3. Fruit oblong, obtusely trigonous caryopsis.

Uses: *Same as *Eleusine coracana*.

Etymology: Hakkikalina hullu (bird foot grass), Kaadu raagi, Kattu muthari and Kattu raagi (wild finger millet) arose due to the resemblance of its inflorescence with bird’s foot and inflorescence of finger millet. Seeds also share close affinity with that of finger millet.

Note: It is a good fodder grass. Seeds are used as a substitute for finger millet.

**361. Embelia ribes** Burm. f. (Plate 61 C)

Syn: *Embelia glandulifera* Wight

Family: Myrsinaceae

Vernacular Name: San: Amodha, Bhasmaka, Krimighna, Vidanga, Vidangah  
Eng: Embelia, Vidanga, Baoberang  
Kan: Vaayuvidanga, Vaayuvilanga, Vidanga  
Mal: Vayuvilangam, Vizhalari, Vizhal  
Tulu: Balangatha kai, Vayuvilango

Habit: Climbing shrub.

Habitat: Semi evergreen forests and plains.

Status: Rare.

Description: Extensive straggling or climbing shrub, with tuberculate stem. Leaves simple, alternate below, opposite above, elliptic-lanceate, lower surface gland-dotted on either side of the midrib, thin-coriaceous. Flowers aggregated in axillary or
terminal, dense panicles. Calyx 4 – 6-lobed; lobes ovate, pellucid-dotted. Corolla
greenish; lobes shortly connate. Stamens 5. Fruit globose drupe, white when ripe.

Uses: *Root and cumin seeds (thrice soaked in lime water and dried) powder are
given with honey for whooping cough. Seed powder is given internally for digestive
tract disorders and worms while applied externally for leprosy, skin diseases and
itches. *Seed powder increases the action of bhasma* and is given for asthma,
bronchitis, dyspnoea and ring worm. *Decoction prepared by crushing its fruits with
leaf veins of Cocos nucifera, Citrus medica and root of Pandanus odorifer is used to
expel intestinal worms. Fruit extract is taken to expel worms and for gas trouble.
Dried fruit powder alone or by mixing it with honey is consumed to expel intestinal
worms. *Root, those of Sida rhombifolia and Ricinus communis (in equal quantity)
are made into a decoction to which ½ tsp ghee and cumin powders are added. The
steam of this hot decoction is inhaled for pain in the left side of navel and
appendicitis. *Tender shot tip tambuli* is useful for rheumatism, phlegm and worms
(not recommended for pregnant women and those with nerve disorders). Seed
powder mixed with honey is used for convulsion due to worm infestation. *Seed
and neem seed powder dissolved in hot water is consumed to expel worms. *Root,
raw rice and Aporosa lindleyana shoot tip ground in tender coconut husk juice or
rice washed water is applied for urticaria or rashes. *Root and Ixora coccinea
flowers cooked with rice are consumed for urticaria and rashes. *Seeds, asafoetida
and Hibiscus rosa-sinensis root (in equal quantity) are made into 600 mg tablets and
are used for five days during periods as a contraceptive. *Dried shoot tip powder
boiled in butter milk is taken for three days in case of worm trouble in children. Fruit
powder in butter milk is given for three days in case of indigestion in children.
*Seed powder mixed with bee wax is used to fill dental cavities. Pills made of its
fruit powder are used for nerve pain. Stem soaked (for 3 hrs) in cool water is
given with ammonium acetate for intermittent and other milder fevers. *Plant juice
with long pepper pulp and honey is recommended for gonorrhoea. Root extract is
used for rheumatism, secondary syphilis, bladder and spleen affections. *Root,
those of Croton laevigatus and Naringi crenulata ground with water are given by
mixing lime juice and jaggery (twice a day) for asthma. *Root extract with rice
washed water or lime juice is consumed to expel phlegm. Ripe fruit (dried in sunlight) powder boiled with water is given thrice a day for stomach swelling due to gas trouble. *One cup root extract with rice washed water is taken once in empty stomach to expel intestinal worms. *Root decoction is used for bleeding from genital tract in cattle. Seed (20 gm) decoction is given twice a day by adding sugar for a week in case of repeated fever attack in children. *Fruit powder mixed with heated pure bee wax is used to fill dental cavities.

Etymology: Bhasmaka (one which reduces to ashes), Krimighna (worm killer) and Vaayuyvidanga (gas remover) arose from its therapeutic efficacy. Seeds are much valued as anthelmintic drug, highly used for digestive tract disorders and gas trouble.

Note: Benzoquinones, christembine, rapanone and quercitol are the major compounds with anthelmintic activity (Kapoor, 1990; Sharma et al., 1998). It is one of the important ingredients of Vidangarista, Vidanga lehya, Vilalveradi kashaya, Anu taila, Abhayarista, Gulgulutiktaka kashaya, Vidangadi churna, Vidangavaleha, Vidanga taila, Sudarsana churna, Sarvajwara lehya, Sanjivani vati, Pippalyasava, Yogaraja guggulu, Vidangadi lepa, Kaisora guggulu, Chandraprabha vati and Vidangadi lehya (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998).

362. Embelia tsjeriam-cottam (Roem. & Schult.) DC. (Plate 61 D)

Syn: Ardisia tsjeriam-cottam Roem. & Schult.; Embelia villosa Wall. ex Roxb.; Embelia robusta sensu Clarke

Family: Myrsinaceae

Vernacular Name: San: Bidanga, Krimighna, Vidanga, Vidangah
Eng: Embelia, Vidanga
Kan: Vaayuvilanga, Kaadu vaayuvilanga
Mal: Ammimuriyan, Cheriyanattam, Eeshaal
Tulu: Kattu vaayuvirdanga, Balipakodi

Habit: Scandent shrub.
Habitat: Semi evergreen forests and plains.

Status: Occasional.

Description: Large scandent shrub. Leaves simple, ovate or broadly elliptic, rusty-pubescent beneath. Flowers dioecious, pentamerous, greenish-yellow, in small axillary and terminal racemes. Calyx 5-lobed; lobes gland-dotted, puberulous. Petals 5, papillose inside. Stamens 5. Fruit globose, longitudinally ribbed drupe, red when ripe.

Uses: *Paste prepared by grinding its root along with that of *Cyclea peltata, *Aristolochia indica, *Rauvolfia serpentina* and *Thottea siliquosa* in lime juice is applied externally for herpes and snake bite. *This preparation excluding *Rauvolfia* is used internally. Seed powder is taken to expel intestinal worms.

Etymology: Vaayuvilanga (gas remover), Krimighna (worm killer), Kaadu vaayuvilanga and Kattu vaayuvidanga (wild gas remover) arose due to its close affinity with *Embelia ribes* and similar therapeutic efficacy.

Note: Benzoquinones, christembine, rapanone and quercitol are the major compounds with anthelmintic activity (Kapoor, 1990; Sharma *et al.*, 1998). It is one of the important ingredients of *Vidangarista, Vidanga lehya, Vilalveradi kashaya, Anu taila, Abhayarista, Gulgulutiktaka kashaya, Vidangadi churna, Vidangavaleha, Vidanga taila, Sudarsana churna, Sarvajwara lehya, Sanjivani vati, Pippalyasava, Yogaraja guggulu, Vidangadi lepa, Kaisora guggulu, Chandraprabha vati* and *Vidangadi lehya* (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma *et al.*, 1998). It is used in synonymous with *Embelia ribes*.

363. *Emilia sonchifolia* (L.) DC. *(Plate 61 E)*

Syn: *Cacalia sonchifolia* L.

Family: Asteraceae

Vernacular Name: San: Sasasruti, Sasasrutih
                Kan: Ilikivi gida, Ilikivi soppu
Mal: Elichevian, Muyalchevian, Orichozhiyam
Tulu: Elikkebi

Habit: Scandent herb.

Habitat: Moist and damp areas.

Status: Common. Weed.

Description: Annual scandent or diffuse herb, pilose. Leaves variable; lower leaves petiolate, lyrate-pinnatifid with a large terminal lobe; cauline leaves lanceolate, auricled at base. Heads homogamous, discoid, laxy corymbose; involucral bracts uniseriate, linear-oblong. Florets purplish. Calyx 5-toothed. Corolla tubular, 5-lobed. Stamens 5. Fruit 5-ribbed, narrowly oblong achene; ribs grooved, grooves pubescent.

Uses: Plant decoction or juice is given to children to expel intestinal worms and bleeding problems. *Whole plant decoction with fruits of *Embelia ribes* and garlic is used to expel thread and pin worms. *Whole plant decoction is given to children with growth retardation. *Iddlis* or *dosa* prepared using its leaves are eaten to expel worms. *Whole plant extract with cumin seeds is poured into the eye for itching in eyes. Whole plant decoction is given for fever. Plant juice is used as eye drop for clearing the eyes. Plant paste is applied for all kinds of cuts and wounds. *Whole plant decoction is recommended for vomiting of saliva in small children. *Two ounce of plant juice is given at night after food to expel intestinal worms (in case of children, one spoon juice mixed with 4 tsp butter milk is given for four days). *Leaf paste with turmeric and salt is used as external application for 3 – 6 days in case of tonsillitis. Whole plant decoction is taken for three days in case of over salivation. Plant extract is consumed for gas trouble and digestive tract disorders. *Tambuli* prepared using this plant (if used for 2 – 3 days) expels worms, it is digestive, increases blood and useful for rheumatism. Plant decoction is used for phlegm, constipation, bleeding piles and eye diseases. *Oil prepared from plant juice is used as a wound healer. Whole plant decoction or juice is recommended for diabetes and diarrhoea in children. *Whole plant, Embelia ribes seed, Cyperus
rotundus rhizome and garlic decoction is used after adding a little fried asafoetida for stomachache due to worms in children (up to the age of 12). *Whole plant, garlic and Embelia ribes seed decoction is given by adding asafoetida powder for three days in case of worm infestation, ring worm, gas trouble and pain. *Whole plant decoction is given twice a day (for about 3 months) in case of recurrent fever, weakness, laziness and over salivation in small children. *Whole plant juice mixed with onion juice and coconut oil and heated is heated and resulting oil is applied over the centre of the head (1 – 2 drops applied to the throat) for chronic tonsillitis.

Etymology: Ilikivi gida (rat ear plant), Ilikivi soppu (rat ear leaf), Elichevian, Elikkebi (rat’s ear) and Muyalchevian (rabbit’s ear) are due to the characteristic shape of its leaves.

Note: Much valued drug for digestive disorders and tonsillitis. Upper leaves are used as vegetable.

364. *Ensete superbum* (Roxb.) Cheesman (Plate 61 F)

Syn: *Musa superba* Roxb.

Family: Musaceae

Vernacular Name: Eng: Wild plantain  
    Kan: Kallubale, Kaadubale, Bettabale  
    Mal: Kalluvazha, Malavazha  
    Tulu: Kallubare

Habit: Large herb.

Habitat: Rocky hill slopes.

Status: Occasional.

Description: Stout tall rhizomatous herb, dying down after flowering. Leaves spirally arranged, oblong, with thick midrib and pinnately parallel nerves. Flowers monoecious, on stout elongated drooping spikes; bracts foliaceous, brownish, orbicular. Flowers infinite, in 2 dense rows. Sepals 3, connate with 2 petals into a
tube, split down one side, third petal opposite to the split. Stamens 5. Fruit oblong, trigonous berry, with subglobose, brown stony seeds.

Uses: *The supernatant liquid of its fried seed powder dissolved in water is given to patients suffering from kidney stones. *Rhizome cooked with rice is eaten for recurrent furuncles. Stem and inflorescence are diuretic. Seed and stem juice is recommended for urinary stones, shortage of urine, cystitis and gastritis. Seed decoction is used for kidney stones, gall bladder stones, fever and malaria. *Lehyam* prepared from its root or seed ground in milk is prescribed for over urine secretion. *2 cup of stem juice at morning in empty stomach and one cup at every hour are given for one week in case of urine block. *Rhizome ground and applied on the sides of stomach for urine block. *Bract juice mixed with cumin powder is consumed in empty stomach for blood dysentery. Stem juice is a poison remover, useful for urinary infections, swellings, bleeding from nose and earache. *Seed powder mixed with milk is given to drink during chicken pox and small pox. *Stem (centre portion) juice mixed with milk is given to drink in case of oedema due to anaemia. *Ground seed mixed with milk is used for amoebiasis. *Seed powder mixed with milk is taken once a day (for nine days) for DUB in pregnant women and seed powder with boiled then cooled water for same in cattle.

Etymology: Kallubale, Kalluvazha, Kallubare (stone plantain), Kaadubale (wild plantain), Bettabale and Malavazha (hill plantain) are due to its wild habit, restriction to the rocky hill slopes and stony seeds.

Note: Seeds are highly used for renal calculi.

**365. Entada rheedei** Spreng. (Plate 62 A)

Syn: *Entada pursaetha* DC.; *Entada scandens* sensu Hook. f.; *Entada monostachya* DC.

Family: Mimosaceae

Vernacular Name: Eng: Elephant creeper

Kan: Ganape kaayi, Palle balli, Pallekaayi, Hallekaayi balli
Mal: Kakkavalli, Kukkumkai, Perunkakkavalli, Thellikody
Tulu: Pallebooru, Pallekaayi

Habit: Woody liana.

Habitat: River banks in semi evergreen forests.

Status: Frequent.

Description: Gigantic climber with twisted angled stem. Leaves bipinnate; rachis grooved, ending in a bifid tendril; pinnae 2 – 3 pairs; leaflets 3 – 4 pairs, ovate-oblong. Flowers minute, polygamous, pale yellow, in spikes from the axils of the upper leaves or from nodes on the leafless branches. Calyx campanulate, 5-toothed. Petals 5. Stamens 10. Fruit, woody, 6 – 15-jointed, up to 100 cm long, compressed pod; joints discoid; seeds circular, compressed, brown, shining, with very hard testa.

Uses: *Fruit pulp paste with coconut gratings is applied for pain in back bone, vertebral column and whole body. Fruit paste with water is highly used for lymph node enlargement, breast swellings, hydrocoele and general swellings. *Fruit extract is used internally to arrest vomiting. *Mucilage or gum extracted from the seeds is used to wash hairs. *Hot seed kernel paste with coconut gratings is applied over lumbar region for lumbago. Seed decoction is taken for vomiting and fever. *Dosa* prepared by grinding its kernels with rice is given for infections of pregnant women and backache (after eating, large quantity of tender coconut water should be taken). Seed kernel paste is applied for scabies. *Oil prepared by boiling its kernel with coconut oil is poured into the ear for earache. Fruit ashes are applied for wounds and ulcers. *Seed powder mixed with honey is applied externally for carbuncles on the cheek due to dental problems.

Etymology: Palle balli, Pallebooru (ear lobe climber), Pallekaayi (ear lobe fruit) and Hallekaayi balli (ear lobe fruit climber) are due to the characteristic shape of its fruits and seeds.
Note: Oleanolic acid, β-sitosterol, α-amyrin, lupeol, quercetin, dopamine, entagenic acid, prosapogenin A, diolein, dilinolein, triolein, oleodilinolein and trilinolein are the active constituents (Jain et al., 1991).

366. *Eranthemum roseum* (Vahl.) R. Br. (Plate 62 B)

Syn: *Justicia rosea* Vahl.

Family: Acanthaceae

Vernacular Name: Kan: Kappukarni, Kappubobbi,
Tulu: Kappukarni

Habit: Undershrub.

Habitat: Forest undergrowth.

Status: Frequent.

Description: Erect undershrub. Leaves simple, oblong-lanceolate, long tapering and decurrent at base. Flowers in terminal spikes; bracts obovate, obtuse, white with green nerves, glandular strigose. Calyx 5-partite; lobes narrow. Corolla rose or blue; tube long; lobes 5, obovate. Stamens 2. Fruit clavate, 4-seeded capsule; seeds discoid.

Uses: *Root paste with lime juice is applied for skin diseases.*

Etymology: Kappukarni and Kappubobbi (*Ecbolium ligustrinum*) are as its bracts share some resemblance with that of *Ecbolium ligustrinum*.

Note: Often used as a substitute for *Ecbolium ligustrinum*.

367. *Erycibe paniculata* Roxb. (Plate 62 C)

Syn: *Erycibe wightiana* Graham.

Family: Convolvulaceae

Vernacular Name: San: Asokarohini
Kan: Ankola balli, Krimighna, Sengaraballi, Singaaraballi
Mal: Erumathali, Irimpiyathali, Irumbithali, Nakkuvalli, Vadayara
Tulu: Singaaraballu

Habit: Climbing shrub.

Habitat: Semi evergreen forests and plains.

Status: Occasional.

Description: Large climbing shrub, rusty-tomentose. Leaves simple, elliptic-lanceolate or oblong-lanceolate. Flowers in terminal panicles, densely clothed with reddish-brown tomentum. Sepals 5, ovate to rounded, densely brown-tomentose. Corolla white, campanulate-rotate, deeply 5-lobed; lobes deeply bilobed. Stamens 5. Fruit ovoid to ellipsoid berry.

Uses: *Twig is chewed or gargle with its bark or leaf decoction is done for toothache and dental cavities.

Etymology: Sengaraballi, Singaaraballi, Singaaraballu (decorated climber) and Irumbithali (dark coloured herb) arose due to its rusty-tomentose plant body.

Note: Plant is credited with diuretic and hypotensive properties (Jain et al., 1991).

368. *Eryngium foetidum* L. (Plate 62 D)

Family: Apiaceae

Vernacular Name: Eng: Fit weed, Culantro, Long coriander, Mexican coriander
  Kan: Kaadu kotthambiri, Ghattada kotthambari
  Mal: African malli
  Tulu: Kattu kotthambri

Habit: Erect herb.

Habitat: Cultivated.

Status: Frequent.

Uses: *Eating raw leaf is useful for stomachache and indigestion. *Whole plant decoction is given to arrest vomiting. *Plant decoction is used to lower the high blood pressure. *Leaf is chewed after lunch and juice is swallowed for indigestion, gastritis and stomachache. *Plant juice and mustard seed powder boiled in oil is applied for wounds in cattle. *Plant extract is a mild laxative and there is a belief that its consumption prevents bed bug bite.

Etymology: Kaadu kotthambari, Kattu kotthambri (wild coriander), Ghattada kotthambari (ghat coriander) and African malli (African coriander) are due to its use as a substitute for coriander leaves and exotic origin.

Note: Leaves are often used as a substitute for coriander leaves. Plant is used in black magic to induce sleep in children.

369. *Erythrina stricta* Roxb. (Plate 62 E)

Family: Papilionaceae

Vernacular Name: San: Mura, Paribhadra, Paribhadrah
   Eng: Indian coral tree
   Kan: Kaadu haalivana, Kaadu hongara, Keechige, Hemmuruku
   Mal: Aann-murikku, Mullumurikku, Murikku, Venmurukku
   Tulu: Kattu pongare

Habit: Medium-sized tree.

Habitat: Semi-evergreen forests.

Status: Rare.
Description: Armed deciduous trees, with yellowish prickles. Leaves 3-foliolate; leaflets rhomboid-ovate. Flowers in terminal racemes on leafless branches. Calyx spathaceous, 5-lobed, apically entire. Corolla deep-red; petals 5. Stamens 9 + 1. Fruit falcate pod, with ovoid seeds.

Uses: Same as *Erythrina variegata*.

Etymology: Paribhadra (strong boundary) arose as usually this plant is planted for fencing. Kaadu haalivana, Kaadu hongara, Kattu pongare (wild coral tree) and Mullumurikku (prickly coral tree) are due to its restriction to the forests and prickly stem.

Note: It is used in synonymous with *Erythrina variegata*.

370. *Erythrina variegata* L. (Plate 62 F)


Family: Papilionaceae

Vernacular Name: San: Kantakipalasa, Paribhadra, Paribhadrah, Raktapuspa
---
| Eng        | Indian coral tree, Tiger’s claw |
| Kan        | Haalivana, Pongara, Hongara, Muruku, Haaluvana |
| Mal        | Kalyana, Mullumurikku, Murikku       |
| Tulu       | Pongare, Ponnu pongare             |

Habit: Large tree.

Habitat: Deciduous forests and plains.

Status: Common.

Description: Large deciduous tree, armed with dark-coloured prickles. Leaves 3-foliolate; leaflets ovate-rhomboid, membranous; stipules caducous. Flowers in dense peduncled axillary or terminal racemes, on leafless branches. Calyx spathaceous; mouth very oblique, 5-toothed at apex. Corolla red; petals 5; standard much exerted.
Stamens 9 + 1, much exerted. Fruit 6 – 8-seeded, linear, turgid pod, with dark-red seeds.

Uses: *Young twig decoction with milk is used for sleeplessness. *Bark decoction is given early morning in empty stomach to ladies with menstrual problems. *Bark decoction is used in case of threatened abortion. *Bark, stem piece of Coccinia grandis and Adenanthera pavonina bark are cooked with rice and given every month for joint pain in pregnant women. *Leaf poultice is given for rheumatism, joint pain, wounds, ulcers and skin diseases. Bark decoction is taken in limited dose for fever and liver diseases. Bark and flower extract is recommended for rheumatism, obesity and leucorrhoea. Leaf and bark decoction is used for fever and DUB. *Leaf decoction is consumed for rheumatic pain, stomachache, malaria, joint pain, bodily pain and blood dysentery. *Bark decoction is given for water in hands and feet of pregnant women. *Bark paste is applied on the scalp for hair fall. Bark decoction is used for leucorrhoea. *Bark juice is given for three days for cough due to worm infestation. *Crushed bark boiled in buttermilk with a white rock is given for amoebic dysentery, urinary infection and yellow coloured motion in small children. *Crushed bark heated with salt is applied for warts. *Leaf crushed with salt is heated and applied for ankle twist. *One spoon leaf juice mixed with equal quantity of coconut oil and a little pacche karpura* is taken twice a day for ulcer in nose and blood in nose discharge. *Leaf ground in lime juice is heated and applied to the centre of head for cold, running nose, headache and increased body heat. *Seed ash mixed with butter is applied for mastitis and boils in udder of cattle. *Ghee prepared by mixing its leaf juice with leaf juices of Allamanda cathartica, neem, Jasminum grandiflorum, Caesalpinia bonduc (in equal quantity), ghee and camphor powder is applied for rabid dog bite and all types of wounds and ulcers. *One spoon bark juice is recommended thrice in a month for asthma and bronchitis. Heated leaf juice is applied on forehead for cold. Bark cooked with rice is used for stomachache during periods. *Leaf juice and dried gooseberry fruit boiled in gingelly oil are applied for
boils in nose. *Tender shoot tip paste with water is applied for three days in case of ringworm.

Etymology: Kantakipalasa (prickly Butea) arose as its trifoliolate leaves resemble that of Butea frondosa and has prickly stem. Paribhadra (strong boundary) arose as usually this plant is planted for fencing. Mullumurikkku (prickly coral tree) is due to its prickly stem. Raktapuspa (red flower) indicate its flower colour.

Note: It is used in the preparation of Nyagrodhadi churna, Abhaya lavana, Narayana taila, Maharajaprasarini taila, Vidangamuladi kashaya and Paribhadravaleha (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). It has hypophorine, saponins, erytherine, β-sitosterol, γ-sitosterol, δ-sitosterol, erythraline, erysovine, erysodine, erysonine, erystorine, betaine and choline as major components (Dey, 1994; Kapoor, 1990). Wood is much used for idol making. Tender shoot tip and young seeds are edible.

371. Erythroxylum monogynum Roxb. (Plate 63 A)

Syn: Sethia indica DC.; Erythroxylum indicum (DC.) Bedd.

Family: Erythroxylaceae

Vernacular Name: Eng: Bastard sandal, Red cedar
                     Kan: Adavi goranti, Gandhagiri, Devadaru, Kuruvaru mara
                     Mal: Chembulinga, Palayachandanam, Vella devadaram
                     Tulu: Devadar, Devadaro

Habit: Small tree.

Habitat: Evergreen forests and grasslands, also grown in gardens.

Status: Rare.

Description: Small tree. Leaves simple, sometimes fascicled on short shoots, narrowly obovate, thin-coriaceous. Flowers solitary or 2 – 3 in axillary fascicles. Calyx cupular; lobes 5, broadly ovate. Corolla pale yellow; petals 5, obovate, with a
corona like ligule. Stamens 10, alternating shorter and longer, united below. Fruit cylindric drupe.

Uses: Heart wood extract is a cooling agent and tonic. *Young leaf pounded in oil is applied over the head for biliousness, sleeplessness and vision problems. *Heart wood decoction with milk and sugarcandy is given for rheumatoid arthritis and polio. Its paste is applied for urticaria and rashes. *Oil extracted from heart wood is applied for rheumatism.

Etymology: Devadaru (deodar) and Vella devadaram (white deodar) are due to its use by the name deodar and white bark.

Note: Heart wood is reddish in colour and is used as a substitute for Cedrus deodara. Heart wood is used as dhup*. Heart wood is also used as an adulterant for sandalwood.

372. Eucalyptus tereticornis Smith (Plate 63 B)

Family: Myrtaceae

Vernacular Name: San: Haritaparna, Sugandhapatra, Tailaparnah, Tailaparni  
Eng: Fever tree, Forest red gum, Eucalyptus, Blue gum  
Kan: Nilagiri mara, Tailada mara  
Mal: Yukkali  
Tulu: Nilagiri maro

Habit: Large tree.

Habitat: Planted along roadsides and slopes of hills.

Status: Common. Exotic.

Description: Large tree, with smooth, grey, exfoliating bark; branchlets apically angular, glaucous, pubescent in juvenile stage. Leaves aromatic, pellucid-punctuate, heteroblastic; juvenile leaves opposite, ovate, dull to bluish-green, glaucous; adult leaves alternate, linear-lanceolate, curved, green, oblique at base. Flowers white, in axillary umbels. Calyx-tube campanulate, truncate; operculum conical, horn-shaped.
Petals united in calyptra, caducous. Stamens many. Fruit truncate-globular loculicidal capsule.

Uses: Oil extracted from leaves is applied for cold and headache. Oil is put into hot water and the steam is inhaled for cold. *Oil mixed with water is applied to expel lice in dogs. Oil or leaf paste is applied for pain. Oil is applied over the forehead to expel phlegm and much used as a pain reliever.

Etymology: Haritaparna (green leaf), Sugandhapatra (aromatic leaf), Tailaparnah and Tailaparni (oil leaf) are due to its dark green, aromatic leaves which are used for oil extraction. Tailada mara (oil tree) arose as the wood and leaves are used for oil extraction. In India, these trees are first introduced in the Nilgiris, hence the names Nilagiri mara and Nilagiri maro (Nilgiri tree).

Note: 1, 8-cineole, camphene, sabinene, myrcene, ρ-menthone, α- & γ-terpinene, fenchone, α- & β-thujone, citral and verbenone are the active constituents. It is used in the preparation of Ekadasasatikaprasarini taila, Mahasugandhika taila, Pancaguna taila, Martandabhairava rasa and Jvaramari rasa (Sharma et al., 1998).

373. Eupatorium triplinerve Vahl. (Plate 63 C)

Syn: Ayapana triplinervis (Vahl.) King. & Robinson.; Eupatorium ayapana Vent.

Family: Asteraceae

Vernacular Name: San: Ajaparna, Ajaparnah, Ayapana, Ayaparnah
   Eng: Water hemp, Aya-pana
   Kan: Gadimaddu, Ayyampane
   Mal: Ayyampana, Ayyapanna, Murikootti, Visappacca
   Tulu: Gadimardu

Habit: Erect herb.

Habitat: Cultivated in gardens.

Status: Occasional.

Uses: Leaf juice is applied for cuts, wounds, rashes, ringworm, skin diseases, to arrest bleeding and easy heal. *Plant paste is applied for poisonous bites. Whole plant paste is applied externally to arrest bleeding from cuts and wounds, for rashes, urticaria and poisonous bites. *Same is used internally to stop uterine bleeding. *Oil prepared from leaf juice is applied to arrest bleeding from cuts and for burns. *Plant extract is the best haemostatic agent and is applied for bleeding from genital tract or even bleeding piles.

Etymology: Gadimaddu, Murikootti, Gadimardu (medicine for wounds) and Visappacca (poison herb) arose from its therapeutic efficacy in healing wounds and poisonous bites.

Note: Ayapanin, ayapinine and ayapin are the active constituents with cardiac stimulant, diaphoretic and haemostatic properties (Kapoor, 1990; Chaudhri, 1996).

374. Euphorbia hirta L. (Plate 63 D)

Syn: Chamaesyce hirta (L.) Millisp.

Family: Euphorbiaceae

Vernacular Name: San: Dugdhika, Pusitoa
   Eng: Asthma herb, Australian asthma herb, Pill bearing spurge, Snake weed
   Kan: Acchesoppu, Kempu neneakki gida, Dodda haalukodi, Haalukodi
   Mal: Kuzhinagappala, Nilappala
   Tulu: Nellya perpanthi, Perpanthi

Habit: Procumbent herb.
Habitat: Wastelands and roadsides.

Status: Common. Weed.

Description: Procumbent or erect herb, with hispid, green or reddish stem and milky latex. Leaves simple, obliquely elliptic or lanceolate, hairy. Flowers in cyathia. Cyathia minute, axillary, in capitate cymes. Male flower: one naked stamen. Female flower: a stalked 3-celled ovary; styles 3. Fruit appressed pubescent capsule.

Uses: *Whole plant decoction with milk is taken for burning sensation in arms, legs, eyes and head. Plant juice is used for worms, cough, to increase lactation and for digestive disorders. *Whole plant ground in milk is recommended for urinary disorders, leucorrhoea, skin diseases and blood in stool. It also acts as a blood purifier. *Plant ground with cumin seeds in cold milk is given for three days to patients suffering from mouth ulcers (this acts as a preventive medicine for mouth ulcers for a period of one year). *Plant (after removing flowers) decoction is used as a tonic for menstrual and vaginal diseases. *Whole plant decoction is used for burning sensation in the body and is applied to expel maggots from the wounds. *Whole plant boiled in water (reduced by adding milk) is consumed (after ½ hr of dinner) with sugar for three days in case of burning sensation in the body. *Latex mixed with lime is applied for septic wounds and to expel maggots from wounds in cattle (over dose may cause giddiness and vomiting and one cup banana stem juice is the antidote). *Due to its hot nature its preparations are not recommended for pregnant women. Latex is applied for lymph node swelling. Root extract is used internally for vomiting and its paste is applied for rheumatism. *Whole plant ground in curd is taken for bladder or urethral swelling. Whole plant paste is applied for skin diseases. *Whole plant decoction with cumin seeds is heated after adding milk (when this simmers to half) and is consumed with sugar in empty stomach in the morning for a week in case of burning sensation in the hand and feet.

Etymology: Dugdhika (one with milky latex), Dodda haalukodi, Nellya perpanthi (larger milky herb), Haalukodi, Perpanthi (milky herb) and Nilappala (ground latex herb) are due to its milky latex and habit which is larger when compared with *Euphorbia thymifolia.*
Note: Quercetin, triacontane, jambulon, euphosterol, phytosterolin and xanthorhamnin are the active constituents with anthelmintic and expectorant activities (Kapoor, 1990). Plant juice along with other drugs is used for preparing bhasma* from mercury. Leaf is used as vegetable.

375. Euphorbia nivulia Buch.-Ham. (Plate 63 E)

Syn: Euphorbia neriifolia sensu Hook. f.

Family: Euphorbiaceae

Vernacular Name: San: Gandira, Patrasnuhi, Snuhi, Vajravrksa
   Eng: Common milk hedge
   Kan: Elegalli, Gootagalli, Dundugalli, Mundagalli
   Mal: Elakkalli, Ilakalli, Kallippala
   Tulu: Irekalli

Habit: Large shrub.

Habitat: Along hedges.

Status: Common. Poisonous.

Description: Large fleshy shrub, with angular, spiny branches; spines in pairs from spirally arranged tubercles. Leaves simple, obovate to oblanceolate, tapered to the base, deciduous; stipules black-spiny, in pairs. Cyathia yellowish, in threes above the leaf-scars, forming solitary or twin peduncled cymes; central cyathium usually male; lateral bisexual. Fruit deeply 3-lobed capsule.

Uses: *Salt is placed in between the two halves of a split opened stem piece, given a soil coating and is heated in coal until cracks appear in soil coating. Then it is taken, kept on the floor and is pressed using sole as a popular remedy for pain in sole, warts and corns. *The twig heated on the sides of furnace is soaked with salt water and pressed using sole for corns. *Latex (3 – 5 drops) mixed with butter is given as a laxative. *Root or leaf decoction is used for stomachache due to unknown reason. *Stem, arecanut fruit and rice seeds paste is applied to clean ulcers and wounds.
Plant extract is taken to expel cough and for diarrhoea. Its paste has anti-inflammatory action. *2 – 3 drops of latex mixed with sugar is consumed for asthma and bronchitis. Latex alone is applied externally for leprosy. Leaf juice is taken to arrest vomiting. *Latex mixed with latex of Calotropis gigantea and gingelly oil is applied over the head of cattle for fever. *Juice of heated stem (after removal of spines) is applied for measles, scabies and other skin diseases. Latex is applied for piles and fistula. Leaf paste or hot paste of drugs placed between its two stem pieces is applied for rheumatism. Heated stem paste is applied for swellings. Latex is detoxified by mixing it with salt. Plant boiled in panchagavya* in order to purify it. *Latex boiled with gingelly oil and rock salt is applied for cracks in feet. Leaf and fruit juice are mixed with butter and applied externally for five days for chronic wounds and ulcers. Latex is purified either by grinding it with butter, salt or washing with panchagavya or heating in fire. Purified plant paste is applied as a wound healer. Heated leaf juice is applied for five days in case of chronic wounds. Latex is mixed with gingelly oil, heated by adding rock salt and applied for cracks in heel. *A paste of rock salt with impure sodium chloride is filled in the hole made in its stem is burnt in charcoal. Its inner portion powder mixed with gingelly oil is applied for skin diseases. *Root along with that of Plumbago zeylanica, Calotropis gigantea, seed of Saussurea lappa and salt ground with cow urine are applied for chronic wounds and ulcers. Stem juice boiled with gingelly oil is applied externally for rheumatic pain. *Leaf along with coconut gratings are cooked, then the leaf is removed and eaten with meals for stomach swelling due to worm infestation. Leaf juice is used as purgative. *Root bark paste is applied for swellings. *Leaf juice mixed with neem oil is applied for rheumatism. *Heated leaf is pasted over lower abdomen region to cause urine flow or urination in case of urine block. *Juice of one foot long heated stem piece (without spines) is applied for measles. *Extract of the spine removed stem (heated in fire) is applied externally for measles, scabies and other skin diseases. *Latex is applied for piles. Paste of heated stem is applied externally for swellings.
Etymology: Patrasnuhi, Elegalli, Elakkalli, Ilakalli and Irekalli (leafy cactus) are due to its cactus like habit and prominent leaves. Gootagalli (stumpy post cactus) arose from its characteristic branches.

Note: It is used in the preparation of Citrakadi taila, Abhaya lavana, Avittoladi bhasma, Snuhayadi taila, Snuhayadi vati and Vajrakashara (Dey, 1994; Sharma et al., 1998). Euphol, nerifoliol, zuphorbon and caoutchouc are the active components giving anthelmintic, purgative and diuretic properties (Dey, 1994; Jain et al., 1991; Sharma et al., 1998). Plant is often planted as hedge plant.

376. Euphorbia thymifolia L. (Plate 63 F)

Syn: Chamaesyce thymifolia (L.) Millsp.

Family: Euphorbiaceae

Vernacular Name: San: Dugdhika, Laghudugdhika, Nagarjuni
Eng: Pill bearing spurge, Snake weed
Kan: Chitrapala, Kempukodi, Nagarjuni, Kempu neneakki gida
Mal: Chitapala, Nilappala
Tulu: Kempukodi

Habit: Prostrate herb.

Habitat: Wastelands and gardens.

Status: Common. Weed.

Description: Prostrate herb, with hispid, reddish stem. Leaves simple, oblong or ovate, oblique, sparsely hairy, reddish. Cyathia axillary, in small cymes. Male flower: one naked stamen. Female flower: a stalked 3-celled ovary; styles 3. Fruit appressed pubescent, keeled capsule, with 4-angled seeds.

Uses: *Latex is daily applied for whitlow and in growing toenails. *Plant juice is given for digestive disorders in children and has antiseptic property. *Whole plant ground in curd is recommended to increase lactation and to persons suffering from burning urination. *Whole plant ground with cumin seeds in cold milk is consumed
internally for three days in case of mouth ulcers. Plant decoction is taken for leucorrhoea and amenorrhoea. *Young shoot tip tambuli*, is used for mouth ulcers. Whole plant ground in milk is given as a tonic. *Whole plant paste is applied for urticaria and rashes. *Plant ground with cumin seeds in fresh milk is taken internally and paste is applied on head for jaundice. *Whole plant cooked with rice is eaten for leucorrhoea.

Etymology: Dugdhika (one with milky latex), Laghudugdhika (smaller milky latex plant), Kempukodi (red herb) and Nilappala (ground milky herb) arose due to its milky latex, small habit when compared with *Euphorbia hirta* and reddish plant body.

Note: Quercetin, triacontane, jambulon, euphosterol, phytosterolin and xanthorhamnin are the active constituents with anthelmintic and expectorant activities (Kapoor, 1990). It is often used in synonymous with *Euphorbia hirta*.

**377. Euphorbia tirucalli** L. (Plate 64 A)

Family: Euphorbiaceae

Vernacular Name: San: Snuhi, Bahukshira, Trikantaka, Vajradruma  
Eng: Indian tree spurge, Milk bush, Pencil bush  
Kan: Kolukalli, Kolugalli, Kodugalli  
Mal: Katerumakkalli, Kolkalli, Kodikalli, Thirukkalli  
Tulu: Kolkalli

Habit: Small tree.

Habitat: Along hedges and foothills.

Status: Frequent. Exotic and poisonous.

Description: Succulent small tree, with spreading, cylindrical branches and milky latex; branchlets terete, polished, whorled, articulate. Leaves small, deciduous, linear-oblong. Cyathia green, in cymes on tubercles. Male flower: one naked stamen. Female flower: a stalked 3-celled ovary; styles 3. Fruit subglobose, smooth capsule.
Uses: *Decoction prepared from this plant is used as a bath by rheumatic patients. *Young shoot tip juice is given in limited dose for stomachache. Plant juice or latex mixed with butter is used as a laxative. *Plant ground or mixed with ashes of paddy husk and arecanut husk is applied for lymphoedema. Root decoction is taken for stomachache. *Stem paste is applied over septic wounds and ulcers to expel maggots. *This along with cow urine and a little mustard seeds are ground, applied and then the body is exposed to sunlight for an hour in case of leprosy. *The inner portion of split opened stem is filled with mustard seed paste and heated in charcoal. This is pressed for carbuncle and warts.

Etymology: Kolukalli, Kolugalli and Kolkalli (stick or rod cactus) are due to its characteristic succulent, cylindrical branches.

Note: Using its latex words are written in a paper, later, that portion is rubbed using charcoal so that the written words become clear. This is a popular magic shown by children in rural villages. A cloth which is smeared with its latex three times and dried never catches fire (Children’s magic). Plant latex is poisonous and the plant is used for fencing.

**378. Evolvulus alsinoides** (L.) L. var. alsinoides (Plate 64 B)

Syn: *Convolvulus alsinoides* L.

Family: Convolvulaceae

Vernacular Name: San: Nilapushpi, Nilasankhapuspi, Sankhapuspi, Vishnukranta, Vishnukranti
Eng: English speed wheel
Kan: Vishnukranti, Vishugandhi, Krishnakranti
Mal: Krishnakranthi, Thalavalathi, Vishnukranthi
Tulu: Vishnukranti

Habit: Trailing herb.

Habitat: Grasslands.
Status: Common.

Description: Perennial herb, with woody rootstock; stems slender, spreading or trailing, clothed with long spreading hairs. Leaves simple, elliptic to linear-oblong, silky pilose. Flowers in axillary cymes; peduncles much longer than the leaves. Sepals 5, ovate-lanceolate. Corolla blue, funnel-shaped; limb plicate. Stamens 5. Fruit globose capsule.

Uses: *Whole plant decoction with milk is used as a general health tonic. Whole plant decoction is used for fever, dysentery, cough and rheumatism. Oil prepared from plant juice is used as hair oil. *Extract of white flowered variety is given for snake bite. *Whole plant extract with milk is given to increase memory power. *Whole plant extract with Aloe vera leaf and Cassytha filiformis stem is heated with coconut oil and gingelly oil (1:1) and is applied to head for raktavata. *Lehyam prepared from whole plant powder is taken for urinary stones, rheumatism, phlegm and raktavata. *Plant decoction is consumed to remove toxic substances from the body. *Crushed whole plant boiled in water is reduced after adding milk and given with sugar as a tonic to children. *Whole plant decoction is used with honey for 14 days to make the children active. *Lehyam or decoction of whole plant is given as a nerve tonic, hair tonic, blood purifier, for fever and asthma. Plant decoction is used for prostate enlargement. *15 – 20 gm crushed whole plant is boiled, milk is added, again boiled and is given by adding sugar for two weeks in a month in case malnutrition or under developed children. *15 – 20 gm whole plant boiled in three cup of water is reduced to 1 1/2 cup and is given with one spoon honey at night and morning for 14 days to make the children active. *Whole plant, pepper, Tinospora cordifolia stem, ginger and Ocimum tenuiflorum leaf (in equal quantity) powder decoction is used for influenza. *Root, Withania somnifera, trikatu and Mesua ferrea stamen (in equal quantity) powder mixed with ghee is given for five days from the 4th day of menses for conception. *Leaves dried in sunlight are ground with milk and given with milk once a day for a week for ejaculation in dream. *Whole plant, Bengal gram plant and Cedrus deodara heart wood (in equal quantity) are ground with lime juice, heated and applied over the head for delirium.
Etymology: Nilapushpi (standing upright flower), Vishnukranti and Vishnukranthi (Vishnu’s desire) arose as the flowers are borne upright on the trailing stem and flowers are considered sacred to lord Vishnu.

Note: Plant is also used for making curries like *sambar* and *pallya*. It is used in the preparation of *Mrtasanjivani vati* and *Aranyatulasimuladi kashaya* (Sivarajan & Balachandran, 1996). Betaine and evolvine are the active constituents with diuretic property (Dey, 1994; Jain *et al.*, 1991).

379. *Evolvulus nummularius* (L.) L. (Plate 64 C)

Syn: *Convolvulus nummularius* L.

Family: Convolvulaceae

Vernacular Name: San: Nilapushpi, Vishnukranta, Vishnukranti

   Eng: English speed wheel
   Kan: Bili Vishnukranti
   Mal: Vella Vishnukranthi
   Tulu: Boldu Vishnukranti

Habit: Prostrate herb.

Habitat: Weed in gardens and moist places.

Status: Common. Exotic and weed.

Description: Perennial herb, with prostrate, appressed tomentose stem. Leaves simple, broadly ovate to orbicular, pubescent beneath. Flowers 1 or 2 in the leaf-axils. Sepals 5, elliptic-ovate, margin ciliate. Corolla white, rotate to broadly funnel-shaped; limb plicate. Stamens 5. Fruit globose capsule.

Uses: *Plant extract is given as a tonic and is used in place of Evolvulus alsinoides.*

Etymology: Nilapushpi (standing upright flower), Bili Vishnukranti, Vella Vishnukranthi and Boldu Vishnukranti (white Vishnu’s desire) arose as the white
flowers are borne upright on the trailing stem and resemble that of *Evolvulus nummularius*.

Note: It is used as a substitute for *Evolvulus alsinoides*.

**380. *Exacum tetragonum* Roxb. (Plate 64 D)**

Syn: *Exacum bicolor* Roxb.

Family: Gentianaceae

Vernacular Name: Kan: Akkathangiyara hoo, Akkathangi hoo, Dodda chirayitha  
Mal: Kannamthali  
Tulu: Akkathangi poo

Habit: Tall herb.

Habitat: Grassy hill slopes.

Status: Locally abundant.

Description: Tall stout herb, with sharply 4-angled stem. Leaves simple, ovate to oblong-lanceate, chartaceous, subauriculate at base. Flowers in dense terminal dichasial cymes. Calyx 4-lobed; lobes ovate, cuspidate at apex, broadly winged. Corolla tubular-campanulate, bluish-white; lobes 4, broadly obovate, spreading. Stamens 4. Fruit ovoid capsule.

Uses: *Whole plant decoction is given for hysteria in ladies. *Tuber decoction is recommended for any type of fever. *Tuber and turmeric powder decoction is used for infections. *Whole plant paste with cumin seeds (in hot water) is applied for water oozing wounds. *Plant decoction is a blood purifier, laxative and is digestive (overdose may cause diarrhoea).

Etymology: Akkathangiyara hoo, Akkathangi hoo and Akkathangi poo (elder sister younger sister flower) and Dodda chirayitha (larger *Swertia*) as the flowers are borne at two levels and resemble *Swertia* in habit.
Note: Flower is used to worship Mahabali during Deepavali. Flowers are worn by the ladies.

381. *Excoecaria agallocha* L. (Plate 64 E)

Syn: *Stillingia agallocha* (L.) Baill.

Family: Euphorbiaceae

Vernacular Name: San: Agaru, Gangua, Tilvakah, Ugaru
Eng: Blinding tree
Kan: Kammatta, Tillamara, Harogida
Mal: Komatti, Kammetti, Kannampotti
Tulu: Neerkanapatte, Neerkanappatti

Habit: Small tree.

Habitat: In marshes along the sea coast.

Status: Frequent. Poisonous.

Description: Evergreen tree, with poisonous milky latex. Leaves simple, ovate-elliptic, glabrous. Flowers monoecious, minute, in terminal or axillary spikes or racemes. Male spikes catkin like, crowded at the ends of the branches. Male flowers 1 – 3 in each bract; bracteoles 2. Female flowers in racemes, axillary; rachis with large glands at the sides of the bracts. Calyx 2 – 3-divided in male, 3-fid in female. Corolla absent. Stamens 3. Fruit deeply lobed capsule of 3 cocci.

Uses: *Bark paste is applied for chronic wounds and skin diseases.*

Etymology: Kannampotti (one which can cause blindness), Neerkanapatte and Neerkanappatti (water blinding tree) arose due to its poisonous latex which if comes in contact with the eyes can cause blindness and habitat. It grows along the marshes and mangroves.

Note: Latex is highly poisonous.
382. *Fagraea ceilanica* Thunb. (Plate 64 F)


Family: Loganiaceae

Vernacular Name: Eng: Lau binh, Gia, Perfume flower tree, Pua keni keni  
Kan: Ginnunnu, Jinnunnu, Menakalli  
Mal: Kompal, Modakam, Modakakkodi, Omal, Vellarimodakam  
Tulu: Berimullu

Habit: Epiphytic shrub.

Habitat: Semi evergreen forests.

Status: Frequent.

Description: Large epiphytic or scandent shrub. Leaves simple, succulent, elliptic or obovate, narrowed into the petiole, sparsely pubescent beneath. Flowers large, scented, in axillary, peduncled 1 – 5 flowered cymes. Calyx deeply 5-lobed; lobes thick, persistent. Corolla with a long tube, funnel-shaped, white or yellowish; lobes 5, rounded. Stamens 5. Fruit ellipsoid berry, black when ripe.

Uses: *Plant or leaf paste with rice cooked water is applied on the back side of body for scurvy and other types of malnutrition symptoms.*

Etymology: Menakalli (uplifted or above cactus) and Berimullu (scurvy) arose due to its epiphytic nature, succulent plant body and therapeutic efficacy against scurvy.

Note: Much valued drug for malnutrition in children.

383. *Ficus amplissima* J. E. Smith. (Plate 65 A)

Syn: *Ficus tsiela* Roxb. ex Buch.-Ham.

Family: Moraceae

Vernacular Name: San: Candrata, Parkati, Plaksa, Vatiplaksa
Eng: Yellow barked fig
Kan: Basarugoli, Bilibasari, Bilibasuri, Doddabasari
Mal: Tsjela
Tulu: Boldubasri, Basrigoli

Habit: Large tree.

Habitat: Along roadsides.

Status: Frequent.

Description: Large tree, with or without aerial roots. Leaves simple, ovate-lanceolate, glabrous; stipules large, sheathing the terminal bud, caducous. Flowers minute, unisexual, on the inner surface of ovoid syconium. Figs in axillary pairs, sessile, globose, pink to purple when ripe; basal bracts 3, small, ovate. Fruit achene, inside enlarged fig.

Uses: *Bud or bark decoction is given for four days from the 4th day of menses for conception. *Oil prepared from the bark decoction is used for scabies in head, rheumatism and also for digestive disorders.

Etymology: Basarugoli, Basrigoli (pregnancy fig), Bilibasari, Bilibasuri, Boldubasri (white pregnancy plant) and Doddabasari (larger pregnancy plant) arose from its use for conception, white bark, close resemblance with Ficus tsjahela or Ficus tinctoria and larger habit.

Note: It is widely used as a substitute for Ficus microcarpa.

384. Ficus arnottiana (Miq.) Miq. (Plate 65 B)

Syn: Urostigma arnottiana Miq.

Family: Moraceae

Vernacular Name: San: Kapitanah, Nandi, Plaksa, Plaksah, Plaksha
Eng: Wild peepul, Shark tailed peepul
Kan: Kallarali, Kaadashwattha, Kallashwattha
Mal: Kallal, Kallarayal
Tulu: Kallatthaso, Kattatthaso

Habit: Small tree.

Habitat: Rocky places.

Status: Common.

Description: Small tree, without aerial roots. Leaves simple, broadly ovate, cordate at base, glabrous. Figs sessile or very shortly peduncled, depressed-globose, in clusters or pairs on tubercles in the axils of fallen leaves, purple with greenish dots when ripe; basal bracts 3, orbicular.

Uses: *Bark powder is dusted or paste is applied over ulcers and boils in the head of children. *Bud extract is given for digestive tract disorders. Bark decoction is given for urinary tract infections, constipation, skin diseases, itches, scabies, wounds and diabetes. Bark paste is applied for carbuncles. *Decoction prepared from its bark and Buchanania lanzan bark is used for rheumatism. Bark paste is applied for ulcers. *Bath with bark decoction is given for herpes. *Heart wood extract is used as eye drop for eye disorders.

Etymology: Kaadashwattha, Kattatthaso (wild peepul tree), Kallashwattha, Kallarayal, Kallatthaso (rock peepul tree) and Kallal (rock fig) are due to its habit and habitat. It has leaves which closely resemble that of Ficus religiosa and usually inhabit rocky areas.

Note: It is the 5th tree with latex in panchavalkala* in addition to nalpamara*. It is the ingredient of Nyagrodhadi kvatha and Nyagrodhadi churna (Sharma et al., 1998).

385. Ficus auriculata Lour. (Plate 65 C)

Syn: Ficus macrophylla Roxb.; Ficus roxburghii Wall. ex Miq.

Family: Moraceae
Vernacular Name: San: Anjira, Kakodumbara, Phalgu, Rajodumbara
Eng: Elephant ear fig tree, Giant Indian fig
Kan: Anjoora, Anjeera, Seeme atthi
Mal: Atthi
Tulu: Anjoora parandu

Habit: Small tree.

Habitat: Cultivated in gardens.

Status: Frequent.

Description: Small spreading tree, without aerial roots. Leaves simple, broadly ovate or suborbicular, pubescent beneath, basal veins 6 – 7. Figs turbinate, peduncled with longitudinal ridges, on short leafless branches from the trunk, pubescent, purplish or reddish when ripe; basal bracts 3, triangular.

Uses: *Bark decoction and fruit are beneficial for gastric ulcers and burning urination. Fruit juice is given to expel phlegm. *Root extract is applied for ring worm and tinea versicolor. *Fried fruit paste is applied for gum problems. *Unripe fruit juice is used for phlegm, warts and is diuretic. *Dry fruit paste is applied for ulcers and wounds with foul smell. *One handful fruit and grapes soaked water is given in empty stomach once in a day for diabetes.

Etymology: Rajodumbara (king country fig) arose due to the close affinity of fruits with that of *Ficus racemosa and larger size of leaves.

Note: Fig is rich in iron. Ripe figs are eaten.

**386. Ficus benghalensis** L. var. *benghalensis* Hook. f. (Plate 65 D)

Syn: *Urostigma benghalense* (L.) Gasp.

Family: Moraceae

Vernacular Name: San: Bahupada, Nyagrodha, Vata, Vatah
Eng: Banyan tree, Bengal fig, Indian fig
Kan: Aala, Aaladamara, Goli, Golimara  
Mal: Alamaram, Peraal, Aal, Vadavriksham  
Tulu: Golithamaro

Habit: Large tree.

Habitat: Along roadsides.

Status: Common.

Description: Large spreading tree, with numerous aerial roots. Leaves simple, elliptic-ovate, coriaceous, pubescent beneath. Figs in axillary pairs, sessile, globose, red when ripe, puberulous; basal bracts 3, suborbicular.

Uses: *White terminal portion of prop root ground in milk is given for burning sensation and is a general tonic. *Paste prepared from its bark, castor oil, bee wax and turmeric is used as a quick healer for cracks in feet. *Oil prepared using its latex and milk is used to prevent hair fall and for sleeplessness. Latex is used for ulcers, cracks in heel and toothache. Bark decoction is recommended for leucorrhoea, dysentery and has cooling effect. *Red shoot tip of hanging root ground with cumin seeds and milk is given for four days from 4th day of menses for conception. Bark decoction is given as cooling agent, tonic, for skin diseases, eye diseases, vomiting, diarrhoea, leucorrhoea and allergy; while its bud extract or paste is given for dysentery. *Hanging root crushed with cumin seeds in milk is given to prevent abortion and bleeding during pregnancy. Hanging root extract in milk is given for leucorrhoea. *Bark, that of Ficus racemosa, Ficus religiosa, Ficus microcarpa, pepper seeds, fruit of Capsicum frutescens and bark of Eucalyptus tereticornis are boiled for three days in water. The resulting decoction by adding pepper powder and Eucalyptus tereticornis bark powder is poured into nose in case of chronic or fatal illness of cattle. Bark decoction is a tonic and is used to wash wounds and for rheumatism. *Bark of tree growing on the sides of Strychnos tree is made into a decoction with cumin seeds and is given for burning sensation and raktavata*. Leaf paste with jaggery is applied for swelling after bruises. Tender shoot tip decoction with milk and cumin seeds is given in empty stomach for
leucorrhoea. *Bark along with that of Ficus racemosa, Ficus religiosa and Ficus microcarpa are cooked with rice and is given for mouth ulcers and increased body temperature. *Tender shoot tip ground in previous day water is given in the morning, in empty stomach for six days from 4th day of menses for irregular menstruation. Bark is added to the above preparation, if there is over bleeding. Root ground in water is mixed with honey and is applied for colour change in skin, itches and water release from skin. *Ashes of full grown yellow leaf mixed with gingelly oil are applied for bleeding piles. Hanging root tip crushed with cumin seeds in milk is given for jaundice. *Decoction made of Dendrophthoe falcata growing on this plant and on Ficus racemosa with cumin seeds is given for one month for jaundice. *Decoction prepared from its bark and fruit of Coix lacryma-jobi is used for pain in hands and legs. 5 – 7 tender shoot tips and cumin seeds are ground in cold milk and taken for 6 – 12 days in case of menstrual disorders. *Hanging root juice ground with Glycyrrhiza glabra rhizome powder is used with honey for vomiting during pregnancy. Hanging root extract in buttermilk is used for dysentery. *Bark with that of Ficus racemosa, Ficus religiosa, Ficus microcarpa, sandalwood and red sandal wood (in equal quantity) are ground, kept inside the tender coconut water, covered by its husk and soil, heated in fire, the resulting extract is applied for rashes and urticaria. Fruit along with betel leaf, Garcinia morella fruit, Acorus calamus rhizome, Saussurea lappa seeds and turmeric (in equal quantity) are ground, heated by adding gingelly oil and is applied for warts, itches, ring worm and scabies. *Decoction made of its bark, which of Ficus racemosa, Ficus religiosa and Ficus microcarpa with milk is given in the morning by adding one spoon sugar for a period of six days for blood and biliousness problems. *Hanging root tip paste with milk is mixed with dried turmeric rhizome paste, purified bee wax and castor oil. This mixture is heated into a thick paste and used as an ointment for cracks in heel.

Etymology: Bahupada (multi footed) arose due to its spreading nature with numerous aerial roots.
Note: It is used in the preparation of *Nyagrodhadi kvatha*, *Nyagrodhadi churna*, *Kunkumadi taila*, *Rasasindhura*, *Abhrika bhasma*, *Saribadya sara*, *Khadiya gutika*, *Brhat candanadi taila*, *Candanasava*, *Dinesavalyadi kulambu* and *Nyagrodhadya ghrta* (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma *et al*., 1998). Triterpene, friadalin, β-sitosterol, caoutchouc, γ-taraxosterol, quercetin and rutin are the active constituents (Dey, 1994; Kapoor, 1990). It is one among the *nalpamara*.

### 387. *Ficus callosa* Willd. (Plate 65 E)

Family: Moraceae

Vernacular Name: Kan: Thaudugoli, Neeruvate  
Mal: Kadaplavu  
Tulu: Neerpajevu, Neerpaje

Habit: Large tree.

Habitat: Semi evergreen forests, especially along streams.

Status: Frequent.

Description: Large tree, with buttressed base and without aerial roots. Leaves simple, ovate or oblong, glabrous above, scaberulus and slightly pubescent beneath. Figs peduncled, solitary, axillary, globose, scabrid-hispid; bracts 3, at the top of peduncle, ovate, pubescent.

Uses: *Paste prepared from its root bark, cumin, pepper seeds and jaggery is given to eat in cases of cough with irritation in throat and bronchial asthma. *Bark decoction is given internally while its paste is applied externally for rheumatism. *Latex in terms of drops (1 or 2) is given in milk to expel worms and diphtheria in children. Overdose may become fatal.

Etymology: Thaudugoli (bran coloured fig) and Neerpajevu (water sand paper tree) arose due to its bran coloured bark, scabrid leaves and soft wooded stem, rich in water content. It usually grows along streams.

Note: It is a soft wooded tree.
388. *Ficus exasperata* Vahl. (Plate 65 F)

Syn: *Ficus asperrima* Roxb.

Family: Moraceae

Vernacular Name: San: Kharapatra
- Eng: Sand paper tree
- Kan: Garagatthi, Garagasa ele, Kharavatthi
- Mal: Parakam, Therakam
- Tulu: Paaje thappu, Paajovu, Paajevu, Paajeyi

Habit: Small tree.

Habitat: Semi evergreen forests and plains.

Status: Common.

Description: Small deciduous tree, without aerial roots; young parts scabrid. Leaves simple, ovate or ovate-lanceolate; sometimes irregularly and deeply 3-lobed, very scabrid. Figs solitary, axillary, peduncled, depressed-globose, scabrous-hispid, yellow when ripe; basal bracts 2 – 3, small, scattered.

Uses: *Bark and fruit decoction is used to wash leprosy affected areas. *Paste of its leaf latex with lime is applied for lymph node enlargement and tonsillitis.  
*Powdered leaf mixed with sugarcandy and honey is given for whooping cough in children.  *Leaf fried with gingelly seeds is powdered and given for cough.  Latex or leaf is rubbed over head for alopecia totalis, while leaf paste for liver and spleen diseases, skin diseases and lymph node swellings. Bark or fruit decoction is given for leprosy.  *Bark cooked with rice is consumed while paste of it fried in ghee is applied externally for viper bite.  Bark paste is applied for skin diseases and warts.  
*The latex or juice oozing out from the wound that is made in its stem is applied to expel maggots from wounds of cattle or humans.  *Leaf is given to eat in order to expel placenta in cattle.  *Outer skin removed bark cooked with rice is eaten with coconut milk while bark paste is applied externally for psoriasis.  *Dried leaf powder is given with sugar for dry cough. Root decoction is recommended for joint
pain. * A gooseberry size paste of bark ground with coconut milk is recommended
daily morning while oil extracted by grinding its bark with coconut milk and
keeping it in sunlight is applied externally for chronic ulcers. *Latex mixed with that
of *Carica papaya* and fruit juice of *Cyclea peltata* are applied for ringworm. Bark
paste with water is applied for ringworm. Bark paste is applied for swellings.

Etymology: Kharapatra (rough leaf), Garagasa ele (axe leaf), Paaje thappu and
Paajovu (scrub leaf) are due to its characteristic scabrid, serrate leaves and their use
as sand paper.

Note: Leaves are used as sand paper to clean the wooden particles and also to wash
utensils.

**389. Ficus hispida** L. f. *(Plate 66 A)*

Syn: *Ficus oppositifolia* Roxb.

Family: Moraceae

Vernacular Name: San: Kakodumbara, Kakodumbarika, Kharapatrika,
Kshudrodumbara, Phalgu

Eng: Wild fig, Devil’s fig, Crow fig, Mad fig

Kan: Kaadatthi, Adavi athi

Mal: Erumanakku, Kattatthi, Parakam, Thondi

Tulu: Ande paajovu, Ande paajeyi

Habit: Small tree.

Habitat: Moist places and along banks of rivers.

Status: Common.

Description: Small tree or shrub, hispidly pubescent, with hollow internodes. Leaves
simple, ovate-oblong, scabrid. Figs clustered on tubercles of the stem or on leafless
hanging branches arising in clusters from the trunk, sometimes trailing on the
ground, depressed-globose, hispid, yellowish when ripe; basal bracts 3.
Uses: *Paste prepared from its root bark, pepper, cumin seeds and jaggery is given for irritated throat and bronchial asthma. *Cooked fruit salad improves digestive system. *Root juice mixed with sugar is given for urinary disorders. *Leaf is given to cattle in case of indigestion as it is digestive. It is also given to expel placenta in cattle. *1 ½ ounce of water oozing out from the wound made on the stem is mixed with water and is given once in night and is taken with meals mixed with butter milk for chronic skin diseases. Bark paste is applied for skin diseases and warts. *Leaf powder mixed with honey and fried rice powder is given for dry cough and sound clearance in children.

Etymology: Kakodumbara, Kakodumbarika (crow country fig), Kharapatrika (rough leaf), Erumanakku (buffalo’s tongue), Kshudrodumbara (inferior country fig), Kaadatthi, Adavi athi, Kattatthi (wild country fig), Ande paajovu and Ande paajeyi (hollow sand paper tree) are due to the resemblance of its fruits with that of *Ficus racemosa*, restriction to forests, characteristic scabrid leaves resembling buffalo’s tongue and hollow internodes.

Note: Young fruits are used as vegetable. Saponin is the active component with purgative and emetic action (Chaudhri, 1996). It is used in the preparation of *Citrakadi taila* and *Mahapancagavya ghrta* (Sharma et al., 1998).

390. *Ficus microcarpa* L. f. (Plate 66 B)

Syn: *Ficus retusa* King.

Family: Moraceae

Vernacular Name: San: Gajapadapa, Ksavatru, Kuberaka, Plaksah  
Eng: Chinese banyan, Indian laurel  
Kan: Kirigoli, Kirugoli, Phaniyala, Itthi  
Mal: Ithi, Ithiyal, Kallithi  
Tulu: Kinnigoli, Itthi

Habit: Large tree.

Habitat: Along roadsides.
Status: Frequent.

Description: Large evergreen tree, with few aerial roots. Leaves simple, elliptic-obovate, narrowed at base, glabrous, coriaceous. Figs in axillary pairs, sessile, depressed-globose, yellowish when ripe; basal bracts 3, suborbicular.

Uses: *Bark ground in milk is given for stomach and mouth ulcers. The same made into a paste is applied for ulcers in genitals. *Latex is applied for penis ulcers and blisters. Oil prepared from its bark decoction is applied externally for rheumatism. *Latex of stem is applied on head for ulcers on head and malabsorption in children. Bath with bark decoction or application of its paste is recommended for skin diseases. *Twigs are used as toothbrush to prevent dental cavities. Bark decoction is given as a cooling agent for stomachache, ulcers, liver problems, mouth ulcers, leucorrhoea and watery legs. *Decoction made of its bark, which of Ficus racemosa, Ficus religiosa, Ficus benghalensis, ginger and cumin seeds is given for loss of appetite in cattle after fever. *Decoction made of its bark, which of Ficus racemosa, Ficus religiosa and Ficus benghalensis is used to wash the body in case of urticaria and rashes. Bark decoction is recommended for rheumatism. Bark decoction is also used to wash wounds, cuts and as a blood purifier. *Bark of the tree growing on the side of Strychnos tree is made into a decoction with cumin seeds for burning sensation and raktavata. Bark decoction is recommended for biliousness, blood purification and gastric ulcers. *Bark extract with fresh milk is given for six days in case of foul smell of urine in children.

Etymology: Kirigoli, Kirugoli and Kinnigoli (smaller banyan tree) are due to its habit, which is the miniature of banyan tree.

Note: Leaf is used in house filling ceremony. It is one among the nalpamara. It is used in the preparation of Gandha taila, Usirasava, Nalpamaradi taila, Dinesavalyadi kulambu, Parantyadi taila and Brhat marma gutika (Sivarajan & Balachandran, 1996).
391. *Ficus racemosa* L. (Plate 66 C)

Syn: *Ficus glomerata* Roxb.

Family: Moraceae

Vernacular Name: San: Sadaphala, Udumbara, Udumbarah, Yajnodumbarah
   Eng: Cluster fig, Gular fig, Country fig
   Kan: Atthimara, Atthi
   Mal: Atthi, Atthial, Udumbaram
   Tulu: Arthimaro, Arthi

Habit: Medium-sized tree.

Habitat: Near villages.

Status: Common.

Description: Medium-sized deciduous tree, without aerial leaves. Leaves simple, ovate-oblong to lanceolate, glabrous. Figs on short leafless branches from the trunk or larger branches, obovoid, tomentose when young, reddish when ripe; basal bracts 3, triangular-ovate.

Uses: *Bark cooked along with rice is given in the month of Aati* for biliousness, for cooling effect and also as health tonic. Fruit juice is used for gastritis. Bark paste is applied to ulcers or boils on body due to excessive heat. *Fruit, gingelly seeds and Leucas aspera flower ground in milk is applied for head ulcers in children.* *Water oozing out from the cut root is used for gastric ulcers; it has cooling effect and is a tonic.* *Bark along with barks of Ziziphus rugosa and Ficus microcarpa cooked with rice is recommended to overcome mouth ulcers. Decoction made of its bark, which of Ficus religiosa, Ficus microcarpa and Ficus benghalensis is used as a bath for ladies after delivery, children and in leucorrhoea. Acrid juice of the plant is applied over penis ulcers. Bark decoction is given along with food prepared from arrowroot powder for burning urination, leucorrhoea, dysmenorrhoea and gastritis. *Paste made of its bark powder with gingelly seeds is used for old ulcers. Bark decoction is used for 2 – 3 months to prevent abortion and
also to wash wounds and ulcers, increases lactation, useful for leucorrhoea, urinary disorders and gastritis. Leaf powder mixed with honey is given for biliousness. Leaf decoction is used to wash ulcers. Tender fruit is eaten for biliousness and diarrhoea, while ripe for menorrhagia. Latex has aphrodisiac property and is given for diarrhoea. Bark decoction is used for dysentery, diabetes and ulcers. The water from cut root is given for leucorrhoea and urinary disorders. *Leaf is fed to cattle to increase lactation. Bark decoction is used for washing wounds and ulcers. It is a blood purifier. *Decoction prepared of its bark and that of *Saraca asoca* is used for leucorrhoea. Bark decoction is used for blood purification, biliousness and digestive tract ulcers. *Tambuli* prepared using tender shoot tip is useful for people of cold and hot type, also for diarrhoea. It is recommended during the month of *Ashada*.

*Decoction made of its bark, which of *Ficus religiosa*, *Ficus microcarpa*, *Ficus benghalensis*, roots of *Protasparagus racemosus*, *Hemidesmus indicus*, *Cyclea peltata*, flower of *Cocos nucifera* and white gingelly seeds is used for burning sensation during urination and brain fever. *Bark, tender shoot tip and young fruit are crushed and made into a decoction which is given for 14 days by mixing with saffron coloured soil powder for leucorrhoea, amenorrhoea, blood in urine and stool. *Tender shoot tip ground in water is given by adding sugarcandy before sunrise for burning sensation in stomach. *Bark, that of *Ficus benghalensis*, *Ficus microcarpa*, *Ficus religiosa* and *Mangifera indica* are made into a decoction which is used as a wash for water oozing wounds. Bark paste with coconut water is applied for chronic body pain. Fried leaf ground in milk is used for bleeding piles. *Bark paste with that of *Litsea glutinosa* is applied for bruises. *Tender shoot tip ground in milk is given for jaundice. Decoction made of its bark, which of *Ficus microcarpa*, *Ficus benghalensis* and *Ficus religiosa* is used as bath for over sweating. This decoction heated with *Glycyrrhiza glabra* rhizome powder and ghee is applied for wounds. *Bark, that of *Ficus microcarpa*, *Ficus benghalensis* and *Ficus religiosa* are made into a decoction. Sandal wood or red sandal wood ground in this decoction is applied for scabies and blisters in children. Bark along with that of *Pterocarpus marsupium* and *Ziziphus mauritiana* is cooked with rice and is used for cracks in feet and hands. *100 ml of water oozing from cut stem is given with sugarcandy for 6 – 12 days in
case of over bleeding during menses. *Fruit, gingelly seeds and Leucas aspera flower are cooked in milk, ground in butter and is applied for furuncles in head. Fruit boiled in milk is given for leucorrhoea. *Bark along with that of Pterocarpus marsupium and Ziziphus jujuba are made into decoction. This decoction is used to cook rice and resulting gruel is eaten for seven days for itches, scabies and ringworm. *Bark, that of Ficus benghalensis, Ficus microcarpa, Ficus religiosa, sandal wood, Ixora coccinea root and Ventilago maderaspatana root are crushed, boiled in coconut oil and the resulting oil is used to massage the body of newborn babies from 10th day onwards. Fruit along with Leucas aspera flower and black gingelly seeds (in equal quantity) are cooked in milk, ground into a paste which is applied externally for itching, bleeding ulcers and psoriasis in head. *Bark pieces fried with ghee and ground into paste is applied externally for quick heal of boils or furuncles after pus release. *The gruel prepared by cooking its bark with Ampelocissus indica tuber is given to eat in case of urticaria, rashes and herpes.

Etymology: It is much used in the traditional Indian ritual yajna (sacred fire) hence the name Yajnodumbara (yajna country fig or sacred fig).

Note: It is one among the nalpamara. Young figs are used as vegetable, while the ripe ones are eaten raw. It is highly used in religious rituals. It is used in the preparations like Nyagrodhadi kvatha, Nyagrodhadi churna, Mutrasamgrahaniya kashaya, Mutrasamgrahaniya churna, Nalpamaradi kera, Candanasava, Brhat candanadi taila, Dinesavalyadi kulambu, Brhat arimedas taila (Sivarajan & Balachandran, 1996; Sharma et al., 1998). Glauanol acetate, ceryl behenate, α-amyrin, lupeol, caoutchouc, leucoanthocyanin and β-sitosterol are the active constituents with astringent and hypoglycaemic activities (Jain et al., 1991, Kapoor, 1990).

392. Ficus religiosa L. (Plate 66 D)

Syn: Urostigma religiosum (L.) Gasp.

Family: Moraceae
Vernacular Name: San: Ashvatha, Asvattha, Bodhidruma, Bodhivrksha, Ksiradruma, Pippala, Yajnika
Eng: Peepal tree, Pipal, Pipul, Sacred fig
Kan: Aralimara, Ashwattha, Brahmadaru
Mal: Arayal, Ashwatham, Bodhivriksham
Tulu: Ashwattho, Atthaso, Asvattho

Habit: Large tree.

Habitat: Near temples and villages.

Status: Common.

Description: Large glabrous tree, without aerial roots. Leaves simple, broadly elliptic-ovate or suborbicular, coriaceous, 3 – 5 veined from base. Figs in axillary pairs, sessile, globose, dark-purple when ripe; basal bracts 3, suborbicular.

Uses: Young shoot tip ground and boiled in milk is given for dysentery and amoebiasis. Bark decoction is given for small pox, mouth ulcers, rashes, urticaria and release of sperm in dreams. Bark extract has antibacterial and aphrodisiac properties; it is given for diarrhoea and gastroenteritis. *Ashes of dried bark mixed with butter are applied for complete cure from warts. Eating fruit gives laxative action. Fruit powder is taken with honey for asthma. Tender leaf cooked in milk is given for diarrhoea and also as a cooling agent. *Bark decoction with barks of Ficus microcarpa, Ficus racemosa and Ficus benghalensis is given to prevent recurrent urticaria. It is used as a bath by ladies after delivery, as a coffee for increasing immunity and as a health tonic for leucorrhoea. Bark decoction is used to wash wounds and ulcers. It is a blood purifier. Bark decoction is used for rheumatism and as gargle for toothache. Bark along with that of Ficus racemosa, Ficus benghalensis and Ficus microcarpa are made into a decoction with milk and is given as general health tonic. *Decoction prepared from the bark of this tree growing on the sides of Strychnos tree and cumin seeds are used for burning sensation and raktavata*. 4 – 8 fruits are given for 1 – 2 weeks in case of malabsorption in small children. *20 – 25 tender shoot tip ground in fresh milk is given at morning in
empty stomach to increase lactation. Leaf ashes dissolved in honey or butter milk is used to stop bleeding. Bark decoction is given for 48 days for gastro intestinal disorders. *Leaf cooked with rice is recommended for stammering. Bark along with that of *Ficus racemosa, Ficus benghalensis, Ficus microcarpa, Anacardium occidentale, Holigarna arnottiana, Syzygium caryophyllatum, Dalbergia volubilis, Pterocarpus marsupium, Lannea coromandelica, Cynodon dactylon and Centella asiatica made into a decoction or cooked with rice is given to increase lactation in cattle. Crushed leaves boiled in coconut oil are applied for burns. Bark decoction with equal amount of milk is given on 4th day of menses for conception. Leaf decoction is used for bathing small children. *Bud is ground and given with butter milk for three days for menstrual disorders. *Ointment made of bark ashes mixed with equal quantity of lime and ghee is used for anal swelling, piles, chronic ulcers, wounds and warts. *Bark ground in cooked *puvan banana juice is given for 3 – 6 days in case of *agnivisarpa, a kind of erysipelas. Gruel prepared by cooking bark with rice is given to eat or its decoction is used internally for rheumatism.

Etymology: Bodhidruma, Bodhivrksha, Bodhivriksham (teaching or knowing tree) arose as in the past the teachers used to teach under this tree. Ksiradrumpa (milk tree) is due to the presence of milky latex. Yajnika (plant used in *Yajna) and Brahmadaru (god’s tree) are as it is used much in *Yajna and is considered sacred.

Note: It is one among the *nalpamara. It is highly used in religious rituals like *hawana and house filling ceremony. It is used in the preparations like Nyagrodhadi kvatha, Nyagrodhadi churna, Nalpamaradi taila, Candanasava, Saribadyasava, Karnasulantakam, Brhat marma gutika and Kaccoradi taila (Sivarajan & Balachandran, 1996; Sharma et al., 1998). β-sitosterol, caoutchouc are the active constituents with antibacterial, relaxant and spasmolytic activities (Kapoor, 1990; Dey, 1994). Latex is used to seal holes in jewelleries.

393. *Ficus tinctoria* G. Forst. ssp. *gibbosa* (Blume) Corner (Plate 66 E)

Syn: *Ficus gibbosa* Blume

Family: Moraceae
Vernacular Name: San: Udumbara
Eng: Stone fig
Kan: Basarugoli, Bilibasari, Bilibasuri, Goddu mitlimara
Mal: Ithimottu
Tulu: Boldubasri, Basrigoli, Kanjolige

Habit: Epiphytic shrub.

Habitat: Along roadsides and plains.

Status: Frequent.

Description: Epiphytic shrub, with interlacing and anastomosing aerial roots encircling the host. Leaves simple, elliptic-ovate to lanceolate, gibbous on one side, scabrid. Figs axillary, solitary or in pairs, globose, scabrid, yellow when ripe; peduncles bracteates near the base.

Uses: *Tender shoot tip or buds ground with cumin seeds in milk is given for four days from the 4th day of menses for conception and to increase fertility. *Bark paste is applied for swelling due to rheumatism.

Etymology: Basarugoli, Basrigoli (pregnancy fig), Bilibasari, Bilibasuri, Boldubasri (white pregnancy plant) arose from its use for conception and white bark.

Note: Consumption of its leaves is poisonous for cattle.

394. *Ficus tsjahela* Burm. f. (Plate 66 F)

Family: Moraceae

Vernacular Name: San: Kapitanah, Plaksah
Eng: Yellow barked fig
Kan: Kappu basari, Kari basarigoli
Mal: Aal, Chela, Karaal, Kara
Tulu: Karibasri, Karibasari

Habit: Medium-sized tree.
Habitat: Forests and plains.

Status: Common.

Description: Medium-sized deciduous tree, without aerial roots. Leaves simple, ovate-oblong, coriaceous. Figs 2 – 6, clustered on short tubercles in the axils of present and fallen leaves, depressed-globose, whitish-yellow, dotted when ripe; basal bracts 3, suborbicular.

Use: *Bud or red shoot tip ground with cumin seeds in milk is given for five days from the day of menses of menstrual irregularities, leucorrhoea and infertility problems, also helps in conception. *Bark extract with milk is used for stomach disorders. *Bark paste is applied externally while decoction is given internally for rheumatism. *Bark paste is applied for swellings.

Etymology: Kappu basari, Karibasari, Karibasari (black pregnancy plant), Kari basarigoli (black pregnancy fig) are due to its blackish bark, use for conception and close affinity with *Ficus amplissima.*

Note: Leaves are poisonous to cattle. It is used in synonymous with *Ficus amplissima.*

**395. *Ficus virens* Ait. (Plate 67 A)**

Syn: *Ficus infectoria* Roxb.

Family: Moraceae

Vernacular Name: San: Plaksah

Kan: Kabbasari, Karibasari, Kaadubasari, Basarugoli

Mal: Chakkila, Cherla, Pepar

Tulu: Basrigoli

Habit: Medium-sized tree.

Habitat: Forests.

Status: Frequent.
Description: Medium-sized deciduous tree, with few aerial roots. Leaves simple, ovate or oblong-ovate, coriaceous. Figs in axillary pairs, subsessile, globose, pink to purple, dotted when ripe; basal bracts 3, ovate.

Uses: *Tender shoot gruel is given as a tonic for conception. *Bark decoction is used as wash for wounds and ulcers.

Etymology: Kabbasari, Karibasari (black pregnancy tree), Kaadubasari (wild pregnancy tree), Basarugoli and Basrigoli (pregnancy fig) are due to its blackish bark, restriction to the forests and use for conception.

Note: It is used in the preparation of Nyagrodhadi kvatha, Nyagrodhadi churna, Nalpamaradi taila and Marma gutika (Sharma et al., 1998).

396. Flacourtia indica (Burm. f.) Merr. (Plate 67 B)

Syn: Flacourtia ramontchi L’Herit; Flacourtia sepiaria Roxb.

Family: Flacourtiaceae

Vernacular Name: San: Aghori, Kantaki, Svardukantaka, Vikantaka

Eng: Batoko plum, Governor’s plum, Madagascar plum

Kan: Gajabeera, Soojikare, Soojigare, Soojimullu

Mal: Cherumullikkachedi, Karkkadappazham, Karimulli, Kattukara, Oushadakkara

Tulu: Jedeparandu, Jedemullu

Habit: Large shrub.

Habitat: Scrub jungles and rocky lateritic slopes.

Status: Common.

Description: Large shrub, with stout and sharp spines. Leaves simple, ovate or obovate, glabrous. Flowers small, dioecious, in small branched racemes or clusters. Sepals 4 – 5, ovate, ciliate. Petals absent. Stamens numerous. Fruit globose berry, about the size of a pea, dark purple when ripe.
Uses: Root decoction is given with honey for biliousness. Root decoction is recommended for fever. Ground root mixed with jaggery is given for dysentery and loss of appetite. Leaf paste is applied for eye sight problems. Plant ash is applied for spider bite. Root extract with milk is mixed with jaggery and given to induce appetite. Root paste is applied for skin diseases. Bark decoction is used for indigestion and to remove thrush from tongue. To the decoction made of one handful leaf one spoon honey is added and is given for asthma and bronchitis. Root decoction is used internally for stomachache in children.

Etymology: Kantaki (one with spines), Svadukantaka (tasty spines), Soojikare, Soojigare (sharp *Canthium*), Soojimullu (sharp spines), Kattukara (wild *Canthium*) and Oushadakkara (medicinal *Canthium*) are due to its sharp spines, which resemble that of *Canthium coromandelicum*, tasty fruits, wild nature and use as medicine.

Note: Fruit is edible. Flacourtin is the active component. It is used in the preparation of *Aragvadhadi kvatha*, *Aragvadhadi churna*, *Nirgundyadi gutika* and *Nirgundyadi ghrt* (Sivarajan & Balachandran, 1996; Sharma *et al*., 1998).

397. *Flacourtia jangomas* (Lour.) Raeusch (*Plate 67 C*)

Syn: *Flacourtia jangomas* Lour.; *Flacourtia cataphracta* Roxb. ex Willd.

Family: Flacouriaceae

Vernacular Name: Eng: Puneala plum
Kan: Karinelli, Chanchalimara, Charijali, Saralu
Mal: Thalira, Loika, Lavalolikka, Luikka
Tulu: Koragi

Habit: Small tree.

Habitat: Cultivated.

Status: Occasional.

Description: Small deciduous, dioecious tree; young branches with simple thorns, white-puberulous. Leaves simple, oblong-ovate, membranous to chartaceous,
glabrous, pinkish brown when young. Flowers in axillary, subcorymbose racemes.
Sepals 4 – 5, ovate, ciliate. Petals absent. Stamens numerous. Fruit subglobose
berry, scarlet red or dark purple when ripe, with persistent stylar column.

Uses: Young leaf extract is given for dysentery, indigestion, fever, tuberculosis and
cough. *Bark decoction is given for sound fall.

Etymology: Karinelli (black gooseberry) is due to its dark purple fruits which
resemble gooseberry.

Note: Ripe fruits are eaten raw. Fruits are much used for diarrhoea (Jain et al.,

398. *Flacourtia montana* Graham (Plate 67 D)

Family: Flacourtiaceae

Vernacular Name: San: Vikantaka, Vaikankatha
Eng: Wild plum
Kan: Champe hannu, Abluka, Mulluhannu
Mal: Chalirpazham, Charalpazham, Painellika, Kattuloika
Tulu: Mulluparandu

Habit: Medium-sized tree.

Habitat: Semi evergreen forests and plains.

Status: Common.

Description: Medium-sized tree; trunk and branches armed with thorns. Leaves
simple, ovate or elliptic-lanceolate, midrib pubescent beneath. Flowers small,
dioecious, in short densely pubescent racemes. Sepals 4 – 5, tomentose. Petals
absent. Stamens numerous. Fruit globose berry, about the size of a cherry, reddish
when ripe.

Uses: *Root paste is applied to heal wounds. *Oil extracted from the seeds is applied
for rheumatism. Fruit is eaten and is an appetizer.
Etymology: Mulluhannu and Mulluparandu (thorn fruit or spine fruit) are as the fruits are produced on thorny tree.

Note: Ripe fruits are eaten raw.

399. *Flemingia macrophylla* (Willd.) Prain ex Merr. (Plate 67 E)


Family: Papilionaceae

Vernacular Name: San: Salaparni  
Kan: Kaadu moorele  
Mal: Kamatteri, Korkattachedi  
Tulu: Kattu moojire

Habit: Undershrub.

Habitat: Open places.

Status: Occasional.

Description: Undershrub. Leaves 3-foliolate; leaflets elliptic-ovate to elliptic-lanceolate, silky pubescent on the nerves beneath, 3-nerved from the base, lateral leaflets unequal-sided; stipules linear-lanceolate, caducous. Flowers in axillary or terminal congested slender racemes; bracts caducous. Calyx 5-lobed; lobes linear-lanceolate. Corolla purplish-yellow; standard auricled. Stamens 9 + 1. Fruit turgid, oblong, pubescent, glandular, 2-seeded pod.

Uses: *Root decoction is used internally for ulcer and swellings.*

Etymology: Kaadu moorele and Kattu moojire (wild three leaved plant) are due to its wild habit and trifoliolate leaves.

Note: It is often used as a substitute for *Pseudarthria viscida.*
**400. Flemingia strobilifera** (L.) R. Br. ex Ait. f. (Plate 67 F)

Syn: *Hedysarum strobiliferum* L.; *Hedysarum bracteatum* Roxb.; *Flemingia bracteata* (Roxb.) Wight

Family: Papilionaceae

Vernacular Name: San: Prsniparni
Kan: Kanpoothi, Kaadu ondele
Mal: Kumalu, Kumbilteri
Tulu: Kattu onjire

Habit: Shrub.

Habitat: Forest undergrowths.

Status: Occasional.

Description: Erect shrub, with tomentose branches. Leaves 1-foliolate; leaflet ovate-lanceolate to oblong, silky pubescent beneath. Flowers in axillary and terminal racemes; bracts large, folded, membranous, veined, glabrescent. Calyx 5-lobed; lobes linear-lanceolate. Corolla purple; standard auricled. Stamens 9 + 1. Fruit oblong, turgid, pubescent, 2-seeded pod, concealed by the bracts.

Uses: *Coffee prepared from the root bark is a general health drink. Root decoction is given for burning sensation in the body, nervous debility, cough, bronchitis, rheumatism, gastritis and as a general tonic. *Paste of whole plant with rice washed water is applied all over the body for urticaria and rashes. Root decoction is given for chest pain due to small size of heart value. *Root and onion boiled in water is reduced by adding milk. This is given by adding sugarcandy at night after food for heart problems, chest pain, digestive and breathing problems. *Leaf ground with black gram soaked in water into a paste is applied for bone fracture or bone pain. Root decoction is recommended for *tridoshas*, rheumatism, *vatarakta*, fever, worms, urinary disorders, bleeding piles, tuberculosis, vomiting and dysentery as a tonic. *Root decoction is used as health tonic during 4th month of pregnancy. *Leaf along with that of *Allophylus cobbe*, root of *Salacia chinensis* and sandal wood are
ground into a paste with tender coconut husk juice and is applied for urticaria and herpes.

Etymology: Kaadu ondele and Kattu onjire (wild one leaved plant) are due to its wild habit and unifoliolate leaves.

Note: It is used as a substitute for *Desmodium gangeticum*.

**401. Flemingia tuberosa** Dalz. *(Plate 68 A)*

Syn: *Moghania tuberosa* (Dalz.) Kuntze

Family: Papilionaceae

Vernacular Name: Kan: Jaambula gadde  
Tulu: Jaambula kande

Habit: Undershrub.

Habitat: Along grassy hill slopes.

Status: Very rare.

Description: Undershrub, with white tuberous roots and trailing stem. Leaves 3-foliolate; leaflets linear-oblong, oblong-elliptic, sparsely hairy on the nerves above and below, ciliate on margins. Flowers in slender, lax, axillary racemes. Calyx 5-lobed, covered with yellowish hairs. Corolla lilac, slightly exerted. Stamens 9 + 1. Fruit oblong, 1 – 2-seeded pod.

Uses: Cooked tubers are given for diarrhoea and dysentery.

Note: Cooked tubers are used as food.

**402. Flueggea leucopyrus** Willd. *(Plate 68 B)*

Syn: *Securinega leucopyrus* (Willd.) Muell.-Arg.

Family: Euphorbiaceae

Vernacular Name: San: Bhuriphali, Panduraphali
Eng: Spinous fluggea
Kan: Karisuli, Karihuli, Korambila, Bilisuli
Mal: Amboorippachila, Perimklavu, Vellamullaram
Tulu: Kurambil, Kurambilo

Habit: Straggling shrub.

Habitat: Degraded forests.

Status: Frequent.

Description: Large straggling or erect shrub; branchlets arrested, stiff and thorn-like. Leaves simple, distichous, obovate or obcordate. Flowers dioecious, minute, in axillary fascicles; female fewer than the male. Calyx 5-lobed. Petals absent. Stamens 5. Fruit globose, succulent, white when ripe.

Uses: *Plant, leaf and twig are used to prepare oil which is used for children suffering from repeated cold attack. *Latex paste is rubbed over teeth in case of dental cavities and toothache. *Tambuli* prepared using young shoot tip is given for dysentery, diarrhoea, liver problems and indigestion. *Oil prepared using its leaf juice is applied for venereal boils. *Leaf paste alone or that boiled in coconut oil is applied on head for sinusitis. Leaf decoction is given internally as a vermifuge. Root decoction is given to stop dysentery. Root powder also has same property. *Paste made of tender shoot tip cooked in milk is applied on centre of head, while its extract is taken internally for pus release from ear. *Tender shoot tip with that of Leucas aspera, Indigofera tinctoria, Moringa pterygosperma, Jasminum grandiflorum and Eclipta prostrata are crushed, heated with coconut oil and is applied to head as hair oil for rhinitis, morning headache, cold and ear ache. *Extract of tender shoot tip crushed with bulb of Gali* variety of banana is poured into ear in case of toothache. *Leaf along with ripen Areca catechu fruit rind juice, Pogostemon heyneanus leaf, Bambusa bambos leaf, Tamilnadia uliginosa leaf, Erythrina variegata leaf, 9 young roots of Cocos nucifera, 9 young roots of Areca catechu, Piper betle leaf, Alstonia scholaris leaf, Citrus aurantium fruit juice and Croton malabaricum leaf juice (each 100 ml for 1000 ml coconut oil) are boiled...
with coconut oil. To this leaf juice of *Naregamia alata* and *Naringi crenulata*, *Vernonia anthelmintica* seed powder and *pacche karpura* are added and is applied over head and is poured into ear in case of chronic running nose and rhinitis (if there is any growth in nose, lime juice should be added during the preparation). *Tender shoot tip is chewed for toothache. Oil prepared from young shoot tip juice is applied as hair oil for rhinitis and over body for chicken pox. Leaf paste is applied for swellings. Leaf paste is rubbed over head for malabsorption in children. *Root decoction is recommended for kidney stone. Root decoction is used for rheumatism and urine block. Plant extract is used for biliousness, as sleep inducer and mainly for ENT problems. Leaf juice is applied for hair, beard and moustache fall. Leaf paste is applied on head for bleeding in nose. *Leaf paste is applied for tail infection and tail degradation in cattle. *Young shoot tip ground with salt and juice is poured into eyes for three days in case of damage to eyes. Tender shoot tip cooked in coconut milk is ground and applied over head in case of sleeplessness in babies. *Crushed tender shoot tip heated in coconut oil with turmeric powder is applied for measles boils on head. Crushed young leaf juice boiled with coconut oil is used as ear drop for pas release from ear. *Shoot tip with that of *Jatropha curcas*, *Centella asiatica* and cumin seeds are ground in milk and is applied over the head for malnutrition in children. *Bark cooked with rice is eaten for 21 days for diabetes. *Root with *Cyclea peltata* root (in equal quantity) are ground with lime juice and is given twice a day for diarrhoea in children. *10 ml of crushed root boiled with water is given thrice a day for constipation and to correct excretory system. Root extract with butter milk is given for two days in case of amoebiasis. Shoot tip powdered with cumin seeds are made into a decoction with water and is given twice a day for leucorrhoea. Root extract with rice washed water is given once a day for indigestion. *The paste prepared by mixing leaf juice with equal quantity of coconut oil or gingelly oil, camphor and *Nigella sativa* seed powder is used as hair oil to overcome repeated attack of cold. *Root paste is applied externally, while extract is used internally for oedema due to snake bite.

Etymology: Bhuriphali (many fruited) arose as fruits are produced in masses.
Note: Ripe fruits are eaten raw. Plant is often used as support for *Coccinia grandis* plant.

**403. Fomes fomentarius** (L.) Fr. (Plate 68 C)

Family: Polyporaceae

Vernacular Name: Eng: Tinder fungus, Hoof fungus, Tinder polypore  
                     Kan: Maramurudu  
                     Mal: Plathadi, Pilathadi  
                     Tulu: Maramurudu

Habit: Saprophytic or parasitic fungus.

Habitat: Especially old jack trees.

Status: Occasional.

Description: Saprophytic or parasitic fungus. Basidiocarp solitary or in groups, on living or dead trunks, hoof-shaped, hard, woody, pale dark grey to dark brown, concentrically furrowed, zonate, with blunt margin. Flesh hard, fibrous, cinnamon-brown; tubes rusty-brown; pores circular, light grey-brown, darkening when handled.

Uses: *Paste made of basidiocarp with rice washed water or Datura metel leaf juice is applied for mumps.* *Its paste with cow urine is applied for burns, knee joint swelling, joint pain, wounds caused by weapons, mastitis in cattle, mumps and headache.* *Paste with cool water is used to treat dandruff and headache.* *Its paste can also be applied for udder swelling in cattle.*

Etymology: Maramurudu (rough tree) arose as the basidiocarps give a rough surface to the tree trunk.

Note: Much valued drug for mumps. It has raw penicillin.
404. *Garcinia gummi-gutta* (L.) Robs. var. *gummi-gutta* (Plate 68 D)

Syn: *Garcinia cambogia* (Gaertn.) Desr.; *Cambogia gummi-gutta* L.

Family: Clusiaceae

Vernacular Name: San: Vrikshamlah  
Eng: Malabar gamboge  
Kan: Aridala, Ardala, Ontehuli, Mantuhuli  
Mal: Korakkapuli, Kodampuli, Meenpuli, Perumpuli  
Tulu: Ontepuli, Karkapuli, Manthuppuli

Habit: Tree.

Habitat: Cultivated in gardens.

Status: Occasional.

Description: Evergreen tree. Leaves simple, elliptic-oblong or obovate, coriaceous. Male flowers fascicled, pale white or green; sepals 4; petals 4; stamens 12 – 20 inserted on prominent receptacle. Female flowers 1 – 3 together; sepals 4; petals 4; staminodes in a ring; ovary 8 – 11-celled. Fruit fleshy, 8 – 10 grooved, mammillate berry.

Uses: Fruit juice is taken for improving liver and digestive functions. It is also used for menstrual irregularities. *Fruit juice is collected, boiled and preserved in bottles. A small piece of cloth dipped in it is applied over tonsils for tonsillitis.*

Etymology: Mantuhuli, Manthuppuli (churning stick acidic fruit) and Meenpuli (fish acidic fruit) arose due to its grooved fruits (resembling churning stick) and its use. Fruits are used as condiment especially for fish preparations.

Note: Acidic fruits are often pickled, also used as a substitute for tamarind in curries.
405. *Garcinia indica* (Thouars) Choisy (Plate 68 E-1, E-2)

Syn: *Garcinia purpurea* (G. Don.) Roxb.

Family: Clusiaceae

Vernacular Name: San: Amlabija, Amlavriksha, Bijamla, Phalamlaka, Tintidika, Vrikshamla
   Eng: Mangosteen oil tree, Wild mangosteen, Red mango, Kokam butter tree
   Kan: Beerunda, Murginahuli, Murginahuli mara, Muruvanahuli
   Mal: Punampuli
   Tulu: Punarpuli

Habit: Tree.

Habitat: Evergreen and deciduous forests, also cultivated.

Status: Frequent.

Description: Slender tree, with drooping branches. Leaves simple, ovate or elliptic-lanceolate, chartaceous, narrowed at base. Flowers polygamous. Male flowers 4 – 8, in axillary or terminal fascicles; sepals 4; petals 4; stamens many on a short column. Female flowers solitary or 2 – 3 together; staminodes in 4 phalanges; ovary 4 – 8-celled. Fruit globose berry, deep purple when ripe.

Uses: Juice or decoction prepared from fruit rind is recommended for biliousness and giddiness. Fruit juice is used to normalize liver functions, to induce appetite and for gall bladder stones. *Ghee extracted from seeds is taken to increase liver function. *Oil or ghee extracted from the seeds is applied for burns, to remove marks of burn and cracks in skin. Fruit extract is consumed for lowering serum cholesterol and diglycerides. *Fruit rind decoction is used for mouth ulcers and bacillary dysentery. It is a cooling agent and quenches thirst. Fruit rind decoction is used internally, while its paste is applied externally for three days in case of chronic chicken pox and measles. *The water in which its dried fruit rind is kept over right is drunk, while its paste is applied externally for eczema, urticaria and biliousness.
Oil extracted from the seed reduces fat. Fruit extract increases haemoglobin level. *Dried fruit rind powder boiled with coriander powder is taken with sugar for heart problems and weakness due to problems in digestive tract. Fruit pulp juice is used for dysentery, phlegm and biliousness. Fruit rind juice is a heart tonic, digestive, blood purifier, useful for *gulma* and urinary diseases. Latex or gum from stem is used for dysentery. Ghee extracted from seeds is a tonic, poison remover, used for mouth ulcers, fever and tuberculosis. *Fruit and tamarind seed coat boiled in coconut oil is applied for burns. *Regular use of its fruit juice prevents gall bladder stones.

Etymology: Amlabija (acidic seed), Amlavriksha (acidic tree), Bijamla (seed acid), Phalamlaka (fruit acid) and Vrikshamla (tree acid) are due to its acidic fruits.

Note: Fruit has about 15% hydroxycitric acid, which decreases the fat. Dried fruit rind is used as a condiment. Seeds yield edible fat known as kokum butter. Ripe fruits are eaten raw or their juice is extracted.

**406. *Garcinia morella* (Gaertn.) Desr. (Plate 69 A)**


Family: Clusiaceae

Vernacular Name: San: Amritadruma, Nilatala, Svarnaksiri, Tamala
Eng: Mysore gamboge tree, Indian gamboge tree
Kan: Aridala, Aradala, Ardala, Jaarigehuli
Mal: Chigiri, Daramba, Iravi
Tulu: Kutthippuli, Jaarigepuli

Habit: Small tree.

Habitat: Evergreen forests.

Status: Rare.

Description: Small tree. Leaves simple, elliptic-ovate, chartaceous. Flowers polygamous. Male flowers 1 – 3 fascicled on old wood; sepals 4; petals 4; stamens
Numerous in a globular mass. Female flowers solitary, axillary; sepals 4; petals 4; staminodes 10 – 12; ovary 4-celled. Fruit globose, 4-seeded berry, reddish brown when ripe.

Uses: *Oil extracted from the seeds is applied for ulcers caused by severe burn.

Etymology: Svarnaksiri (golden latex or golden milk) arose due to its characteristic dark yellow bark exudate.

Note: Bark yields a yellow dye which is used to colour fabrics. It has morellin, morelloflavone, isomorellin, desoxymorellin, dihydro-isomorellin as active constituents with purgative, vermifuge and wound healing activities (Kapoor, 1990).

**407. *Garcinia xanthochymus*** Hook. f. ex Anders (Plate 69 B)


Family: Clusiaceae

Vernacular Name: San: Bhavishya, Pichchalabija, Tamala, Tamalaki  
   Eng: Egg tree, Gamboge, Mysore gamboge, Himalayan Garcinia  
   Kan: Arasina gurgi, Devagarige, Devajaarige, Nelamavu  
   Mal: Anavaya, Bhaviyam, Thamalam, Vayirapuli  
   Tulu: Argala, Jaarige

Habit: Small tree.

Habitat: Evergreen and semi evergreen forests.

Status: Frequent.

Description: Small tree with dropping branches. Leaves simple, oblong, tapering at the ends, shining above. Flowers polygamous. Male flowers fascicled on old wood; sepals 5; petals 5; stamens in 5 phalanges, each with 3 stamens. Female flowers fascicled in old wood; staminodes in 5 phalanges; ovary 5-celled. Fruit globose berry, yellow when ripe.
Uses: Fruit pickle is used for preparing various dishes as a taste enhancer and condiment. It helps to improve digestive power. *Oil extracted from seeds is applied for burns. *Latex and fruit cooked with rice is eaten for jaundice.

Etymology: Pichchalabija (slimy or lubricous seeds) and Devajaarige (sacred gamboge) arose from its characteristic slimy seeds which are used for fat extraction and close affinity with *Garcinia morella*.

Note: Dried and preserved fruit rinds are used in place of tamarind in curries. Fruit is edible.

408. *Gardenia jasminoides* Ellis (Plate 69 C)

Syn: *Gardenia angusta* (L.) Merr.; *Gardenia florida* L.

Family: Rubiaceae

Vernacular Name: San: Gandharaja, Hingunadika
   Eng: Bush Gardenia, Bunga cina, Cape jasmine, Cup and saucer
   Kan: Vaasane malle, Suvasane malle, Ghattada manjatti, Dikamali
   Mal: Gandharajan
   Tulu: Ghattanmanjatti

Habit: Large shrub.

Habitat: Cultivated in gardens.

Status: Frequent. Exotic.

Description: Evergreen shrub. Leaves simple, obovate to lanceolate; stipules intrapetiolar, connate into a cup. Flowers white, large, showy, fragrant. Calyx truncate, 5-lobed. Corolla double; lobes spreading; tube cylindric. Stamens 5. Fruit ovoid, ribbed berry.

Uses: *Gum resin obtained from tender part of this plant is applied for wounds and ulcers.*
Etymology: Gandharaja, Gandharajan (king of fragrans), Vaasane malle, Suvasane malle (fragrant jasmine), Ghattada manjatti and Ghattanmanjatti (*Tabernaemontana* of Ghats) arose due to its highly fragrant white flowers resembling that of *Tabernaemontana coronaria* and introduction to India from China.

Note: Fragrant flowers are used for worship. Gum resin obtained from buds is used as a substitute for asafoetida.

**409. Gardenia resinifera** Roth. (*Plate 69 D*)

Syn: *Gardenia lucida* Roxb.

Family: Rubiaceae

Vernacular Name:  
San: Hingu, Hingunadika, Nadihingu, Pidavha  
Eng: Brilliant Gardenia, Gummy Gardenia, White emetic nut  
Kan: Kambimena, Dikkamali, Chitamali  
Mal: Dikamali kayam  
Tulu: Dikkamali

Habit: Small tree.

Habitat: Dry deciduous forests, also cultivated in gardens.

Status: Occasional.

Description: Resiniferous tree. Leaves simple, elliptic, hairy in the leaf axils below. Flowers axillary, solitary or in lax cymes, white turns to yellow. Calyx 5-lobed; lobes triangular. Corolla-tube short; lobes 5, obovate, puberulous without. Stamens 5. Fruit ellipsoid berry.

Uses: *Gum resin from the buds is applied for chronic septic wounds, ulcers and to remove maggots from wound. Gum is used for rheumatism, rhinitis, wounds with foul smell, diarrhoea, worms and toothache. Gum resin is fly repellent, wormicidal, purifier of septic wounds, breath conditioner, diuretic, digestive and foul breath remover. *Gum powder boiled with palm oil is applied to expel worms from wounds and ulcers. *Gum dissolved in water is consumed at bed time for three days
to expel worms. Root extract with water is taken twice a day as a tonic. *Root paste with lime juice is applied all over the body for warts. *Fried leaf powder is applied to wounds for pus release and quick healing. Leaf, *Caesalpinia crista* seed kernel, *Swertia corymbosa*, *Apium graveolens* (250 gm each) and *Abruś precatorius* seed (100 gm) are fried and powdered. 250 gm sodium bicarbonate and 250 gm borax powder are mixed with above mixture. *Pravala* and *Shringa bhasmam* (about the size of a pepper seed), potassium permanganate (4 gm) are kept separately. *Vitex negundo*, *Achyrantes aspera*, *Aegle marmelos* leaf (2 kg each) powder are made into a decoction. To this decoction all above powders and three drops of *Eucalyptus* oil are added and used for foot and mouth disease in cattle. *Leaf ground with gingelly oil, jaggery and a little water is used twice a day for diarrhoea in cattle. *Resin boiled in groundnut oil is applied over the body of cattle to repel insects and flies.

Etymology: Hingunadika, Nadihingu (tubular or culm asafoetida) and Kambimena (rod wax) arose as yellow gum resin is obtained from its shoot tips as exudate. The shoot tips remain enclosed by the stipules which connate into a cup.

Note: Gum resin is used as a substitute for asafoetida.

**410. Garuga pinnata** Roxb. (Plate 69 E)

Family: Burseraceae

Vernacular Name: San: Golika, Karnikara, Krsnamlika

Eng: Garuga

Kan: Arenelli, Guddadanelli

Mal: Annakkara, Eechakkara, Eechamaram, Kareyam, Kattunelli

Tulu: Arenelli, Katambate

Habit: Large tree.

Habitat: Deciduous forests.

Status: Frequent.
Description: Tall deciduous tree, with grey bark and pubescent branchlets. Leaves imparipinnate; leaflets 11 – 17, ovate-ovate or oblong-lanceolate, oblique at base, chartaceous, pubescent. Flowers in tomentose panicles, terminal on leafless branches. Calyx-lobes 5, ovate-oblong, densely tomentose. Petals 5, oblong-lanceolate, tomentose, cream-coloured. Stamens 10; filaments pubescent. Fruit oblong or irregularly globose, fleshy drupe.

Uses: Fruit juice is used as a digestive agent for stomachache. *Leaf juice mixed with Justicia adhatoda and Vitex trifolia leaf juice and honey is used for asthma. *Stem juice is applied for opacity of cornea. *Bark decoction is recommended for biliousness.

Etymology: Arenelli (half gooseberry), Guddadanelli (hill gooseberry), Kattunelli (forest gooseberry), Eechamaram (insect tree) and Katambate (wild Spondias) arose due to the resemblance of its acidic fruits with that of gooseberry or Spondias pinnata, restriction to the forests and presence of insect galls on leaves. Fruit has amentoflavone which is a digestive agent (Jain et al., 1991).

Note: Fruits are edible and often pickled.

411. *Geissaspis cristata* Wight & Am. (Plate 69 F)

Family: Papilionaceae

Vernacular Name: Kan: Kuduhullu
Mal: Mudirapullu
Tulu: Kudupanthi

Habit: Diffuse herb.

Habitat: Moist places.

Status: Common. Weed.

Description: Diffuse herb, with thick rootstock. Leaves paripinnate; leaflets 2 pairs, obovate; stipules membranous, lanceolate, ciliate. Flowers small, in long-peduncled axillary racemes; bracts large, orbicular, veined, persistent, margins with many long

Uses: *Whole plant paste or extract is used externally for ulcers due to hair fall in cattle. *Plant is used as fodder to increase lactation in cattle.

Etymology: Kuduhullu, Mudirapullu and Kudupanthi (horse gram grass) are due to its herbaceous nature and use as fodder.

Note: It is widely used as fodder and is believed to have properties similar to that of horse gram.

412. *Geophila repens* (L.) Johnst (Plate 70 A)

Syn: *Geophila reniformis* D. Don.; *Geophila herbacea* (Jacq.) K. Schum.

Family: Rubiaceae

Vernacular Name: San: Kakamaci  
                            Kan: Kari ondelaga, Karithimare  
                            Mal: Karimutthil, Karinkudangal  
                            Tulu: Karithimare

Habit: Prostrate herb.

Habitat: Moist shady places.

Status: Occasional.

Description: Prostrate herbs. Leaves simple, orbicular or broadly ovate to reniform, chartaceous. Flowers solitary or rarely in umbels, 4 – 7-merous. Calyx 5-lobed; lobes small, persistent. Corolla funnel-shaped, white, hairy within; lobes 4 – 7. Stamens 4 – 7, included. Fruit globose drupe.

Uses: *Plant paste is applied for scabies and ulcers on head.
Etymology: Kari ondelaga, Karithimare, Karimutthil and Karinkudangal (black *Centella asiatica*) are due to its dark coloured plant body which closely resembles that of *Centella asiatica*.

Note: Plant juice is used in the preparation of gold *bhasma*.

413. *Girardinia diversifolia* (Link.) Friis (Plate 70 B)

Syn: *Urtica diversifolia* Link.; *Girardinia heterophylla* Decne. in Jacq.; *Girardinia leschenaultiana* Decne. in Jacq.

Family: Urticaceae

Vernacular Name: San: Laghukacchu, Romalu, Santativardhini, Vatavidhvamsini

Eng: Nilgiri nettle

Kan: Dodda thurike, Thurike

Mal: Aanachoriyanam, Choriyanam, Chenthotti, Kuttithoova

Tulu: Malla aakire

Habit: Subshrub.

Habitat: Evergreen forests.

Status: Frequent. Poisonous.

Description: Subshrub, with stinging hairs. Leaves simple, long-petioled, 3 – 7-lobed, margin coarsely dentate-serrate, 3-nerved from base, sparsely scabrous, chartaceous. Flowers unisexual, monoecious. Male flowers in branched or unbranched spikes; tepals 4, ovate, cucullate; stamens 4; pistillode globose. Female flowers in globose heads armed with dense stinging hairs; tepals connate, tubular, 2 – 4-lobed. Fruit compressed achene.

Uses: *Decoction prepared from leaf or root is recommended for skin allergies.*  
*Plant extract is taken internally for bleeding from nose and mouth. Plant paste is applied for allergies. *Root decoction is used with sugarcandy for bleeding from nose and mouth. *Body of the patient is beaten with a broom made up of its twig and leaf for pain and swellings (if allergic reactions are seen then *Eupatorium*...
*Triplinervia* leaf juice is applied as antidote. *Root and leaf decoction is used for rheumatism, gall bladder stones, skin diseases, swellings, cough and breathing problems.*

Etymology: *Laghukacchu* (rapid sting), *Romalu* (one with stinging hairs), *Santativardhini* (rapidly propagating), *Vatavidhvamsini* (rheumatism killer), *Dodda thurike*, *Malla aakire* (larger itchy plant), *Thurike*, *Choriyanam* (itchy plant), *Aanachoriyanam* (elephant itchy plant) and *Kuttithoova* (shrub itchy plant) are due to its property to cause severe itch on contact, shrubaceous plant body, rapid propagation, therapeutic efficacy against rheumatism and plant body covered with stinging hairs.

Note: Much valued drug for rheumatic complaints. Young fruit and tender shoot tip are edible.

**414. *Gliricidia sepium* (Jacq.) Kunth ex Walp. (Plate 70 C)**

*Syn: Gliricidia macualata* (Steud.) Kunth

*Family: Papilionaceae*

*Vernacular Name: Eng: Spotted Gliricidia
  Kan: Gobbarada sappu, Eetina sappu
  Mal: Seema-konna
  Tulu: Eetutha thappu*

*Habit: Small tree.*

*Habitat: Planted as hedge plant.*

*Status: Common. Exotic.*

*Description: Small deciduous tree. Leaves imparipinnate; leaflets elliptic-oblong or lanceolate. Flowers showy, in axillary racemes, appearing before the leaves. Calyx subtruncate, 5-toothed. Corolla pinkish or pink and white; standard emarginate. Stamens 9 + 1. Fruit leathery, linear-oblong, compressed pod.*
Uses: *Leaf decoction is poured as dhara* for body pain after fever. *Gargle with its bark decoction is recommended for toothache. *Oil prepared from plant juice is applied for wounds in cattle.

Etymology: Gobbarada sappu, Eetina sappu and Eetutha thappu (manure leaf) arose as the leaves are widely used as green manure.

Note: Leaf is used as a green manure. It is rich in phosphate. Leaves are nutritious and are used as fodder. *Seed powder mixed with food particles is used as raticide.

415. *Globba sessiliflora* Sim. (Plate 70 D)

Syn: *Globba ophioglossa* Wight

Family: Zingiberaceae

Vernacular Name: Kan: Bettada dumparasme
                  Mal: Kattinji, Kolchanna
                  Tulu: Kattusunti

Habit: Erect herb.

Habitat: Forest undergrowths.

Status: Occasional.

Description: Erect rhizomatous herb. Leaves sessile, lanceolate, pubescent beneath; sheaths pubescent. Inflorescence terminal on a leafy stem, narrow, lower cincinni 4 – 6-flowered, a few bulbils usually present in the lower axils; bulbils ovoid, deflexed; bracts deciduous. Calyx funnel-shaped, 3-lobed. Corolla yellow; lobes ovate, shorter than the staminodes. Lateral staminodes lanceolate, yellow; labellum yellow, deflexed, very deeply bifid. Fruit oblong capsule.

Uses: *Rhizome decoction is used as a digestive agent for diarrhoea, indigestion and gas trouble.

Etymology: Bettada dumparasme (hill Alpinia), Kattinji and Kattusunti (wild ginger) arose as this plant resembles Alpinia and Zingiber species in its habit.

Note: It is often used as a substitute for Zingiber neesanum.
**416. *Glochidion zeylanicum* (Gaertn.) A. Juss. var. *zeylanicum* (Plate 70 E)**

Syn: *Briedelia zeylanica* Gaertn.

Family: Euphorbiaceae

Vernacular Name: Eng: Melon feather foil  
Kan: Neerukukku, Neeruvatti, Bilisarali  
Mal: Neervetti, Pannimutti  
Tulu: Neerkukku, Bolsaroli

Habit: Tree.

Habitat: Semi evergreen forests and low lands. Usually found along streams.

Status: Frequent.

Description: Medium-sized deciduous tree. Leaves simple, broadly oblong-elliptic, coriaceous. Flowers monoecious, yellow, in axillary clusters. Male flowers pedicellate; tepals 6, biseriate; stamens 4 or more. Female flowers subsessile; tepals 6; ovary 4 – 5-celled. Fruit subglobose, beaked capsule; seeds shining, orange-red, wedge shaped.

Uses: *Bark decoction is used as a digestive agent for indigestion. Fruit juice is recommended internally for digestive disorders. It has cooling effect.*

Etymology: Neeruvatti, Neervetti (water *Aporosa*), Bilisarali and Bolsaroli (*Aporosa*) are due to its habitat and resemblance with *Aporosa lindleyana*. It is often found along the streams and used as a substitute for *Aporosa lindleyana*.

Note: Ripe fruits are edible. It is used in synonymous with *Aporosa lindleyana*.

**417. *Gloriosa superba* L. (Plate 70 F)**

Family: Liliaceae

Vernacular Name: San: Agnimukhi, Agnishikha, Garbhagatini, Garbhapatini, Haripriya, Langalaki, Langali, Langalika
Eng: Climbing lily, Glory lily, Malabar glory lily
Kan: Agnishikhe, Kolikutumana gadde, Agniballi, Nangulika, Shivashakthi balli, Chauthi hoo
Mal: Karthikappovu, Malathamara, Menthonni, Ventoni
Tulu: Chauthipoo, Balipabooru, Balipapoo

Habit: Climbing herb.

Habitat: Along hedges.

Status: Frequent. Poisonous.

Description: Climbing herb, with white, cylindric, forked tubers. Leaves oblong to ovate-lanceolate, apex ending in tendril. Flowers large, solitary, axillary; pedicels reflexed near the tip. Perianth-segments 6, narrow, petaloid, spreading or reflexed, margins usually undulate, first greenish, then yellow, passing through orange and scarlet to crimson. Stamens 6, spreading. Fruit oblong, septicidal capsule.

Uses: *Purified root paste is used for rheumatoid arthritis and joint pain. It is highly abortive. Root paste is applied over the navel region for quick delivery (immediate). *Tuber paste is applied externally for furuncles. *Tuber (collected without using any iron tool) paste with soil of termite shelter is applied to the centre of head for easy delivery without much labor pain. Tuber paste is applied for skin diseases, snake bite and over head for insanity. *A dried piece of root soaked in salted butter milk for 4 – 5 days is taken internally for cobra bite. *Purified tuber paste with butter is given with sugarcandy for raktavata*. *Tuber paste with Datura metel leaf juice is applied for fistula. *Tuber and Calotropis gigantea root ground in goat urine is applied for venereal diseases. *Tuber is purified by soaking it in butter milk for seven days, then dried and preserved. The longer tuber ground with honey applied to panchavalli* variety betel leaf from base to tip is shown to vagina when labor pain starts to cause immediate delivery. The smaller tuber ground with honey applied to panchavalli* betel leaf from tip to base is shown to vagina immediately after delivery (this is highly dangerous practice and should be performed only by the
experts). *Tuber and Calotropis gigantea plant ash mixed with goat urine is applied for venereal diseases.

Etymology: Agnimukhi, Agnishikha, Agnishikhe (flame or crest of fire), Garbhagatini, Garbhapatini (abortive), Langali, Langalika (plough possessor) and Agniballi (fire climber) arose due to its characteristic flower, petal and hot or abortive property of the tubers.

Note: It is used in the preparation of Nirgundi taila, Kasisadi taila, Jyotismatyadi taila, Mahabhutarasa ghṛta, Languli rasayana, Laghu visagarva taila and Mahavisagarbha taila (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). Superbine, gloriosine, chelidonic acid, dimethylcolchicine, N-formyldeacetyl colchicine, lumicolchicine and colchicine are the active constituents (Dey, 1994; Kapoor, 1990). Tuber is highly poisonous. If one commits suicide by eating it, it is very hard to identify the poison which caused the death. Tuber has two parts – upper *shakthi* and lower *shivashakthi*. One has mercury, while the other sulphur. Larger part, *shakthi* is the older and dries when exposed to sunlight, while the smaller, *shivashakthi* is newer and it does not get dried when kept in sunlight.

418. Glycosmis pentaphylla (Retz.) DC. (Plate 71 A)

Syn: Glycosmis arborea (Roxb.) DC.; Limonia pentaphylla Retz.

Family: Rutaceae

Vernacular Name: San: Asvasakhotah, Vananimbuka
Kan: Manikyana gida, Pandelu
Mal: Kuttippanel, Kurumpanal, Panal, Panachi
Tulu: Pandelu

Habit: Large shrub.

Habitat: Shady places.

Status: Common.
Description: Large evergreen shrub. Leaves 1 – 7-foliolate; leaflets elliptic or oblong-lanceolate. Flowers small, in axillary and terminal dense panicles. Calyx small, 5-lobed. Petals 5, white, broadly obovate. Stamens 8 – 10. Fruit subglobose berry, white when ripe.

Uses: *Root ground in rice washed water is applied externally for urticaria, rashes, measles and chicken pox. Root extract is given internally for gastroenteritis. *Leaf decoction or that cooked with rice is taken to arrest vomiting. *Oil prepared by mixing its leaf juice with *Leucas aspera* plant juice, *Vitex negundo* leaf juice and *Tamarindus indica* leaf juice is applied for rheumatoid arthritis. Root and bark decoction is used as a blood purifier for skin diseases. *Leaf crushed with garlic is poured into nose of cattle as *nasya* (for three days) for fever and cold. *Leaf boiled in butter milk is ground and extract after dipping a white stone in it is given for worms in calves. Root paste is applied for swellings and rheumatism. Leaf extract is recommended for dysentery and vomiting. *Root paste with lime juice is applied for septic ulcers, wounds, skin diseases and herpes. Root decoction is consumed for diarrhoea. *Leaf and garlic decoction is used for loss of appetite in children. *Root extract with honey is given for fever, diarrhoea and colic in children. *Root decoction is recommended for chickungunya type fevers. *Leaf, *Trachyspermum ammi* seeds, mustard seeds, pepper, *Artocarpus gomezianus* fruit and *Acacia sinuata* leaf are ground with rice cooked water by adding salt. This mixture is heated and 100 ml is given thrice for fever in cattle. *Extract of crushed root soaked in butter milk is given after dipping a heated white stone in it for nerve weakness in calves. Root or bark decoction is used as a bath for rheumatism. Oil extracted from this plant is also used for same purpose.

Etymology: Manikyana gida (ruby plant), Pandelu (whitish-yellow) and Vananimbuka (forest *Citrus*) arose from its characteristic fruits, wild nature and aroma of leaves resembling that of *Citrus*.

Note: Ripe fruits are eaten raw. It is used in the preparation of *Nirgundyadi gutika* and *Nirgundyadi ghrta* (Sivarajan & Balachandran, 1996).
419. *Gmelina arborea* Roxb. (Plate 71 B)

Family: Verbenaceae

Vernacular Name: San: Bhadraparni, Gambhari, Kashmari, Kasmari, Katphalah
  Eng: Candahar tree, Coomb tree, Cashmeri teak, Gamari
  Kan: Kashmiri, Shivanimara, Shivane, Kumbala mara
  Mal: Kumalu, Kumbil, Kumizhu
  Tulu: Kumbudomaro

Habit: Medium-sized tree.

Habitat: Dry deciduous forests, widely grown along roadsides and in gardens.

Status: Occasional in wild.

Description: Medium-sized tree, with tomentose branchlets. Leaves simple, deltoid-ovate, tomentose beneath. Flowers on the naked branches or appearing with the young leaves, in 1 – 3 flowered cymes on terminal tomentose panicles. Calyx campanulate, tomentose, 5-lobed. Corolla campanulate, brownish-yellow, pubescent; limb 2-lipped. Stamens didynamous. Fruit fleshy, ovoid drupe, yellow when ripe.

Uses: *Bark cooked with rice is eaten for biliousness and giddiness. *Root bark paste is applied for scorpion bite, while decoction for joint pain and various pains. Root powder paste is applied for rheumatism. Root decoction is recommended for rheumatism and fever. *Bark decoction or that cooked with rice is given for conception in cattle. *Leaf paste with salt is applied for udder swelling in cattle. Bark or leaf paste is applied over head for insanity. *Bark extract gives strength to the bones and is a digestive. Heart wood decoction is used for *raktapiṭṭa*, poisonous bites and anxiety. *Leaf paste is applied for wounds in cattle and that with cumin seeds is applied for mastitis. Bark and *Phyllanthus airy-shawii* decoction is taken with *Dhanvanthari* tablet for giddiness. *Bark juice is poured into ear in case of snake bite.
Etymology: Shivanimara (auspicious tree), Shivane (auspicious), Kumbala mara and Kumbudomaro (ash gourd tree) arose due to its diverse uses, soft wood and whitish bark.

Note: It is one among the dasamulas*. It is used for the preparation of Dasamularista, Dasamulaharitaki, Dasamula ghrtta, Dasamulasatpalaka ghrtta, Aravindasava, Draksadi kvatha, Draksadi churna, Karpuradi kulambu, Candanasava, Sriparnyadi kvatha, Sriparni taila, Brhat panchamuladi kvatha, Kutajarista, Dantyadyarista and Usirasava (Dey, 1994; Sharma et al., 1998). It has arboreal, isoarboreal, luteolin, apigenin, quercetin, hentriacontanol, β-sitosterol, clutyl ferulate and butyric acid as active constituents (Kapoor, 1990; Sharma et al., 1998). Wood is the best for handicraft industry.

420. Gmelina asiatica L. (Plate 71 C)

Syn: Gmelina parviflora Roxb.

Family: Verbenaceae

Vernacular Name: San: Gopabhadra, Kasmari
    Kan: Kirushivani, Kirushivane
    Mal: Cherukumuzhu, Kumilamaram, Mulkumizhu
    Tulu: Ellya kumbudomaro

Habit: Small tree.

Habitat: Dry deciduous forests, also planted in gardens.

Status: Occasional.

Description: Small tree, with ferruginous pubescent branchlets; aborted branches spiny. Leaves simple, ovate, slightly pubescent on the nerves beneath, glaucous. Flowers golden yellow, in axillary and terminal pubescent racemes. Calyx campanulate, with large glands, tomentose, 5-lobed. Corolla campanulate; tube ventricose; limb 2-lipped; lobes pubescent. Stamens didynamous. Fruit ovoid drupe.

Uses: *Root decoction is used as a blood purifier and pain killer.
Etymology: Kirushivani, Kirushivane, Cherukumuzhu, Ellya kumbudomaro (smaller Cashmeri teak) and Mulkumizhu (thorny Cashmeri teak) arose due to its close affinity with *Gmelina arborea* and spiny stem.

Note: It is often used as a substitute for *Gmelina arborea*.

421. *Gnetum edule* (Willd.) Blume (Plate 71 D)

Syn: *Gnetum ula* Brongn.; *Gnetum scandens* auct. non Roxb.

Family: Gnetaceae

Vernacular Name: Kan: Kamballi, Kaadukamballi, Nokate  
Mal: Karuthodal, Odal, Sunamkai, Oolakodi  
Tulu: Nokate

Habit: Woody climber.

Habitat: Evergreen, semi evergreen forests and sacred groves.

Status: Frequent.

Description: Woody dioecious liana. Leaves simple, elliptic-ovate or broadly elliptic, coriaceous, black when dry. Strobili axillary from the axil of a pair of basal bracts, on mature wood; collars cupular. Male strobilus stalked, 20 – 30 in a ring, exerted at maturity; stamen 1, microsporangia 2. Female strobilus with about 8 ovules around a node. Mature seed ellipsoid, drupaceous.

Uses: *Stem paste is applied for skin rashes while the juice or water oozing from the cut stem is poured into eyes (for three days) for eye infection. Oil prepared from its seeds is applied for rheumatoid arthritis. Seed extract is used for diabetes and plant decoction for urinary disorders.*

Etymology: Karuthodal (black odal) arose due its blackish plant body and characteristic seeds which resemble the fruits of *Sarcostigma kleinii*. *Sarcostigma kleinii* is the Veluthodal (white odal) due to its whitish plant body.

Note: Seeds are nutritious and is ground with rice for preparing *dosa*. Seed kernel is edible. Fried fruits are eaten. Fruit is slightly narcotic.
422. *Gomphia serrata* (Gaertn.) Kanis (Plate 71 E)


Family: Ochnaceae

Vernacular Name: Kan: Kuntala, Kempukuntala  
Mal: Aanaperal, Chavakambu, Chavetti, Chokkatti, Valermani  
Tulu: Kuntangeru, Kuntala parandu

Habit: Large shrub.

Habitat: Scrub forests.

Status: Occasional.


Uses: *Root decoction is used for digestive disorders, rheumatism and body pain. It is also used as a tonic.*

Etymology: Kuntala, Kuntangeru (*Syzygium caryophyllatum*), Kempukuntala (red *Syzygium caryophyllatum*) and Kuntala parandu (*Syzygium caryophyllatum* fruit) arose as its dark purple drupelets show resemblance with fruits of *Syzygium caryophyllatum*.

Note: It is usually used as a substitute for *Ochna obtusata*. Tender shoot is used as vegetable.

423. *Gomphrena celosioides* Mart. (Plate 71 F)

Syn: *Gomphrena decumbens* sensu Gamble

Family: Amaranthaceae
Vernacular Name: Eng: Globe amaranth  
Kan: Biligonde, Nelarudrakshi hoo  
Mal: Wadapu  
Tulu: Boldugonde

Habit: Ascending herb.

Habitat: Weed in gravelly soil.

Status: Common. Exotic and weed.

Description: Ascending herb, lanate, pubescent with age. Leaves simple, elliptic-oblong to spatulate-lanceolate, white hairy beneath. Flowers white, in terminal ovoid heads; bracts concave, membranous, 1-nerved; bracteoles 2. Perianth 5-lobed; lobes lanceolate, ciliate. Stamens 5, united into a long tube. Fruit small, oblong utricle.

Uses: *Leaf ground with fenugreek and black gingelly seeds are applied for sprain, spasm and nervine spasm. *Leaf ground with cumin and coriander seeds is taken with sugarcandy for easy recovery in above cases. *Root ground in water is consumed with ghee and sugar for dry cough, headache and weakness. *Plant paste is applied for cuts and wounds. Its extract is a nervine and hepato tonic.

Etymology: Biligonde and Boldugonde (white tuft) arose due to its white, oval head inflorescence.

Note: Leaf is used as a vegetable.

424. *Gossypium arboreum* L. (Plate 72 A)

Syn: *Gossypium perenne* Blanco

Family: Malvaceae

Vernacular Name: San: Karpasa, Karpasah  
Eng: Tree cotton  
Kan: Karihatti, Marahatthi, Bangali hatthi, Jade hatthi
Mal: Kattuparuthi, Muripparuthi
Tulu: Maroparthi

Habit: Large shrub.

Habitat: Grown in gardens.

Status: Occasional.

Description: Large shrub. Leaves simple, 5 – 7 lobed; stipules caducous; epicalyx segments triangular. Flowers solitary, axillary, pale yellow. Calyx campanulate, 5-lobed. Corolla 2 to 3 times as long as involucre. Stamens monadelphous. Fruit pitted, 3-celled capsule; seeds linted.

Uses: *Cotton ash mixed with honey (several years old) is applied externally for skin diseases. *Bark decoction is given internally and paste is applied externally for skin diseases and furuncles.

Etymology: Karihatthi (black cotton), Marahatthi, Maroparthi (tree cotton), Kattuparuthi (wild cotton) and Jade hatthi (long plaited hair cotton) are due to its blackish plant body, large shrubaceous nature and characteristic shape of dehisced capsule resembling long plaited hair of ladies.

Note: It is used in the preparation of *Karpasastyadi taila, Karpasastyadi kulambu, Sarvamayantaka ghṛta* and *Svetagunjadi gutika*. It has gossypol as active component with emmenagogue action (Chaudhri, 1996; Sivarajan & Balachandran, 1998).

425. *Gossypium barbadense* L. (Plate 72 B)

Syn: *Hibiscus barbadensis* (L.) O. Ktze.

Family: Malvaceae

Vernacular Name: San: Karpasa, Karpasah
Eng: Cotton
Kan: Egypt hatthi, Vilayathi hatthi, Karibeejada hatthi, Jade hatthi
Mal: Panjhi, Paruthi
Tulu: Parthi
Habit: Large shrub.

Habitat: Cultivated in gardens.

Status: Occasional. Exotic.

Description: Large shrub. Leaves simple, orbicular to ovate, deeply 3 – 5-lobed; lobes ovate-oblong; stipules linear to lanceolate. Flowers solitary, axillary; pedicels glandular at top. Epicalyx segments orbicular to ovate, deeply laciniate. Calyx cupular, 5-lobed. Corolla yellow, with a purple tinge. Stamens monadelphous. Fruit ovoid, beaked capsule; seeds coherent, linted.

Uses: Oil extracted from the seeds is used for skin diseases. *Seed decoction is given along with sugar for stomachache. *Seed oil is poured into ear in case of ear ache and applied externally for rheumatism. *Bark decoction is a uterine contractor and is taken to expel placenta. *Leaf and fruit ground in milk is consumed for venereal diseases. Seed extract is recommended for indigestion and opium poison. *Seed oil is used as an antidote for tobacco poisoning. Root decoction is consumed for urine block and urticaria. Tender leaf juice is used for blood dysentery. Bark or root decoction is a general and nerve tonic. *4 – 6 drops of crushed fruit boiled in coconut or gingelly oil is used as ear drop for pus release from ear. Plant paste is applied for rashes and other skin diseases. *Root paste with lime juice is applied for pus release from ear. *Leaf paste with rice washed water is applied for scabies and itches. Seed decoction is recommended for rheumatism and biliousness. Root extract increases biliousness and rheumatism, used for pain, worms, skin diseases, wounds, urine block, over bleeding, nervous debility, diarrhoea, menstrual disorders and as a preventive of fever. Oil extracted from seeds is used for rheumatism. It is a nerve stimulant. *Root decoction is used to induce menstruation. *Seed kernel paste is applied for warts.

Etymology: Vilayathi hatthi (foreign cotton), Karibeejada hatthi (black seeded cotton) and Jade hatthi (long plaited hair cotton) are due to its exotic nature, black seeds and characteristic shape of dehisced capsule resembling long plaited hair of ladies.
Note: It is used in the preparation of *Karpasastyadi taila*, *Karpasastyadi kulambu*, *Sarvamayantaka ghṛta* and *Svetagunjadi gutika*. It has gossypol as active constituent with emmenagogue action (Chaudhri, 1996; Sivarajan & Balachandran, 1998).

426. *Gossypium hirsutum* L. (Plate 72 C)


Family: Malvaceae

Vernacular Name: San: Karpasa, Karpasah  
Eng: Cotton  
Kan: American hatthi, Dodda hatthi, Vilayathi hatthi  
Mal: Karpassi, Paruthi  
Tulu: Parthi

Habit: Subshrub.

Habitat: Cultivated in gardens.

Status: Occasional. Exotic.


Uses: *Root, leaf and bark decoction is used internally while paste is applied externally for skin diseases, nerve disorders, burns, scabies and wounds.*

Etymology: Dodda hatthi (larger cotton) and Vilayathi hatthi (foreign cotton) are due to its exotic origin and larger fruits.

Note: It is used in the preparation of *Karpasastyadi taila*, *Karpasastyadi kulambu*, *Sarvamayantaka ghṛta* and *Svetagunjadi gutika* (Sivarajan & Balachandran, 1998).
It has dihydroxy benzoic acid, gossypetin, leuko-anthocyanidin and gossypol with expectorant, aphrodisiac and galactagogue properties (Kapoor, 1990).

427. *Grangea maderaspatana* (L.) Poir. (Plate 72 D)

Syn: *Artemisia maderaspatana* L.

Family: Asteraceae

Vernacular Name: San: Masipatre
Eng: Madras worm wood
Kan: Granhiparni, Masipatre, Machipatre
Mal: Nelampala
Tulu: Panchotre

Habit: Prostrate herb.

Habitat: Along bunds of paddy fields and marshy ground.

Status: Common. Weed.

Description: Prostrate herb, with stems spreading from the centre, hairy with soft white hairs. Leaves lyrate-pinnatifid, with opposite rounded lobes, hairy. Heads globose, solitary terminal, heterogamous; involucral bracts 2 – 3-seriate, elliptic, rigid, densely pubescent. Florets yellow, glandular; outer florets female, fertile; inner bisexual. Calyx minutely 5-toothed. Corolla of female florets filiform, outer ones 2-lobed, inner 3 – 4-lobed; of bisexual flowers tubular-campanulate, 4 – 5-lobed. Stamens 5. Fruit compressed, minutely puberulent, glandular achene with whitish pappus.

Uses: *Oil prepared from plant juice is applied over the head for sleeplessness and biliousness. Plant juice is taken internally as a digestive, also for cough, skin diseases and blood disorders. *Leaf juice mixed with *Plectranthus amboinicus*, *Ocimum tenuiflorum* and *Justicia adhatoda* leaf juices is consumed for cough. *Leaf extract is applied for pain, bruises and ulcers. *Leaf juice is used internally to expel intestinal worms.
Etymology: Masipatre (grey leaved) is due to the greyish tinge of the plant.

Note: Sometimes it is used as a substitute for *Artemisia indica*.

**428. Graptophyllum pictum** (L.) Griff. (Plate 72 E)

Syn: *Justicia picta* L.; *Graptophyllum hortense* Nees in Wall.

Family: Acanthaceae

Vernacular Name: Eng: Caricature plant  
Kan: Bannada ele  
Mal: Anchunirappacha  
Tulu: Bannotha thappu

Habit: Erect shrub.

Habitat: Cultivated in gardens.

Status: Occasional. Exotic.

Description: Erect shrub. Leaves simple, ovate-elliptic, purplish or green mottled with yellow. Flowers dark purple or crimson, in terminal panicles of cymes; peduncles puberulous; bracts and bracteoles inconspicuous. Calyx 5-lobed; lobes linear. Corolla glandular, pubescent within, 2-lipped; upper lip erect, lower reflexed. Stamens 2. Fruit clavate capsule.

Uses: *Root with that of Dracaena terniflora ground with cow urine and taken once a day in the morning for leucoderma. *Fried leaf powder mixed with coconut oil is applied for chronic ulcers and wounds. Leaf decoction is recommended twice a day for cold and fever. *Juice of leaf heated with burning charcoal is given with honey for phlegm in children. *Leaf juice or root paste with lime juice is applied for allergic swellings.

Etymology: Bannada ele, Bannotha thappu (colourful leaf) and Anchunirappacha (five coloured herb) are due to its variegated leaves.

Note: It is a much valued drug for skin diseases.
**429. Grewia glabra** Blume. (Plate 72 F)

Syn: *Grewia serrulata* DC.; *Grewia disperma* sensu Dunn.

Family: Tiliaceae

Vernacular Name:  
- Kan: Kathpagangi, Kadpaganji
- Mal: Aanakottimaram, Kallai, Kottimaram
- Tulu: Kathpagangi, Kadpaganji

Habit: Small tree.

Habitat: Plains and along the sides of paddy fields.

Status: Occasional.

Description: Small tree, with slender branches. Leaves simple, ovate-lanceolate, serrate, 3-nerved from base. Flowers in axillary umbellate cymes; peduncles 2 – 3-flowered. Sepals 5, linear, pilose outside. Petals 5, white, with gland almost as long as the petal, hairy on the top and margins. Stamens numerous. Torus pubescent in the upper half. Fruit fleshy, 1 – 4-lobed drupe.

Uses: Bark cooked with rice is eaten for three days for irregular menstruation, urticaria, itches, burning sensation, rashes and for pain during menses. *Bark extract in rice cooked water is consumed for backache. *Bark ground in rice cooked water is mixed with jaggery and given for bleeding piles. *Extract of bark soaked in hot rice cooked water overnight is given to cattle to prevent habitual abortion.  
*Bark extract in rice washed water is recommended for stomachache during menses. Bark decoction is used as a cardiac tonic. Bark extract in rice cooked water is also useful for threatened abortion and discharges during pregnancy. *Bark decoction is recommended to reduce high blood pressure and for white discharge through urine.  
*Mucilage from the bark is applied over the scalp for dandruff. *One fresh bark piece (of the size of three fingers), one burnt bark piece and cumin seeds ground in fresh milk is consumed at early morning for burning sensation in the body and backache. Bark decoction is recommended for burning urination. *Bark extract in
tender coconut water is taken for stomachache due to hyperacidity. *Leaf is given to eat in case of diarrhoea in cattle due to increased body heat.

Note: *Bark peel is used as a shampoo.

430. Grewia nervosa (Lour.) Panigrahi (Plate 73 A)

Syn: Microcos paniculata L.; Grewia microcos L.

Family: Tiliaceae

Vernacular Name: Kan: Abhroni, Abhrangu, Abhrankaayi, Pittlakaayi
Mal: Cherikkotta, Kotta, Kottakka
Tulu: Abhroni, Abhrankaayi

Habit: Large shrub.

Habitat: Forests and waste places.

Status: Common.

Description: Large glabrescent herb. Leaves simple, elliptic-oblong, chartaceous, 3-nerved at the base. Flowers yellow, in terminal panicles. Sepals 5, obovate-oblong, tomentose. Petals 5, ovate, with gland half as long as the petal. Stamens numerous. Torus with ciliate rim at apex. Fruit globose, 1-seeded drupe.

Uses: *Young twig crushed with sandal wood is taken with tender coconut water for three days in cases of menopause problems, DUB and over menstrual bleeding. *The water in which its crushed leaf soaked is used to wash eyes if latex of Sapium insigne comes in contact with the eyes. Leaf decoction is recommended for indigestion, fever with shivering, mouth ulcers and blood dysentery. Plant paste and decoction are used as anti allergic agents. *Leaf extract mixed with jaggery is taken for biliousness. *Leaf and sandal wood paste are soaked in tender coconut, boiled in fire and is given for three days in case of over bleeding and leucorrhoea. Stem peel decoction is used for blood dysentery, rheumatism and typhoid. *Leaf decoction is recommended for cold, headache, mouth ulcers and piles. *Tender shoot tip tambuli* is consumed for intestinal worms. *Leaf paste with butter is applied for
swellings, while that with water for skin diseases. *Tender shoot tip ground with rice cooked water (one day old) is used for three days in case of blood dysentery.

Etymology: Abhrankaayi (fruit which not breaking to pieces) arose due to its single hard seeded fruits.

Note: Fruits are eaten raw.

**431. *Grewia tiliifolia* Vahl. (Plate 73 B)**

Syn: *Grewia leptopetala* Brandis

Family: Tiliaceae

Vernacular Name: San: Dhanurvriksha, Dhanvana, Dharwana, Dhavana, Pichhilaka
Eng: Dhaman
Kan: Tadasala, Dadasu, Bedipathi mara
Mal: Chadachi, Unnam, Dhanurvriksham
Tulu: Dadas, Dadasu

Habit: Medium-sized tree.

Habitat: Deciduous and semi evergreen forests.

Status: Common.


Uses: *Bark decoction is of hot nature and is used for indigestion. *Mucilage of bark is taken with cumin seeds to arrest dysentery. *Bark decoction is used for rheumatism and biliousness. It is nutritive and a blood purifier.

Etymology: Dhanurvriksha, Dhanurvriksham (bow tree) and Bedipathi mara (gun handle tree) arose as this tree is widely used for preparing bow and handle of gun.
Note: Bark mucilage is used as a cool shampoo.

432. Gymnacranthera farquhariana (Hook. f. & Thoms.) Warb. (Plate 73 C)

Syn: Myristica farquhariana Hook. f. & Thoms.; Myristica canarica Bedd. ex King.; Gymnacranthera canarica (Bedd. ex King.) Warb.

Family: Myristicaceae

Vernacular Name: Kan: Pindi, Pindikaayi, Mombatthi mara  
               Mal: Udaipanu, Undappayin  
               Tulu: Pundikkayi

Habit: Large tree.

Habitat: Sacred groves and Myristica swamps.

Status: Rare.

Description: Large evergreen tree. Leaves simple, bifarious, oblong-lanceate, chartaceous, coriaceous, glaucous beneath. Flowers unisexual, dioecious, deep yellow; male in axillary panicles; female in axillary racemes; bracts deciduous. Perianth tubular, orange-yellow, apically 4-lobed. Stamens 6 – 12, connate by their back. Fruit ovoid or globose capsule; aril laciniate to the base.

Uses: *Seed kernel ground with ghee is applied externally and bark cooked with rice is eaten for boils and ulcers in small children.

Etymology: Pundikkayi, Pindikaayi (globose fruit) and Mombatthi mara (candle tree) arose due to its globose fruits and red exudate which is used in candle making.

Note: It is often used as a substitute for Myristica malabarica.

433. Gymnema sylvestre (Retz.) R. Br. (Plate 73 D)

Syn: Periploca sylvestris Retz.

Family: Asclepiadaceae
Vernacular Name: San: Ajasringi, Madhunashini, Medhasringi, Meshasringi
Eng: Small Indian ipecac
Kan: Madhunashini, Sappe soppu
Mal: Chakkarakolli, Madhunashini, Sarkarakolli
Tulu: Madhunasini

Habit: Twining shrub.

Habitat: Along the hedges.

Status: Frequent.

Description: Large twining shrub, with tomentose branches and inflorescence. Leaves simple, ovate to oblong, densely pubescent; petioles pubescent. Flowers small, in axillary pedunculate cymes. Calyx 5-lobed; lobes ovate, pubescent. Corolla yellow, sub-rotate. Corona coralline, single. Pollinia solitary in each anther sac. Fruit lanceolate follicle.

Uses: *Leaf juice is recommended for malnutrition in children. Plant decoction is used to arrest diarrhoea, for chronic ulcerative colitis and dysentery. Eating its leaves is beneficial for diabetes. *Leaf boiled in milk is used internally and paste is applied over head for malnutrition in children. Leaf decoction is also used for leucorrhoea. *Leaf, those of *Glycosmis pentaphylla, *Tabernaemontana heyneana, *Calotropis gigantea, camphor and copper sulphate are ground, heated by adding coconut grating paste and is applied for scabies. Leaf paste is applied for herpes. *Bark, those of *Alstonia scholaris, *Tabernaemontana heyneana, *Anacardium occidentale (2:1:1:1), pepper and long pepper powder are ground and taken with honey for fever in cattle. If *Leucas aspera leaf, *Tagetes erecta leaf, *Zanthoxylum rhetsa fruit and garlic are added to above preparation, it becomes useful for stomach swelling and swelling on the sides of throat.

Etymology: Ajasringi, Meshasringi (goat’s horn), Madhunashini, Madhunasini, Chakkarakolli, Sarkarakolli (sweet killer or sugar killer) and Sappe soppu (sugarless leaf) arose due to its characteristic fruits resembling goat’s horn and therapeutic
efficacy of leaves. Leaves are credited with the property of neutralizing the taste of sugar.

Note: Gymnemic acid A, B, C & D, gymnemagenin, gymnamine, betaine, choline, inositol, d-quercitol, nonacosane, hentriacontane, tritriacontane, pentriacontane, phytin, lupeol, β-amyrin, stigmasterol and γ-butyric acid are the active constituents (Kapoor, 1990; Sharma et al., 1998). It is used in the preparations like Ayaskrti, Nyagrodhadi churna, Mahavisagarbha taila and Mrtasanjivani sura (Sharma et al., 1998). It is much valued drug for diabetes.

434. Gymnostachyum febrifugum Benth. var. febrifugum Hook. f. (Plate 73 E)

Syn: Gymnostachyum alatum Wight.

Family: Acanthaceae

Vernacular Name: Kan: Nelamucchala, Jwarahara beru, Agrada beru, Chitiki gadde
   Mal: Nilamuchaala
   Tulu: Chitki

Habit: Small herb.

Habitat: Forest undergrowths.

Status: Frequent. Weed.

Description: Small herb. Leaves subradical, ovate, long-decurrent on the petiole. Flowers in terminal paniculate cymes; bracts and bracteoles very small. Calyx 5-partite; lobes linear-lanceolate. Corolla pale greenish yellow or purplish; tube cylindric, curved and widened above; limb 2-lipped; upper lip emarginate. Stamens 2. Fruit linear capsule.

Uses: *Whole plant ground with gingelly oil is given to expel placenta in cattle. *Whole plant juice is used for preparing oil which is applied for varicose veins in ladies and pain. *Root extract in lime juice is applied for thrush in tongue. *Rhizome, cumin seeds and turmeric paste with ghee is applied for septic wounds and ulcers. *It is also applied for septic ulcers caused by Smilax zeylanica spines.
*Root decoction is recommended for fever.  *Tuber crushed with salt is tightly tied for swellings.  Root decoction is consumed for all types of fevers including malaria. Crushed root stock heated with gingelly oil is applied for nervine rheumatism, septic wound and ulcers.  *Whole plant decoction is recommended for backache.

Etymology: Nelamucchala (ground cover), Jwarahara beru (fever root), Agrada beru (thrush root) and Chitiki gadde (cracking sound tuber) are due to its subradical leaves which spread over the ground, its therapeutic efficacy against fever, thrush in tongue, tuberous roots and characteristic cracking sound produced by the flower buds.

Note: Tuberous root stock is much valued for fever. Leaves are used as vegetable.

435. **Gynandropsis gynandra** (L.) DC. (Plate 73 F)

Syn: *Cleome gynandra* L.; *Gynandropsis pentaphylla* (L.) DC.; *Cleome pentaphylla* L.

Family: Capparaceae

Vernacular Name:  San: Ajagandha  
Eng: Spider flower  
Kan: Ajagandha, Narambele  
Mal: Aattunarivela, Karavela, Pattivela, Vellavela  
Tulu: Narambele

Habit: Erect herb.

Habitat: Along waste lands.

Status: Occasional. Weed.

Uses: Seed decoction is recommended for fever and biliousness. *1 – 2 drops of leaf juice mixed with salt is poured into ear for earache. *Whole plant boiled in coconut oil is applied for bruises, septic wounds, ulcers and leprosy.

Etymology: Ajagandha (smell of goat), Pattivela (dog Cleome) and Vellavela (white Cleome) arose due to its foetid nature, wild habit, white flowers and close affinity with Cleome.

Note: It is often used as a substitute for Cleome viscosa.

436. *Habenaria diphylla* (Nimmo) Dalz. *(Plate 74 A)*

Syn: Habenaria jerdoniana Wight

Family: Orchidaceae

Vernacular Name: San: Padmacarini
   Kan: Ondelethavare, Nelathavare
   Mal: Orilattamara
   Tulu: Nelathavare

Habit: Tuberous herb.

Habitat: Grassy hill-slopes.

Status: Common.

Description: Tuberous herb. Leaves 2, unequal in size, appressed to the ground, orbicular. Flowers in terminal spikes, greenish-white; bracts ovate. Sepals 3, unequal; laterals oblique. Petals 3, linear, subfalcate; lip spurred, 3-lobed, longer than sepals; lobes filiform. Pollinia 2. Fruit fusiform capsule.

Uses: *Tuber paste is applied externally for furuncles in breast and nose.*

Etymology: Padmacarini (resembling lotus), Ondelethavare, Orilattamara (one leaved lotus) and Nelathavare (ground lotus) arose due to its orbicular leaves. Of the two leaves only one is prominent.
Note: Usually it is used as a substitute for *Nervilia aragoana*.

437. **Habenaria grandifloriformis** Blatt. & Mc Cann. (Plate 74 B)


Family: Orchidaceae

Vernacular Name: San: Padmacarini
Kan: Ondelethavare, Nelathavare
Mal: Orilattamara
Tulu: Nelathavare

Habit: Tuberous herb.

Habitat: Grasslands.

Status: Occasional.

Description: Tuberous herb. Leaves 1 or 2, sessile, suborbicular, unequal in size, appressed to the ground. Flowers in terminal 1 – 4 flowered spikes, greenish-white; bracts ovate. Sepals 3, unequal; laterals oblique. Petals 3, linear, subfalcate; lip spurred, 3-lobed, longer than sepals; lobes filiform; spur slender, curved. Pollinia 2. Fruit fusiform capsule.

Uses: *Rhizome extract in milk is used as a general health tonic.*

Etymology: Padmacarini (resembling lotus), Ondelethavare, Orilattamara (one leaved lotus) and Nelathavare (ground lotus) arose due to its suborbicular leaves. Of the two leaves only one is prominent.

Note: Usually it is used as a substitute for *Nervilia aragoana*.

438. **Haldina cordifolia** (Roxb.) Ridsd. (Plate 74 C)

Syn: *Adina cordifolia* (Roxb.) Hook. f. ex Brand.

Family: Rubiaceae
Vernacular Name: San: Dharakadambah, Girikadambah  
   Eng: Haldu  
   Kan: Anavu, Arasina tega  
   Mal: Manjakadambu, Malamkadambu  
   Tulu: Anavu, Anovu

Habit: Large tree.

Habitat: Deciduous forests.

Status: Occasional.

Description: Large deciduous tree, with horizontal branches. Leaves simple, orbicular-cordate; stipules large, broad, deciduous. Flowers small, yellow, in globose heads; receptacle hairy; peduncles stout, axillary, 1 – 3 together. Calyx 5-lobed. Corolla funnel-shaped; lobes 5. Stamens 5. Fruit cuneate, pilose capsule.

Uses: *Oil prepared from tender shoot tip is used for pus release from ear. Bark decoction is recommended for bile and liver diseases. *Oil prepared using tender shoot tip is applied for wounds and ulcers. *Bark and leaf paste is used as wound healer.

Etymology: Girikadambah, Malamkadambu (hill cadamba), Arasina tega (yellow teak) and Manjakadambu (yellow cadamba) arose due to its restriction to the forests, yellow flowers in heads resembling that of *Neolamarckia cadamba* and light weight wood.

Note: Heart wood is a valued timber. It is often used as a substitute for *Neolamarckia cadamba*.

**439. Hedychium coronarium** Koenig in Retz. (Plate 74 D)

Family: Zingiberaceae

Vernacular Name: San: Sugandhi  
   Eng: Butterfly lily, Butterfly ginger lily, Garland flower, Common ginger lily
Kan: Suruli, Seeme kacchura  
Mal: Elipoochedi, Sugandhi, Sugandhikam  
Tulu: Suruli, Boldu suruli

Habit: Tall herb.

Habitat: Cultivated in gardens.

Status: Common.


Uses: Rhizome paste in water is applied for swelling due to allergy, rashes and urticaria. *Rhizome decoction is used for urinary disorders, to induce appetite and to increase urine. It is also used for ovarian and uterine disorders. *Rhizome decoction with milk is consumed by adding sugar in empty stomach for a period of two months (after menses) in case of leucorrhoea.

Etymology: Sugandhi (fragrant), Boldu suruli (white roll) and Suruli (roll) arose from its highly fragrant flowers which appear as a roll in bud stage.

Note: Flowers are used for worship. It is much valued drug for gynecological problems. It is used in the preparation of *Agastyaharitaki rasayana, Satayadi kvatha, Sudarsana churna, Chandraprabha vati and Satyadi churna. It has methyl-paracusarin acetate, linalool, cinnamic ethyl-acetate and sesquiterpenes as active components (Dey, 1994; Sivarajan & Balachandran, 1996).

**440. Hedyotis auricularia** (L.) K. Schum. (Plate 74 E)

Syn: *Oldenlandia auricularia* L.

Family: Rubiaceae
Vernacular Name: San: Tukah  
Kan: Nela nekkare  
Mal: Erachiketti, Murikootti, Kudalchurukki  
Tulu: Nela nekkare  

Habit: Trailing herb.  

Habitat: Wet low lands.  

Status: Common. Weed.  


Uses: *Plant tambuli* is used as a cooling agent, also useful to normalize digestive system, for weakness and anaemia. *Plant decoction with Cynodon dactylon is recommended for dysentery and diarrhoea. *Plant, Cynodon dactylon and Emilia sonchifolia extract or decoction is taken for gastrointestinal problems, duodenal problems and indigestion. *Plant decoction is highly recommended for chronic amoebiasis and gastric ulcers. Plant decoction has pain relieving property. *Cooked plant tambuli* with cumin seeds is used for anal prolapse due to dysentery. *Tender shoot tip is chewed for mouth ulcers. Plant decoction is taken for bleeding piles and urinary problems. *Whole plant decoction with neem leaf is given for urinary disorders. *Whole plant (half a hand) and Murraya koenigii leaves (¼ hand) ground in water is prescribed for one week in empty stomach at early morning in case of uncontrolled urination, burning urination, bed wetting, prostate gland swelling and less urine production. Plant extract is useful for biliousness. Root cooked with rice is eaten for gastric ulcers. *Whole plant crushed with cumin seeds in butter milk are boiled and given in empty stomach at morning for one week in case of malabsorption of food, loss of appetite, cold, rhinitis, dysentery and constipation in children. Whole plant extract is recommended for gastrointestinal tract problems.
*Tambuli* of plant fried in ghee is used with rice for diarrhoea in children (up to 12 years of age). *Tender shoot tip is fried in ghee with coconut gratings and boiled in butter milk. To this mixture, garlic, asafoetida, curry leaf and salt are added and are used for diarrhoea and indigestion. *Whole plant and Cynodon dactylon* (in equal quantity) decoction is used internally twice a day (for about 48 days) in case of amoebiasis and growth retardation in children.

Etymology: Nela nekkare (ground *Melastoma*), Erachiketti (flesh binder), Murikootti (wound healer) and Kudalchurukki (stomach contractor) arose from its trailing habit, prominently nerved leaves and resemblance with *Melastoma malabathricum*, therapeutic efficacy in wound healing and digestive disorders.

Note: Much valued drug for digestive disorders. *It is used as food in between two seasons to normalize digestion process.

441. *Hedyotis corymbosa* (L.) Lam. *(Plate 74 F)*

Syn: *Oldenlandia corymbosa* L.

Family: Rubiaceae

Vernacular Name:  
San: Parpatah, Parpatakah  
Kan: Parpata hulu, Kallu sabbasige  
Mal: Onathumba, Parpatakapullu  
Tulu: Parpato, Kora panthi

Habit: Annual herb.

Habitat: Wet low lands and weed in cultivated fields.

Status: Common. Weed.

Description: Annual herb, with ascending or spreading slender stem. Leaves simple, linear or linear-lanceolate; stipules with few short bristles. Flowers white, in axillary corymbose or umbellate 3 – 8-flowered cymes. Calyx 4-lobed. Corolla rotate; lobes ovate-oblong. Stamens 4. Fruit obovoid, didymous capsule.
Uses: *Bath with whole plant decoction is recommended for patients suffering from measles. Whole plant decoction is highly used for fever and gastritis. *Oil prepared from plant juice is applied for wounds. Plant decoction is also used to purify blood, for liver disorders, jaundice and biliousness. *Whole plant boiled with gingelly oil is applied externally for septic wounds, ulcers and scabies. *Plant paste (about the size of a gooseberry) is given with cooked rice for rabid dog bite. Leaf paste with salt is applied for ringworm. *Whole plant decoction with *Vernonia cinerea* is used for fever. *This and *Datura metel* leaf (in equal quantity) are ground with a little salt, heated by adding gingelly oil and is applied for all types of wounds, itches and ringworm.

Etymology: Kora panthi (measles grass) arose due to its herbaceous nature and therapeutic efficacy against measles.

Note: It is used in the preparation of *Amrtaista, Candanasava, Mahatiktaka ghrlta, Jatyadi taila* and *Aranyatulasyadi kera* (Sivarajan & Balachandran, 1996). Much valued drug for fever and skin diseases.

442. *Hedyotis herbacea* L. *(Plate 75 A)*

Syn: *Oldenlandia herbacea* (L.) Roxb.

Family: Rubiaceae

Vernacular Name: San: Chayaparpatika
Kan: Kaage purale, Parpata
Mal: Monganampullu, Nonganampullu
Tulu: Parpato

Habit: Erect herb.

Habitat: Laterite rocks and grassy hill slopes.

Status: Common.

Description: Erect much branched glabrous herb. Leaves simple, linear-lanceolate, with recurved margins. Flowers white, in solitary or 2-nate axillary filiform

Uses: *Leaf decoction is used to expel phlegm, for breathing trouble and tuberculosis. *Whole plant decoction is recommended for urinary stones. *Plant decoction or its gruel with rice is given for venereal diseases.

Etymology: Kaage purale (dried crow) and Chayaparpatika (coloured *Hedyotis corymbosa*) arose as this plant becomes dark black when dry.

Note: Sometimes used as a substitute for *Hedyotis corymbosa*.

443. *Hedyotis neesiana* Arn. (Plate 75 B)

Syn: *Hedyotis nitida* Wight & Arn.; *Oldenlandia nitida* (Wight & Arn.) Gamble

Family: Rubiaceae

Vernacular Name: Kan: Elukootti
MAL: Kallukkoduveli
Tulu: Elukootti

Habit: Trailing herb.

Habitat: Shady places.

Status: Frequent.

Description: Trailing herb, with 4-angled stem. Leaves simple, ovate-lanceolate, rigid, with recurved margins; stipules with much long hair-like bristles. Flowers white, in axillary fascicles. Calyx 4-lobed. Corolla rotate; lobes 4, ovate. Stamens 4. Fruit ovoid capsule.

Uses: *Whole plant paste is applied externally for bone fracture.*

Etymology: Elukootti (bone binder) is due to its therapeutic efficacy against bone fracture.

Note: Much valued drug for traditional bone setters.
444. *Helianthus annus* L. (Plate 75 C)

Family: Asteraceae

Vernacular Name: San: Adityabhakta, Suryamukhi, Suvarchala  
Eng: Sunflower, Common sunflower  
Kan: Sooryamukhi, Sooryakanthi  
Mal: Sooryakanthi  
Tulu: Sooryakanthi

Habit: Undershrub.

Habitat: Cultivated in gardens and fields.

Status: Occasional.

Description: Undershrub. Leaves simple, broadly ovate to elliptic, thick-coriaceous, penninerved, lowest pair prominent, sparsely scabrous. Inflorescence terminal, yellow, heterogamous, radiate heads; involucral bracts 15 – 45. Ray florets sterile. Disc florets perfect; corolla tubular, 5-lobed. Fruit 4-angled achene.

Uses: Seed or plant decoction is used for migraine, lymph node enlargement, stomachache, piles, urinary disorders and fever. It has laxative property and brings down serum cholesterol. *Leaf decoction is used as a wash for wounds and ulcers.  
*Leaf paste is applied over the forehead for headache and burning sensation in the body. *Oil extracted from the seeds is applied for scorpion bite and rheumatism.

Etymology: Suryamukhi, Sooryamukhi (facing sun) and Sooryakanthi (sun shine) arose from its characteristic bright coloured inflorescence which faces the sun.

Note: Edible oil is extracted from the seeds. *There is a belief that the air passing through this plant prevents diseases.

445. *Helicanthes elastica* (Desr.) Danser (Plate 75 D)

Syn: *Loranthus elasticus* Desr.; *Dendrophthoe elasticus* (Desr.) Danser

Family: Loranthaceae
Vernacular Name: Eng: Mistletoe
            Kan: Bandanike, Badanike
            Mal: Mavu iththill
            Tulu: Bandanukku

Habit: Parasitic shrub.

Habitat: Common on mango trees.

Status: Common.

Description: Woody, dichotomously branched, parasitic shrub. Leaves simple, ovate or orbicular, coriaceous. Flowers fascicled at the nodes of branches, subtended by one bract. Calyx truncate, 5-toothed. Corolla-tube white with green veins; lobes 5, linear, elastically coiled. Stamens 5, reddish. Fruit ovoid, pink when ripe.

Uses: *Same as Dendrophthoe falcata.

Etymology: Mavu iththill (mango mistletoe) arose as it is usually found on mango trees.

Note: It is often used as a substitute for Dendrophthoe falcata. Plant present on Calotropis gigantea is used in black magic.

446. Helicteres isora L. (Plate 75 E)

Family: Sterculiaceae

Vernacular Name: San: Avartani, Avartaphala, Avartaki
            Eng: East Indian screw tree
            Kan: Edamuri, Edamurikayi, Bhutakarulu
            Mal: Edampiri-valampiri, Kaivam, Kayinaru, Kayivilanaru
            Tulu: Kaiyyolu, Kidinjelu ballu

Habit: Large shrub.

Habitat: Forest undergrowths.
Status: Frequent.

Description: Large stellately tomentose shrub. Leaves simple, bifarious, obovate, obliquely cordate at base, irregularly toothed, scabrous above, pubescent beneath. Flowers in axillary fascicles. Calyx laterally compressed, obliquely 5-toothed, brown, stellately pubescent outside. Petals 5, exerted, red, 2 broader than the others and closely reflexed on the calyx tube. Stamens 10; staminodes 5. Fruit of 5 spirally twisted follicles.

Uses: *Tender twig boiled with coconut oil is used for paralysis of limbs and arms. *Root bark decoction is given to women after delivery for a day in order to contract the uterus. *Tender shoot tip juice is given to small children as one of the sour agents. *Fruit powder mixed with castor oil is poured into ear in case of earache. Fruit paste is applied over the eyes in case of eye diseases. *Root decoction is recommended for malaria and intermittent fever. Fruit decoction is used for fits. Root juice is consumed for digestive problems. Fruit gruel is given for biliousness and eye pain. *Fruit extract in castor oil is poured into ear to kill insects that entered the ear. *Stem peel is tied on the body for relief from itches of urticaria and Alocasia macrorrhiza allergy. *Shoot tip, cumin seeds and Ziziphus oenoplia shoot tip extract is poured into the nose of the opposite side and made to run in case of shoulder dislocation in cattle and bulls. *Tender shoot tip crushed with cumin seeds is boiled in coconut oil by adding a little turmeric powder and is applied for whitlow. *Root extract in butter milk is used to expel worms both in cattle and humans. *Tender shoot tip paste is applied to remove the stitches of operation and to heal wound of operation. *Stem peel extract is given to expel intestinal worms in calves. Stem bark decoction is used for ankle twist. Stem peel decoction is recommended for allergy. *Bark decoction is consumed for menstrual irregularity, dysentery in children skin diseases and as a tonic after delivery. Crushed fruit heated with gingelly oil is applied for paralytic stroke and rheumatism. *Root juice is heated after immersing a white rock in it and taken as a preventive medicine for fever. *Root and cumin extract with gingelly oil is used as nasya for leucorrhoea.
Etymology: Avartani, Avartaki (repeating), Avartaphala (repeating fruit), Edamuri (curved to left) and Edampiri-valampiri (left curve-right curve) are due to its spirally twisted follicles.

Note: Bark yields a strong fibre. It has saponins, phlobotannins, diosgenin, tetraatriacontanoic acid, tetraatriacontanol and sitosterol with expectorant and demulcent actions (Kapoor, 1990). Stem fibre is utilized for making ladder.

447. *Heliotropium indicum* L. (Plate 75 F)

Family: Boraginaceae

Vernacular Name: San: Bhurundi, Hastishundi, Vrscikali
   Eng: Indian turnsole
   Kan: Chelubalada gida, Chelukondi gida
   Mal: Thelkada, Thekkida
   Tulu: Chelkade, Chelkondi

Habit: Erect herb.

Habitat: Wastelands and in paddy fields after harvest.

Status: Common. Weed.

Description: Erect pubescent herb. Leaves simple, ovate, pubescent, margins undulate, decurrent on the long petiole. Flowers small, white, 2-ranked, in terminal unilateral scorpioid cymes. Calyx 5-lobed; lobes linear-lanceolate, pubescent. Corolla salver-shaped, blue-white; lobes 5. Stamens 5. Fruit deeply 4-lobed; nutlets angled, combined in pairs.

Uses: *Whole plant decoction is used for diarrhoea due to liver disorders or liver dysfunction in children. Leaf juice is applied for pimples, carbuncles, eye infection and to clean wounds. *Plant cooked with castor oil is applied for burning sensation, swellings with pain and poisonous bites. Root decoction is taken for cough and fever. *Whole plant (cleaned) extract with honey is poured into the eye for redness in eye, conjunctivitis, dust in eye and injuries to eye. *Plant paste is applied for
scorpion bite. Plant juice is given to expel phlegm. Whole plant paste is applied for carbuncles and its decoction is used as an antiseptic. Plant decoction is also recommended for urinary disorders. *Leaf paste with honey is applied for pimples and black heads. Leaf paste is applied for pus release from carbuncles. *Oil prepared from leaf juice is used as a wound healer. *Plant juice is used as gargle of ulcers in gum. Leaf paste is applied for swellings with burning sensation, wounds, skin diseases and poisonous bites. Whole plant boiled water is used to clean wounds, cuts, ulcers and as an eye wash for eye diseases. *Whole plant juice mixed with honey is consumed for asthma and bronchitis. *Legs are soaked in whole plant decoction for fungal disease of feet during rainy season. *20 gm whole plant and 10 gm dried ginger decoction is used internally for indigestion caused by jack fruit.

Etymology: Hastishundi (elephant’s trunk), Chelubalada gida, Chelukondi gida (scorpion sting herb) and Chelkondi (scorpion sting) are due to its characteristic inflorescence.

Note: It is used in the preparation of Vidaryasava, Vidaryadi ghṛta and Vidaryadi lehya (Sivarajan & Balachandran, 1996).

448. *Hemidesmus indicus* (L.) R. Br. var. *indicus* (Plate 76 A)

Syn: *Periploca indica* L.

Family: Periplocaceae

Vernacular Name: San: Anantamulah, Bhadravalli, Gopakanya, Krsnamuli, Sariva, Svetasariva
Eng: False sarsaparilla, Indian sarsaparilla, Country sarsaparilla
Kan: Sogade beru, Nannari, Nannali, Sugandhi beru
Mal: Nannari, Naruneendi, Paravalli
Tulu: Nannari, Nannari booru

Habit: Twining undershrub.

Habitat: Plains and lateritic hills.
Status: Common.

Description: Perennial twining undershrub, with woody rootstock. Leaves simple, highly variable, linear-lanceolate to elliptic-oblong, frequently variegated with white along the veins. Flowers small, in axillary cymes. Calyx 5-lobed; lobes broadly ovate. Corolla rotate, purplish-brown within; lobes 5. Corona of five fleshy, broadly truncate scales. Filaments free; anthers connivent. Fruit slightly falcate follicles.

Uses: Inner portion of root ground with milk is used as a health tonic, for urinary diseases, urinary stones, burning during urination, weakness, gastritis and as a blood purifier. Root decoction in milk is a good tonic for children and pregnant women. *Root oil is used to massage the body of small children. Inner root paste is applied for herpes and snake bite. *Fried root powder is taken for thrush in tongue of children. Root extract in milk is recommended for kidney and bladder stones. *Root decoction with cumin seed is consumed for chronic biliousness. Root decoction is used for rheumatism, piles, urinary disorders, dysentery and burning urination. Root decoction with milk is given for leucorrhoea and without milk for foul smell of urine in small children. Whole plant decoction with milk is taken for osteoarthritis and bone marrow problems. *During summer, root decoction is used as a thirst reliever. *Root is chewed for getting relief from mouth ulcers. *Plant paste with Clerodendrum viscosum shoot tip in fresh milk is applied for wounds, cuts and ulcers. Root soaked water is given to drink for fever. Root decoction is used as breast milk purifier. *Root decoction is consumed with sugar for burning during urination and less urine production. Root extract with milk is used for mouth ulcers. *Tender leaf petiole crushed with coriander seeds are used for sound fall. Root decoction strengthens bones. *Regular use of its root decoction is recommended for getting relief from heel cracks. Root starch extract in water is consumed in empty stomach with milk or starch boiled in water is given with sugar and milk for leucorrhoea. Root decoction is used for diarrhoea, chronic cough, urinary problems and to increase lactation. *Latex is used for eye diseases. Root paste is applied as a foul body odour remover.

*Root, Pedalium murex and Rubia cordifolia decoction is used for prostate
gland swelling while the same with *Boerhavia diffusa* is recommended for rheumatoid arthritis. *Root, dried gooseberry fruit powder and Glycyrrhiza glabra rhizome powder mixed with butter and sugarcandy are used for cough. Root and Glycyrrhiza glabra rhizome powder dissolved in water are used for gastritis. *Root, Rubia cordifolia, gooseberry and turmeric decoction is used as a blood purifier. *Root, those of Rauwolfia serpentina, Croton laevigatus and Clerodendrum serratum ground in cow urine is used for oedema. *Oil prepared by boiling its root, Psoralea corylifolia seed powder, Eclipta prostrata and Tectona grandis shoot tips (kept for 2 – 3 days) is used for 2 – 3 months for blackening the white hairs. *Root soaked in water (for one day) ground with *Hybanthus enneaspermus* in milk is given for leucorrhoea. Leaf paste is applied for dental cavities. *Hemidesmus indicus, sandalwood, grapes and Symplocos cochinchinensis bark decoction with milk is taken to prevent threatened abortion. Root, coriander, cumin and Tribulus terrestris (4:1:1:1) seeds decoction is used as a tonic. *Root, which of *Abutilon indicum* and cumin seeds powder boiled with water is used twice a day for constipation. *Sun dried root powder dissolved and boiled in water is used for amoebic dysentery. Root extract with milk is given thrice a day for cough in children. *Root paste with milk is applied over the forehead for migraine.

**Etymology:** Anantamulah (endless roots), Bhadravalli (auspicious climber), Krsnamuli (black rooted) and Sugandhi beru (fragrant root) are due to its long, black, fragrant roots and diverse uses.

**Note:** Saponin, coumarine, hemidesmine, smilosperic acid, hemidosterol, hemidesmol, β-sitosterol, α & β-amyrin, lupeol, hyperoside, isoquercitin, rutin, tannin and sterols form the active constituents (Dey, 1994; Kapoor, 1990). It is used for preparing Sarivadyasava, Pinda taila, Vidaryadi lehya, Draksadi kashaya, Sarivadi kvatha, Sarivadi vati, Sarivadyavaleha and Jatyadi ghṛta (Dey, 1994; Sivarajan & Balachandran, 1996). Root extract is used as thirst quencher.

**449. Hemigraphis colorata** Hallier f. (Plate 76 B)

Family: Acanthaceae

Vernacular Name: San: Vranaropani
Kan: Gadimaddu  
Mal: Murikootti  
Tulu: Gadimardu

Habit: Prostrate herb.

Habitat: Cultivated in gardens.

Status: Frequent.

Description: Prostrate herb, rooting at the nodes. Leaves simple, broad, ovate, cordate at base, crenate, sparkling silvery violet, red purple beneath. Flowers pale white, solitary, axillary or terminal. Calyx 5-partite; lobes narrow. Corolla tubular-ventricose; lobes 5, subequal. Stamens 4, didynamous. Fruit clavate capsule.

Uses: Plant or leaf paste is a wound healer and is applied to arrest bleeding from wounds.

Etymology: Vranaropani, Gadimaddu, Murikootti and Gadimardu (wound healer) are due to its wound healing property.

Note: It is a valued drug for wounds.

450. *Heterophragma quadriloculare* K. Schum. (Plate 76 C)

Syn: *Heterophragma roxburghii* DC.

Family: Bignoniaceae

Vernacular Name: Kan: Bechaadi, Bechadi mara, Kaligottu mara, Adavinugge, Mandeli mara  
Tulu: Kattunurge, Mandeli maro

Habit: Medium-sized tree.

Habitat: Rocky hill tracts.

Status: Occasional.
Description: Medium-sized deciduous tree. Leaves 1-pinnate; leaflets 7 – 11, ovate, unequal sized at base. Flowers fragrant, in large, terminal wooly panicles; pedicels wooly. Calyx irregularly 5-lobed, campanulate, brown-tomentose outside, silky-hairy within. Corolla tubular-ventricose; rose-coloured; lobes 5, crisped, crumpled in bud. Stamens 4, didynamous. Fruit narrowly oblong, cylindric, loculicidally 2-valved capsule; septum 4-winged.

Uses: Bark decoction is used for treating arthritis and rheumatism. *Bark paste or that cooked with rice is applied for hardened tumours and isolated hair fall (here and there) in cattle. *Bark decoction is used to wash septic wounds and ulcers. *Bark juice is taken as an antidote for viper bite. *Decoction prepared from the bark is used as a body wash for urticaria, rashes and other skin diseases. *Bark paste with lime juice is applied externally for psoriasis. *Oil prepared by mixing leaf juice, gingelly oil and mustard oil is applied externally for rheumatism. Bark cooked with rice or its decoction is recommended for snake bite and gangrene. *Bark decoction or decoction with *Pterocarpus marsupium* bark is recommended for a week in case of gangrene caused by poisonous bites or diabetes. *Small bark piece cooked with rice is given to eat and paste is applied (until bitter taste felt) for viper bites and related ulcer. *Bark cooked with rice is used for worm infestation. *Bark paste with salt water is applied for itchy wounds, that with rice washed water for burning sensation and softened skin and that with lime juice for septic and diabetic ulcer.

Etymology: Adavinugge, Kattunurge (wild drumstick), Mandeli mara and Mandeli maro (viper tree) arose due to its cylindric fruits which resemble drumstick and therapeutic efficacy against viper bite.

Note: It is widely used for viper bite.

451. *Hibiscus hispidissimus* Griff. (Plate 76 D)

Syn: *Hibiscus aculeatus* Roxb.; *Hibiscus furcatus* Roxb. ex DC.

Family: Malvaceae

Vernacular Name: San: Sathambasthi
Kan: Huli gauri, Huligeri, Kairpuli, Huli sappu  
Mal: Naranampuli, Panichakam, Pachapuli, Vaishyappuli  
Tulu: Kayyeruppuli, Kayerpuli, Bottu poo

Habit: Rambling undershrub.

Habitat: Along hedges.

Status: Common. Weed.

Description: Prickly rambling undershrub, with pubescent stem. Leaves palmately 3 – 5-lobed, densely strigose, prickly on the nerves beneath; petioles prickly. Flowers solitary, axillary. Epicalyx segments 8 – 12, divided at apex into two leafy portions, densely hispid. Calyx deeply 5-partite; lobes broadly lanceolate, 3-nerved, hispid with stiff bristles. Corolla yellow with purple centre; petals 5. Staminal column 5-lobed. Fruit ovoid, pointed capsule, enclosed in the enlarging calyx.

Uses: Oil prepared from leaf juice is applied for ulcers. *Leaf paste with cumin seeds is applied for breast swelling. *Leaf or flower is used for preparing a rasam* used as blood purifier and to improve digestion. *Root bark crushed with jaggery is taken internally for expelling worms in cattle. Root decoction is used after delivery. Root paste is applied for pus release from abscess and furuncles. *Stem and leaves ground with raw rice are applied for mastitis and other swellings. *Root extract in tender coconut water is consumed for burning urination. *Paste of root bark pieces (fried in coconut oil) with butter is applied for ulcers or boils in ear lobe, septic wounds, ulcers and ulcers in nose. *Leaf, cumin and raw rice seeds ground in water are stored in an earthen pot for one day and applied for breast pain, swelling and hardened breast. *Paste of leaf and Aloe vera ground in rice washed water is applied for udder swelling in cattle. *Leaf juice mixed with honey or jaggery is given for cough and phlegm in children. Root or leaf decoction is used for vision problems, poisonous bites, septic conditions, wounds, swelling with burning sensation, rheumatism, indigestion, diarrhoea, vomiting, gas trouble and sleeplessness. Oil extracted or prepared from plant juice is applied for chronic wounds and swellings. *Root paste with Cassia fistula leaf juice is applied for ringworm. *Root paste with
rice washed water is applied for furuncles in small children. Leaf extract is recommended for fever, hyperacidity and burning sensation. *Root crushed with cumin seeds in tender coconut water or its leaf chutney is used for burning during urination.

Etymology: Huli sappu (sour leaf) and Bottu poo (circlet mark flower) arose due to its sour leaves and purple centre of corolla.

Note: Flowers are made into rasam*. It is used in the preparation of Annabhedi sindhura and Abhra bhasma (Sivarajan & Balachandran, 1996). It is also used in black magic.

452. *Hibiscus mutabilis* L. (Plate 76 E)

Syn: *Abelmoschus mutabilis* (L.) Wall. ex Hassk.

Family: Malvaceae

Vernacular Name: San: Padmacharini, Sthalapadma

Eng: Cotton rose, Confederate rose, Changing rose

Kan: Bettadaavare, Sooryakanthi, Chandrakanthi

Mal: Chinappratti

Tulu: Sooryakanthi

Habit: Large shrub.

Habitat: Cultivated in gardens.

Status: Frequent. Exotic.

Description: Large shrub, with densely pubescent young parts. Leaves suborbicular, palmately 3 – 7-lobed; lobes triangular, sparsely stellate pubescent, densely stellate pubescent beneath. Flowers solitary, axillary or subcorymbose at the tip. Epicalyx segments 6 – 12, linear-lanceolate. Calyx deeply 5-partite; lobes ovate, pubescent. Corolla double, white in the morning, turning red in the evening. Staminal column truncate. Fruit subglobose, densely stellate-pubescent capsule.
Uses: *Bark decoction is used as a cooling agent, useful for biliousness and dysentery.

Etymology: Padmcharini (resembling lotus), Bettadaavare (hill lotus), Sooryakanthi (sun light) and Chandrakanthi (moon light) arose from its double corolla, Chinese origin, blooming in the morning and colour change towards the evening.

Note: Often grown as ornamental plant.

453. *Hibiscus radiatus* Cav. (Plate 76 F)

Syn: *Hibiscus heptaphyllus* Dalz. & Gibs.; *Hibiscus pachmaricus* Haines

Family: Malvaceae

Vernacular Name: Eng: Aibika  
Kan: Kaadubende  
Mal: Kaattuvenda  
Tulu: Kaattubende

Habit: Undershrub.

Habitat: Grown as ornamental plant, also as garden escape.

Status: Frequent.

Description: Erect undershrub, with few scattered bulbous based prickles. Leaves palmately 3 – 5-lobed, progressively reduced towards the distal part; lobes trigonous or lanceolate, with stout hairs on veins beneath; stipules bristly. Flowers solitary, axillary, showy. Epicalyx segments 8 – 10, linear, forked towards apex, covered with bulbous based bristles. Calyx campanulate, veins prominent, ultimately becoming hard and stiff, with bristles outside. Corolla red, with dark centre; petals 5. Staminal column 5-lobed. Fruit ovoid capsule, enclosed within accrescent calyx, densely hairy with simple bristles.
Uses: *Oil extracted from the seeds or plant juice is applied for skin diseases and hair fall. *Root decoction is given to arrest loose motion in calves. *It is also used for rheumatism.

Etymology: The names Kaadubende and Kaattuvenda (wild okra) indicate its wild nature.

Note: It is often used as a substitute for *Abelmoschus manihot*.

454. *Hibiscus rosa-sinensis* L. var. *rosa-sinensis* (Plate 77 A)

Family: Malvaceae

Vernacular Name: San: Japa, Japapushpa, Raktapushpi, Japakusuma
Eng: Chinese hibiscus, Chinese rose, Rose of China
Kan: Daasavala, Kempu daasavala, Kempu pundrike
Mal: Ayamparathi, Chembarathi
Tulu: Arappacche, Daasana poo

Habit: Large shrub.

Habitat: Cultivated in gardens.

Status: Common. Exotic.

Description: Large shrub. Leaves simple, ovate or ovate-lanceolate, glabrous. Flowers axillary, solitary; pedicels longer than the leaves. Epicalyx segments 5 – 8, lanceolate. Calyx campanulate, 5-lobed, divided almost to the middle; lobes lanceolate. Corolla red, white or other shades; petals 5 or double. Staminal column slightly exerted beyond the corolla. Fruits rarely formed.

Uses: *Leaf paste with rice seeds is applied over the warts and carbuncles for pus release, quick heal, also for ringworm. *Roties prepared using leaves or buds are advised to eat for three days as preventive of carbuncles for a period of one year. 3 – 5 flowers (red variety) ground in water are given in case of over menstrual bleeding. *Root ground with butter milk is applied for udder swelling in cattle. Flower paste is applied on the head for getting relief from dandruff. *Root (white
variety) ground in rice washed water is given for leucorrhoea, UTI and menstrual irregularities. Leaf mucilage is taken internally for indigestion. Flower buds ground in milk are given for menstrual irregularities. *Leaf, *Ixora coccinea* flower, *Eclipta prostrata, Cynodon dactylon* and *Centella asiatica* used for preparing good hair oil. *Flower (red variety) ground in butter milk is taken to normalize menstrual cycle. *Eating 10 flower buds daily results in permanent sterility in women (if it is used during pregnancy it can cause abortion). *10 flower buds are chewed for 28 days to purify blood and to prevent carbuncles. Oil prepared by boiling its leaf juice in coconut oil is applied for increasing hair length and blackness. *Leaf juice mixed with sugar is consumed as a cooling agent for unconsciousness and digestive problems. Leaf paste is applied for carbuncles and bud paste for piles. *3 – 4 flower extract in rice washed water is used for normalizing menstruation in women and cattle. Root extract (white variety) in cold milk is consumed for leucorrhoea and menstrual problems. *Leaf chutney is recommended for expelling worms and paste for hair fall. *Leaf and flower mucilage or oil from these is applied on the head for malnutrition in children and increased body temperature. *10 flower buds eaten daily for backache in women.

*Leaf paste with lime juice is applied for carbuncles. Leaf mucilage is a laxative, used for constipation and as liver medicine. *Flower (white variety) soaked water is consumed for weakness after fever. Flower (white variety) paste is applied over the stomach and its powder is given internally for irregular menses. *Dosa prepared from the leaves is eaten for skin diseases due to increased body heat. Leaf decoction is taken for burning urination. Eating its two flowers (red variety) daily helps to overcome digestive disorders. *Flower paste is the best natural facial cream. *Root extract of cream coloured variety is recommended for leucorrhoea. *Tambuli prepared from tender shoot tip is useful for protein discharge in urine and carbuncles (not recommended for those with phlegm). 5 – 10 flower buds heated in charcoal are chewed with sugarcandy at morning in empty stomach for a week in case of increased body heat, red boils and anxiety. *Root cooked with rice is consumed for over urination. Leaf decoction is used to wash eczema. Leaf paste is applied over the head for somnambulism and gastritis. *Flower (white variety)
ground in copper vessel is kept for one day and next day given for conception in cattle. *Flower paste is applied to stop bleeding from cuts and wounds. *

*Shade dried flower powder is used with milk for piles and with honey for over menstrual bleeding. Flower paste is applied over the head and kept for one hour for hair fall. 5 gm leaf powder is used twice a day for leucorrhoea. Leaf paste is applied over the head for headache. *Root (white variety) ground with Hybanthus enneaspermus and cumin seeds in milk are used for leucorrhoea. *5 – 6 flower buds (white type) kept in earthen pot overnight are ground next morning in cold milk and given for leucorrhoea. Flower bud (white variety) ground in milk is applied for rashes or urticaria in small children. *Root (white variety) decoction with green gram is used for burning during urination. *Flower bud ground in rice washed water is taken with honey for bleeding during pregnancy. Root extract in milk is consumed internally for snake bite. *Flower ground with gingelly oil is given internally to induce menstruation. *Juice of its leaf along with that of Abutilon indicum mixed with milk is used once a day for over sweating. Leaf decoction is taken at bed time for burning sensation in stomach. *Flower pieces boiled with coconut oil are applied on the scalp before bed time for sleeplessness. *Flower or bud and cumin powder ground with milk are recommended once a day for five days in case of amoebiasis. *Dried petal boiled with coconut oil is applied before bed time for proper growth of hair. Flower extract with butter milk is consumed for three days in the morning from the 4th day of menses for stomachache during menses. Paste of its leaf and raw rice seeds is applied for at least three hours in a day for itches, scabies and ring worm.

Etymology: Japa (muttering), Japapushpa (muttering flower) and Raktapushpi (red flower) arose as the flowers are used for worship and reddish corolla.

Note: It is used in the preparation of Cemparutyadi taila (Sivarajan & Balachandran, 1996). Flower and buds are used as vegetables. *It is believed that the side effect of sunlight can be avoided if one walks in sunlight by wearing its flowers on the head.
455. *Hibiscus rosa-sinensis* L. var. *schizopetalus* Dyer. *(Plate 77 B)*

Syn: *Hibiscus schizopetalus* (Dyer.) Hook. f.

Family: Malvaceae

Vernacular Name: Eng: Coral hibiscus, Skeleton hibiscus, Fringed hibiscus
   Kan: Jaali, Daasavala, Katthari daasavala
   Mal: Tookuchemparuthi
   Tulu: Katthari daasano

Habit: Large shrub.

Habitat: Cultivated in gardens, also planted along hedges.

Status: Frequent. Exotic.

Description: Large shrub, with slender drooping branches. Leaves simple, ovate-elliptic, coarsely serrate towards the tip. Flowers solitary, axillary, pendulous. Epicalyx segments 6 – 7, small. Calyx tubular, irregularly 2 – 4-lobed at the tip. Corolla scarlet or whitish-red; petals 5, deeply laciniate into many linear-oblong segments. Staminal column twice as long as petals. Fruits rarely formed.

Uses: *Mucilaginous juice from the bark is used as a cooling shampoo for hair fall, sleeplessness, skin diseases and itches.*

Etymology: Katthari daasavala and Katthari daasano (scissor hibiscus) are due to its deeply laciniate petals.

Note: *Bark mucilage is used as shampoo.*

456. *Hibiscus surattensis* L. *(Plate 77 C)*

Family: Malvaceae

Vernacular Name: San: Sathambasthi
   Kan: Huli gauri, Huligeri, Kairpuli, Huli sappu, Mullu gogu
   Mal: Kakkapoovu, Mampazhaya, Pulichai
   Tulu: Kayyeruppuli, Kayerpuli, Bottu poo
Habit: Rambling undershrub.

Habitat: Along hedges.

Status: Common. Weed.

Description: Rambling undershrub, sparsely covered with recurved prickles. Leaves ovate to 3 – 5-lobed, sparsely strigose above, with prickles on nerves beneath; lobes elliptic-lanceolate; petioles prickly; stipules large, foliaceous, auriculate. Flowers solitary, axillary. Epicalyx segments 10, spathulate, spreading with an erect, filiform appendage, hispid. Calyx deeply divided; lobes ovate, 3-nerved, hispid with recurved prickles. Corolla yellow, with deep purple centre; petals 5. Staminal column truncate. Fruit ovoid capsule, covered with bristles.

Uses: *Oil prepared from its twig juice is used for urinary tract infections, skin diseases, wounds and digestive problems.

Etymology: Huli sappu (sour leaf) and Bottu poo (circlet mark flower) arose due to its sour leaves and purple centre of corolla.

Note: It is often used as a substitute for *Hibiscus hispidissimus*.

**457. *Hiptage benghalensis* (L.) Kurz. (Plate 77 D)**

Syn: *Hiptage madablota* Gaertn.

Family: Malpighiaceae

Vernacular Name: San: Bhadralata, Madhavi, Madhavilata
Eng: Clustered Hiptage, Helicopter flower
Kan: Madhavilathe, Madhavilatha
Mal: Chittilakody, Njarambodal, Seethambu, Sitampu
Tulu: Madhavilathe

Habit: Woody climber.

Habitat: Along hill tracts, also grown in gardens.
Status: Rare in wild.

Description: Large woody climber. Leaves simple, elliptic-ovate, pubescent, coriaceous. Flowers fragrant, in terminal panicles. Sepals 5, obtuse, persistent, grey-tomentose outside. Petals 5, reflexed, white tinged with yellow or pink, fimbriate. Stamens 10. Fruit samara, with oblong wings.

Uses: *Whole plant paste is applied externally for rashes, scabies and rheumatism while a little quantity is used internally for asthma and bronchitis.

Etymology: Bhadralata (auspicious climber), Madhavilata and Madhavilathe (spring climber) arose due to its diverse uses and blooming during the spring.

Note: Mostly used for skin diseases.

**458. Holarrhena pubescens** (Buch.-Ham.) Wall. ex G. Don. *(Plate 77 E)*

Syn: *Holarrhena antidysenterica* (Roth.) A. DC.

Family: Apocynaceae

Vernacular Name: San: Indrayava, Kutaja, Kutajah  
Eng: Conessi bark, Ester tree, Ivory tree, Tellicherry tree  
Kan: Kodasige, Kadasiga, Kodagappale, Kodagappalari  
Mal: Kadalapala, Kudagappala  
Tulu: Kodenchi, Kodagasana

Habit: Large shrub.

Habitat: Laterite hills and forests.

Status: Common.

Description: Large shrub or small tree. Leaves simple, ovate or elliptic-oblone, pubescent. Flowers white, in terminal or axillary corymbose cymes. Calyx 5-lobed; lobes glandular within. Corolla salver-shaped; lobes 5, spreading. Stamens 5. Fruit divaricate, slender, curved follicles.
Uses: Bark decoction is used for 12 days in case of bronchitis and asthma. Fried flowers are eaten for indigestion and dysentery while bark ground in curd is given for amoebiasis, diarrhoea and dysentery. Bark decoction is taken for gastrointestinal tract disorders. *Fried seed extract is given for upset stomach and typhoid. Seed powder is consumed to expel worms. *Bark decoction or its extract in butter milk is used for indigestion both in humans and cattle. *Dried flower powder is recommended for amoebiasis.

Bark decoction is much used for diarrhoea and dysentery. *Flower boiled in butter milk is given for diarrhoea in small children. Fried seed powder is used for stomachache. *Seed powder mixed with jaggery is taken to expel intestinal worms. *Seed powder is used for preparing a tea for fever. *Seed powder with honey is used as a breast milk purifier. Bark decoction is a digestive, used to increase blood quality and for piles. Bark paste is applied for 7 – 14 days and bark decoction is given internally for 2 – 3 days in case of leprosy, wounds and diabetic ulcers. *Dried flower is used for preparing a tambuli* which is digestive. *Fruit tambuli* is recommended during winter. *Bark decoction mixed with salt is used as gargle for tonsillitis. Root bark fried in ghee is powdered, mixed with ghee and given after food at night for diabetes, fat and ulcers. Root or bark extract in butter milk is recommended for amoebic dysentery, dysentery due to indigestion and dysentery due to increased phlegm while that in curd for water borne dysentery. Root ground in lime juice is taken for dysentery. *Root powder decoction with water is used twice a day to expel intestinal worms. *Root extract with lime juice is taken once a day for scabies. *Bark along with that of Phyllanthus emblica, Syzygium caryophyllatum and Flueggea leucopyrus root are ground with curd and given thrice a day for two days in case of amoebiasis. Root ground with rice washed water is given to expel worms in calves, piles, indigestion, leprosy, oedema, raktapitta* and worms. *Root bark, Saussurea lappa seed and chebulic myrobalan ground with butter milk are applied for urticaria and rashes. *Seeds, impure sodium chloride, turmeric, Eleusine coracana seeds and Saussurea lappa seeds (in equal quantity) are ground in butter milk and applied repeatedly for scabies, leprosy and other skin diseases. *Bark and Strychnos nux-vomica ashes are dusted after applying coconut
oil for septic wounds and ulcers. *Root, jaggery and onion ground with coconut husk juice are given internally for bleeding from mouth and nose in cattle.

Etymology: Indrayava (Indra’s seeds) and Kodagappale (gifted tree with milky latex) arose due to its milky latex and much used seeds.

Note: Dried seeds are known as Indrayava. It is used in the preparation of Kutajarista, Kutajavaleha, Kutajaghana vati, Amritarista, Saravajwarahara lehya, Yogaraja guggulu, Bhunimbadi churna, Brhat sudarsana churna, Amrtastaka kvatha, Piyusavalli rasa, Jvaraghni rasa, Ahiphena rasa, Pancanimba churna, Palasabijadi churna, Laghu gangadhara churna, Kutajatvagadi lehya, Ayaskriti and Krmī kuthara rasa (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). Conessine, norconessine, conessimine, isoconessimine, kurchine, conimine, conamine, conarrhimine, conessidine, conkurchine, holarrhinine, holarrhimine, holarrhine, kurchicine, concuressine, holadysine, holarrhine, holadysamine, holadysine, holarrhine, holanamine, kurchamine, holarrhinetine and holadysone are major active components (Dey, 1994; Kapoor, 1990; Jain et al., 1991; Sharma et al., 1998). Fruits are used as vegetable.

459. Holigarna arnottiana Hook. f. (Plate 77 F)

Family: Anacardiaceae

Vernacular Name: Eng: Jungle marking nut
Kan: Chera, Cheremara, Holegeru, Kutageru
Mal: Cheru, Kattuchera, Karincheru
Tulu: Kattuchere, Chere

Habit: Large tree.

Habitat: Semi evergreen forests and along streams.

Status: Frequent. Poisonous.

Description: Large tree, with buttressed base and black caustic juice. Leaves simple, oblanceolate, glabrous beneath; petioles with a pair of spurs. Flowers yellowish-

Uses: *Bark cooked with rice is given for a period of three days for uterine diseases. *Tambuli* prepared from tender shoot tips is useful for gastritis (*if any allergy results, then Terminalia bellirica bark extract in lime juice is given as antidote). *Bark piece (of the size of four fingers) cooked with rice is taken for expelling worms. *Tender shoot tip tambuli* is given as a digestive agent for gastrointestinal tract diseases. *Bark cooked with rice is used as a blood purifier for skin diseases. *Tender shoot tip paste is applied externally and extract is taken internally for poisonous bites. *Bark cooked with rice is given for ulcers due to hair fall in dogs. *Purified (by heating in charcoal) seed paste is applied for cancerous lesions. *Gruel prepared by cooking its bark with rice is eaten with coconut milk for scabies, chronic wounds and ulcers. *Fruit decoction is recommended for black tinea versicolor. *Bark cooked with rice is recommended to expel intestinal worms and conception in cattle. *Bark and Ficus racemosa bark decoction is used for DUB in pregnant women.

Etymology: Kattuchera, Kattuchere (wild marking nut) and Karincheru (black marking nut) are due to its restriction to the forests, black caustic juice and use as a substitute for Semecarpus anacardium (marking nut).

Note: Ripe fruit pulp is eaten after the removal of hysocarp and rubbing with Aporosa lindleyana leaf. It is widely used as a substitute for Semecarpus anacardium.

460. *Holigarna ferruginea* Marchand (Plate 78 A)

Family: Anacardiaceae

Vernacular Name: Eng: Jungle marking nut

Kan: Chera, Cheremara, Holegeru, Kutageru

Mal: Cheru, Kattuchera, Karincheru

Tulu: Kattuchere, Chere
Habit: Medium-sized tree.

Habitat: Semi evergreen forests.

Status: Frequent. Poisonous.

Description: Medium-sized tree, with black caustic juice. Leaves simple, obovate, glabrous beneath; petioles with a pair of deciduous spurs. Flowers whitish, in terminal, brown, pubescent panicles. Calyx cup-shaped, 5-lobed, ferruginous-tomentose outside. Petals 5, villous within. Stamens 5. Fruit ellipsoid drupe, completely enclosed in hysocarp, black when ripe.

Uses: Same as Holigarna arnottiana.

Etymology: Kattuchera, Kattuchere (wild marking nut) and Karincheru (black marking nut) are due to its restriction to the forests, black caustic juice and use as a substitute for Semecarpus anacardium (marking nut).

Note: It is used in synonymous with Holigarna arnottiana.

461. Holoptelea integrifolia (Roxb.) Planch. (Plate 78 B)

Syn: Ulmus integrifolius Roxb.

Family: Ulmaceae

Vernacular Name: San: Chirabilva, Cirabilvah, Putikaranjah
    Eng: Indian elm, Jungle cork tree
    Kan: Tapasimara, Rahubeeja, Ravubeja
    Mal: Aavel, Aavil, Njetaval, Njetavil
    Tulu: Ravubejja, Ravubeejo

Habit: Large tree.

Habitat: Forests and along roadsides.

Status: Frequent. Poisonous.

Description: Large deciduous tree. Leaves simple, elliptic-ovate or suborbicular.

Uses: Oil prepared from its bark is used for chronic ulcers. *Bark paste is applied to the spot of pit viper bite and also to arrest bleeding from wounds. Bark decoction is taken in small dose for tumours, septicemia and liver disorders. *Leaf paste is applied for skin diseases and septic wounds. Bark decoction is recommended for piles, fistula and fissure. *Bark paste with gingelly oil is applied for rheumatism. *Acrid juice from stem is applied for skin allergy. Bark or leaf decoction is given for rheumatic swellings. Seed decoction is recommended for dysentery and diarrhoea. Oil extracted or prepared from bark juice is applied for rheumatism. Bark decoction is given for stomachache and as a tonic for pregnant women. *Purified bark (by heating in charcoal) is used for burning sensation in the body, digestive problems, liver problems and gastric ulcers. *Bark heated in charcoal (until the water evaporates) is crushed, tied in a cloth and boiled in water. Rice gruel prepared in this water is eaten with butter milk for over urination. *Bark, dried ginger and cumin seeds cooked with rice are eaten with butter milk at morning for recurrent indigestion and loss of appetite. Oil extracted from the seeds is applied for rheumatism, pain, swelling and skin diseases. Leaf paste is applied for swelling, rheumatism, joint pain, bone pain, skin diseases, urinary diseases, wounds and septic ulcers. Bark decoction is recommended for swelling and pain. *Decoction prepared from its leaf, those of Cassia fistula, Dendrophthoe growing on Aporosa lindleyana, Smilax zeylanica and Tamarindus indica is used as bath for four days in case of skin diseases. *Bark and Oroxyllum indicum bark cooked with rice are given six times a day for three days in case of pit viper bite. *Shoot tip, which of Pongamia pinnata, Cyathula prostrata, ginger, rock salt, Terminalia chebula fruit rind and borax decoction is used for malabsorption in children. *Leaf is rubbed for alopecia totalis.

Etymology: Putikaranjah (foetid Pongamia), Ravubeeja and Ravubeejo (king seed) arose due to its foetid bark, resemblance of leaves with that of Pongamia pinnata and diverse uses.
Note: Leaf and bark have insecticidal properties. *Bark is put into paddy fields to repel insects. Leaf is used as manure to prevent nematode attack especially in *Coccinia* plants. *It is used as manure for *Capsicum* plant to increase its pungency. It is used in the preparation of *Piyusavalli rasa*, *Gandharvahastadi kvatha*, *Cirivilvadi kashaya*, *Ayaskrti*, *Indukanta ghrta*, *Brhat panchagavya ghrta* and *Gandharvahastadi churna* (Sharma et al., 1998; Sivarajan & Balachandran, 1996). Hexacosanol, octacosanol, β-sitosterol, β-amyrin, friedelin and headeragenin are the active constituents (Jain et al., 1991).

462. *Holostemma ada-kodien* Schult. (Plate 78 C)

Syn: *Holostemma annulare* (Roxb.) K. Schum.

Family: Asclepiadaceae

Vernacular Name: San: Jivanti

Eng: Holostemma

Kan: Jeevanthi, Arane beelu, Jeevahaale, Seehaale

Mal: Adakkodien, Adakotti, Adapathiyan, Thinnampala

Tulu: Arane booru

Habit: Twining shrub.

Habitat: Along hedges.

Status: Occasional.

Description: Large glabrous twining shrub. Leaves simple, ovate, cordate at base. Flowers showy, in axillary few-flowered cymes. Calyx 5-lobed; lobes ovate. Corolla thick, shallowly cup-shaped, 5-lobed, deep red-purple in the centre, whitish on the upper margins and below. Corona fleshy. Pollinia solitary in each anther-sac. Fruit oblong-fusiform follicles, deeply furrowed along each side.

Uses: Tuber ground in milk is given as a general health tonic for weakness. Tuber decoction is recommended for urinary diseases, leucorrhoea, gout, allergy and arthritis. *Leaf paste is applied for swellings. Tuber decoction is consumed to
increase lactation. Leaf juice is applied for urticaria and rashes. *Leaf paste with leaf of *Indigofera tinctoria* is applied for urticaria and rashes. *Root along with *Indigofera tinctoria* root and *Ficus racemosa* bark cooked with rice is given to eat for six days (repeated monthly) for urticaria and rashes. This is also useful for allergy and scabies. Tuber paste is applied for swellings of urticaria and rashes. Tuber decoction is used as a tonic in rheumatic conditions and helps to increase sperm count. *Plant paste is applied externally for poisonous bites and decoction is used internally for biliousness.

Etymology: Jeevanthi (livelihood), Jeevahaale (living lateciferous plant), Seehaale (sweet lateciferous plant), Arane beelu and Arane booru (lizard climber) are due to the rejuvenating property of its tubers, watery latex, edible buds and therapeutic efficacy against skin diseases like Arane kempu (lizard red – a kind of erysipelas).

Note: *Flower buds are edible and are used to prepare rasam*. It is used in the preparation of *Jivantyadi ghrita, Manasamitra vataka, Balarista* and *Anu taila* (Sivarajan & Balachandran, 1996).

**463. *Homalocladium platycladum* (Hook.) L. H. Bailey (Plate 78 D)**

Syn: *Polygonum platycladum* F. Muell.; *Muehlenbeckia platyclados* Meisn.

Family: Polygonaceae

Vernacular Name: Eng: Ribbon bush, Centipede plant, Tapeworm plant  
Kan: Vishakkolli, Chappate hambu  
Mal: Pazhutharakolli  
Tulu: Vishakkolli

Habit: Erect undershrub.

Habitat: Cultivated in gardens.

Status: Occasional.

Description: Erect or climbing undershrub; branchlets green, flattened, jointed, modified into phylloclades; nodes flattened. Leaves simple, lanceolate, chartaceous,
deciduous; stipules sheathing. Flowers white, in axillary clusters or on short lateral spikes. Perianth 5-lobed; lobes oblong. Stamens 8. Fruit 1-seeded, 3-gonous, hard nutlet.

Uses: *Plant paste is applied externally for centipede and other poisonous bites. *Plant decoction is used internally for jaundice.

Etymology: Vishakkolli (poison killer) and Pazhutharakolli (centipede killer) are due to its use for centipede sting. Chappate hambu (flattened creeper) is due to its flattened branchlets.

Note: Much used for centipede sting.

464. *Homonoia retusa* (Graham ex Wight) Muell.-Arg. (Plate 78 E)

Syn: *Adelia retusa* Graham ex Wight

Family: Euphorbiaceae

Vernacular Name: San: Pasanabheda, Pasanabhedah, Pashanabedaka

   Eng: Water croton

   Kan: Neernekki, Holenekki, Pashanabeda

   Mal: Aattuvanchi, Kadallari, Neervanchi, Puzhavanchi

   Tulu: Tudenekki

Habit: Shrub.

Habitat: Along river banks.

Status: Frequent.


Uses: *Same as Homonoia riparia.*
Etymology: Pasanabheda, Pashanabedaka (intruder of stones), Neernekki (water Vitex), Holenekki and Tudenekki (river Vitex) are due to its therapeutic efficacy in renal calculi and riparian habitat.

Note: It is used in synonymous with Homonoia riparia.

465. Homonoia riparia Lour. (Plate 78 F)

Syn: Adelia neriifolia Heyne ex Roth.

Family: Euphorbiaceae

Vernacular Name: San: Pasanabheda, Pasanabhedah, Pashanabedaka
Eng: Water croton
Kan: Neernekki, Holenekki, Pashanabeda
Mal: Aattuvanchi, Kadallari, Neervanchi, Puzhavanchi
Tulu: Tudenekki

Habit: Shrub.

Habitat: Beds of rivers and streams among rocks.

Status: Frequent.


Uses: *Young twig paste (about the size of a Bengal gram) is taken for three days for urinary infections, bladder and kidney stones. Plant decoction is also used for urinary stones, dropsy and ulcers.

Etymology: Pasanabheda, Pashanabedaka (intruder of stones), Neernekki (water Vitex), Holenekki and Tudenekki (river Vitex) are due to its therapeutic efficacy in renal calculi and riparian habitat.
Note: Much valued drug for renal calculi. It is used in the preparation of *Putikaranjasava*, *Taikantaka ghrta* and *Brhat marma gutika* (Sivarajan & Balachandran, 1996).

**466. *Hopea parviflora* Bedd. (Plate 79 A)**

Family: Dipterocarpaceae

Vernacular Name: Eng: Iron wood, White kongu  
Kan: Kiralbogi, Bogimara, Sannelebogi, Urippu  
Mal: Iripu, Kambagam, Urippu  
Tulu: Kiralbogi, Urippu

Habit: Tall tree.

Habitat: Evergreen and semi evergreen forests.

Status: Common.


Uses: *Smoke of this wood is inhaled for lung problems.*

Etymology: Bogimara (useful tree), Sannelebogi (small leaved useful tree) and Urippu (burning) arose due to the diverse use of its heartwood, smaller leaves in comparison with *Hopea ponga* and wood which readily burns.

Note: Heart wood is one of the tough timbers.

**467. *Hopea ponga* (Dennst.) Mabb. (Plate 79 B)**


Family: Dipterocarpaceae

Vernacular Name: Kan: Kalmara, Karimara
Mal: Illapongu, Irumbakam, Nayurippu, Pongu  
Tulu: Karmara

Habit: Large tree.

Habitat: Semi evergreen forests and plains.

Status: Common.

Description: Large tree, usually with axillary or extra-axillary spherical echinate galls. Leaves simple, oblong, coriaceous; petioles swollen, tomentose. Flowers pink, in glabrous terminal panicles. Sepals 5, connate at base. Petals 5, ovate-lanceolate, pubescent outside. Stamens 15. Fruit nut-like, with 2 linear-oblong wings, green, turning red when mature.

Uses: *Bark decoction and gum resin paste are used for rheumatism. *Bark or gum resin paste is also applied for burns. *Plant is used as smoking wood for lung disorders.

Etymology: Kalmara (stony tree) and Karimara (black tree) are due to its hard wood and black bark.

Note: Wood is much valued firewood.

468. *Hoya ovalifolia* Wight & Arn. (*Plate 79 C*)

Family: Asclepiadaceae

Vernacular Name: Kan: Kandala balli, Ugurusutthina balli  
Mal: Mareta-inali  
Tulu: Kandala ballu

Habit: Epiphytic shrub.

Habitat: Tree trunks in forests.

Status: Frequent.
Description: Twining epiphytic shrub. Leaves simple, ovate or elliptic, undulate along margins, fleshy. Flowers numerous, in lateral peduncled umbels. Calyx 5-lobed; lobes ovate-oblong. Corolla rotate, fleshy, pinkish-white. Corona single, of 5 fleshy segments. Pollinia solitary in each anther-sac. Fruit slender follicles.

Uses: *Oil prepared from the plant or its latex is useful for whitlow and ingrowing toenails. *Oil is also used for toothache. *Plant juice or latex is applied for boils or ulcers due to the friction caused by the ornaments.

Etymology: Kandala balli, Kandala ballu (climber for ulcers due to friction of ornaments) and

Ugurusutthina balli (climber for whitlow) arose due to its therapeutic efficacy.

Note: Much valued drug for whitlow and ulcers.

469. **Hugonia mystax** L. (Plate 79 D)

Family: Linaceae

Vernacular Name: San: Kamsamarah  
Eng: Climbing flax  
Kan: Mullankole, Modirakkanni  
Mal: Kaarthotti, Modirakkanni  
Tulu: Mullankole

Habit: Scandent shrub.

Habitat: Scrub forests.

Status: Frequent.

Uses: *Oil prepared from leaf is applied for skin cracks. *Root paste is applied for poisonous bites. *Paste of tender leaf boiled in rice cooked water is applied over the head for sleeplessness and mental problems. *Root decoction is given for fits in small children and stomachache. *Leaf and root paste is applied for skin diseases, swellings and fever while extract for food poisoning and worms. Bark paste is applied for poisonous bites and its extract or decoction for poisonous bites, fever and worms. Oil prepared from plant juice is applied for rheumatism. *Leaf paste with cow urine is applied externally for backache. Leaf or bark paste is applied for skin diseases.

Etymology: Mullankole (spinous *Alangium*) and Modirakkanni (ringlet rope) arose due to its affinity with *Alangium*, straggling nature and presence of ring like coiled hooks.

Note: Usually used for poisonous bites.

**470. *Humbolditia brunonis* Wall. (Plate 79 E)**

Family: Caesalpiniaceae

Vernacular Name: San: Jelavedesa

- Kan: Kaadu ashoka, Haasigemara
- Mal: Karappongu, Kurati
- Tulu: Kattasoko, Kattasoke

Habit: Small tree.

Habitat: Evergreen forests.

Status: Frequent.

Description: Small evergreen tree. Leaves abruptly pinnate; leaflets 2 pairs, ovate-oblong, glabrous, oblique at base; stipules foliaceous. Flowers orange, in axillary racemes. Calyx 4-lobed; lobes elliptic. Petals 4, clawed, elliptic-ovate. Stamens 5, alternating with 5 staminodes; filaments pink. Fruit ob lanceolate pod.

Uses: *Same as Saraca asoca.*
Etymology: Kaadu ashoka and Kattasoko (wild Asoca) are due to the resemblance of its flowers with that of Saraca asoca, wild nature and use as its substitute.

Note: It is used as a substitute for Saraca asoca.

471. Hybanthus enneaspermus (L.) F. V. Muell. (Plate 79 F)

Syn: Ionidium enneaspermum (L.) Vent.; Ionidium suffrutosum (L.) Ging.

Family: Violaceae

Vernacular Name: San: Padmacarini
Kan: Purusharathna
Mal: Orilathamara
Tulu: Purusharathno

Habit: Spreading herb.

Habitat: Dry rocky places.

Status: Common.

Description: Small, perennial herb, with spreading branches. Leaves simple, linear-lanceolate, lower ones broader than upper ones; stipules subulate. Flowers red, solitary, axillary. Sepals 5, triangular. Petals 5, the lowermost is the largest with an elongate, spurred claw towards base and an obovate, broad limb above. Stamens 5. Fruit subglobose, 3-valved capsule.

Uses: *Whole plant ground in milk is given for 48 days to males suffering from sexual weakness and women for leucorrhoea. This is also given to increase sperm count and as a general tonic. *Whole plant ground with milk and sugar is used for sexual vigour and UTI. *Oil prepared from plant extract is good for hair growth and colour. Whole plant decoction is recommended for urinary disorders and digestive problems. *Tender shoot paste with coconut oil is applied over the head as a cooling agent. Whole plant extract in milk is heated and given by adding sugar for weakness. *Whole plant ground with cumin seeds in milk is given in empty stomach to increase sexual vigour in ladies. *Whole plant and cumin seeds ground
in cool milk are given for three days in empty stomach and rice gruel prepared with bark of *Pterocarpus marsupium* and coconut milk is eaten leucorrhoea. *It is believed that wearing a twig of this on the head increases sexual potency in men. Whole plant lehyam* or decoction with milk is given for burning sensation in stomach and blood or mucous in stool. Whole plant ground with cumin seeds in milk is consumed for leucorrhoea. *Plant extract with cumin seeds in milk is recommended for burning urination and increased body temperature. *Whole plant, dried *Hemidesmus indicus* root and sugarcandy extract is used for urinary disorders.

Etymology: Purusharathna and Purusharathno (gem of males) arose as it is used as an aphrodisiac agent for men. Padmacarini (resembling lotus) and Orilathamara (single leaved lotus) are due to its use as the substitute for Padmacarini (*Nervilia aragoana*).

Note: Pink flowered ones are known as *purusharathna* and are used for women, while yellow flowered as *sthreerathna* and are used for males. It is used in the preparation of *Vastyamayantaka ghṛta* and *Satavari ghṛta* (Sivarajan & Balachandran, 1996).

**472. *Hydnocarpus alpina* Wight. (Plate 80 A)**

*Syn: Hydnocarpus pendulus* Manilal *et al.*

Family: Flacourtiaceae

Vernacular Name: San: Garudaphala, Shaluvala
   Eng: Chaulmoogra
   Kan: Sanna surante, Surante, Marathutthi, Thoratti
   Mal: Attuchankala, Kattumarotti, Malamarotti, Pinervetty
   Tulu: Surante, Soranti

Habit: Medium-sized tree.

Habitat: Evergreen forests.

Status: Rare.
Description: Medium-sized tree. Leaves simple, lanceate or oblong-lanceate. Flowers polygamous, pendulous, in axillary racemes. Male flowers: long-pedicelled; sepals 5, oblong or elliptic, rusty pubescent; petals 5, white, linear-lanceate, longitudinally strongly inflexed; stamens 5. Bisexual flowers: pedicels stout, short; ovary ovoid, tomentose. Fruit globose berry.

Uses: *Seed oil is applied externally for septic wounds, ulcers, leprosy and eye diseases.

Etymology: Kattumarotti (wild chaulmoogra) and Malamarotti (hill chaulmoogra) are due to its wild nature and restriction to the forests.

Note: Seed oil is much valued for skin diseases.

473. *Hydnocarpus macrocarpa* (Bedd.) Warb. (Plate 80 B)

Syn: *Asteriastigma macrocarpa* Bedd.; *Taraktogenos macrocarpa* (Bedd.) Balakr.

Family: Flacourtiaceae

Vernacular Name: Eng: Chaulmoogra

Kan: Dodda surante, Shaluvala

Mal: Malakummatti, Malamarotti, Vellananku

Tulu: Malla marotti

Habit: Medium-sized tree.

Habitat: Evergreen forests.

Status: Rare.

Description: Medium-sized evergreen tree, with light brownish grey bark. Leaves simple, oblanceolate, coriaceous, shining above; lateral nerves prominent beneath. Flowers polygamous, in axillary fascicles, leafless twigs or on old wood, greenish white, foetid. Sepals 4. Petals 8, shorter than sepals, ciliate, with 3-lobed scales at base inside. Stamens numerous. Fruit woody, globose, dark brown berry.
Uses: *Oil extracted from the seeds is applied for leprosy and all types of skin diseases. *This is also used for lymph node enlargement, ulcers and joint pain.

Etymology: Malla marotti, Dodda surante (larger chaulmoogra) and Malamarotti (hill chaulmoogra) are due to its restriction to evergreen forests, larger habit and fruits.

Note: Seed oil is much valued drug for skin diseases.

**474. Hydnocarpus pentandra** (Buch.-Ham.) Oken. (Plate 80 C)

Syn: *Hydnocarpus laurifolia* (Dennst.) Sleum.; *Hydnocarpus wightiana* Blume.

Family: Flacourtiaceae

Vernacular Name: San: Garudaphala, Shaluvala, Tuvaraka
   Eng: Chaulmoogra
   Kan: Garudaphala, Shaluvala, Surante, Toratti
   Mal: Maravetti, Marotti, Neeratti, Niralam
   Tulu: Surante, Sorante

Habit: Large tree.

Habitat: Evergreen forests and sacred groves.

Status: Occasional.


Uses: Oil extracted from the seeds is applied for leprosy and skin diseases. *Leaf ground with lime juice or *Citrus aurantium* fruit juice is applied and tied for whitlow and furuncles. Oil is applied externally for leucoderma. *Fruit paste with water is applied for fungal infections in hand and feet. *Oil mixed with *Pongamia pinnata*
seed oil (1:1 a little sandalwood oil and boric powder is used to cure all types of wounds.

Etymology: Garudaphala (eagle fruit) is due to its wound healing property.

Note: If the oil is smeared to some grass and burnt, the grass burns for longer time.
Hydnocarpic acid, chaulmoogric acid, alepric acid, aleprytic acid, aleprestic acid, aleprolic acid, garlic acid and oleic acid are the active constituents with bacteriostatic action (Kapoor, 1990). It is used in the preparation of Tuvarakadi taila (Dey, 1994).

475. *Hydrocotyle javanica* Thunb. (Plate 80 D)

Syn: *Hydrocotyle hispida* Buch.-Ham. ex D. Don.; *Hydrocotyle polycephala* Wight & Arn.

Family: Apiaceae

Vernacular Name: San: Mandukaparni
Eng: Wild pennywort
Kan: Kaadu ondelaga
Mal: Vaite-kala, Vella-vaite
Tulu: Kattuthimare

Habit: Prostrate herb.

Habitat: Along shady forest undergrowths, in upper hills.

Status: Common. Weed.


Uses: *Whole plant paste is applied externally for rashes and skin allergy. *Leaf decoction is used internally for indigestion, dysentery and nervous disorders.
Etymology: Mandukaparni (Indian pennywort), Kaadu ondelaga and Kattuthimare (wild Centella or pennywort) are due to its close affinity with Centella asiatica.

Note: Sometimes it is used as a substitute for Centella asiatica.

476. *Hydrocotyle sibthorpioides* Lam. (Plate 80 E)

Syn: *Hydrocotyle tenella* Buch.-Ham. ex D. Don.; *Hydrocotyle rotundifolia* Roxb. ex DC.

Family: Apiaceae

Vernacular Name:  San: Mandukaparni
Eng: Lawn pennywort
Kan: Kari ondelaga, Sanna ondelaga
Tulu: Karithimare, Ellya thimare

Habit: Prostrate herb.

Habitat: Grown in gardens.

Status: Occasional.


Uses: *Whole plant along with cumin seed juice is given for dullness, anorexia, loss of appetite and depression. *Whole plant ground with gingelly seeds is heated and applied all over the body for nervous debility. *It is a cooling agent, clears excretory system and good for memory power.

Etymology: Mandukaparni (Indian pennywort), Kari ondelaga, Karithimare (black pennywort), Sanna ondelaga and Ellya thimare (smaller pennywort) arose due to its close affinity with Centella asiatica, smaller size and blackish tinge.

Note: It is often used as a substitute for Centella asiatica.
477. *Hygrophila ringens* (L.) Steud. *(Plate 80 F)*

Syn: *Ruellia ringens* L.; *Hygrophila erecta* (Burm. f.) Hochr.; *Hygrophila angustifolia* R. Br.

Family: Acanthaceae

Vernacular Name: Kan: Neerchulli
Mal: Nir-schulli
Tulu: Neerchulli

Habit: Erect herb.

Habitat: Along marshy areas.

Status: Common.


Uses: *Root decoction is given for bladder, kidney stones, oedema in stomach, urinary disorders and rheumatism.*

Etymology: Neerchulli and Nir-schulli (water *Hygrophila*) are due to its marshy habit and close affinity with *Hygrophila schulli*.

Note: Much used for urinary tract disorders.


Syn: *Asteracantha longifolia* (L.) Nees.; *Barleria longifolia* L.; *Hygrophila auriculata* (K. Schum.) Heine.

Family: Acanthaceae

Vernacular Name: San: Iksurah, Kokilaksha, Kokilaksah
Eng: Long leaved Barleria  
Kan: Kolavalike, Kokilaksha, Bayalamullu, Hole chulli  
Mal: Chulli, Neermully, Vayalchulli  
Tulu: Bayalamullu  

Habit: Stout herb.  
Habitat: Marshy places and roadside ditches.  
Status: Common.  

Description: Erect stout herb, with axillary long spines. Leaves simple, in false whorls of 6, lanceolate, hairy. Flowers in axillary whorls, surrounded by slightly recurved spines; bracts leafy; bracteoles linear-lanceolate. Calyx 4-partite. Corolla 2-lipped, blue purple or whitish. Stamens 4, didynamous. Fruit linear-oblong capsule.  

Uses: *Plant decoction with seeds of *Tribulus terrestris* and *Boerhavia diffusa* whole plant is used for urinary infection, kidney problems and water or oedema in hands and legs. Plant decoction is given as a cooling and diuretic agent for urine block, dropsy and urinary diseases due to heart, kidney or liver problems. *Seed powder or decoction is used as a sexual stimulant. Whole plant decoction is recommended for rheumatism, backache, arthritis, kidney stone and oedema. *Seed decoction is taken and its paste is applied for poisonous bites, toothache and furuncles. Root decoction is used for oedema, kidney disorders and bladder stones.  

Etymology: Bayalamullu (open field spinous herb), Hole chulli (river *Hygrophila*) and Vayalchulli (open field *Hygrophila*) are due to its habitat and spiny nature. This plant prefers open fields, especially marshes.  

Note: Much valued drug for renal calculi. It is used in the preparation of *Laghu rasnadi kashaya*, *Rasnadi ghrta* and *Vastyamayantaka ghrta* (Sivarajan & Balachandran, 1996). Linoleic acid, oleic acid, stearic acid, palmitic acid and myristic acids are the major components with diuretic and aphrodisiac properties (Kapoor, 1990).
479. *Hymenodictyon obovatum* Wall. (Plate 81 B)

Family: Rubiaceae

Vernacular Name: Eng: Kuthan  
Kan: Bogimara, Gandele, Hiremara  
Mal: Malamkalli  
Tulu: Bogimaro

Habit: Small tree.

Habitat: Along plains and deciduous forests.

Status: Occasional.

Description: Small deciduous tree. Leaves simple, crowded at the ends of branchlets, obovate, narrowed at base, pubescent on the nerves beneath. Flowers small, greenish-white, in dense cylindric shortly panicled spikes; bracts foliaceous, persistent. Calyx 5-lobed. Corolla funnel-shaped, 5-lobed; lobes ovate. Stamens 5. Fruit ovoid, erect capsule.

Uses: *Bark decoction is used for fever, diarrhoea, dysentery and indigestion.*

Etymology: Hiremara (lofty tree) is due to its habit.

Note: Bark is often used as a substitute for *Cinchona succirubra*.

480. *Hymenodictyon orixense* (Roxb.) Mabb. (Plate 81 C)

Syn: *Cinchona orixensis* Roxb.; *Hymenodictyon excelsum* (Roxb.) Wall.

Family: Rubiaceae

Vernacular Name: Eng: Kuthan  
Kan: Gandale, Thoppemara, Doddathoppe, Bandaru  
Mal: Chakkathekku, Ithil, Perumtholi, Vella kadambu  
Tulu: Thoppethamaro

Habit: Medium-sized tree.
Habitat: Plains and deciduous forests.

Status: Occasional.


Uses: Heart wood decoction is recommended for fever, indigestion and also used as a febrifuge agent.

Etymology: Thoppemara (soft wooded tree), Doddathoppe (larger soft wooded tree) and Vella kadambu (white cadamba) are due to its resemblance with Neolamarckia cadamba, soft wood and larger habit than that of Hymenodictyon obovatum.

Note: It has hymenodictine, aesculin, anthraquinone, rubiadus, lucidin, nordamancanthal, damcanthal, 2-benzylanthopurpurine, anthragallol, soranjidol and morindone as active components (Jain et al., 1991).

481. *Hyptis capitata* Jacq. (Plate 81 D)

Syn: *Hyptis rhomboidea* M. Martens & Galeotti

Family: Lamiaceae

Vernacular Name: Eng: Hyptis
    Kan: Malethumbe
    Mal: Malamthumba
    Tulu: Malethumbe

Habit: Woody herb.

Habitat: Disturbed forest areas of hills.

Status: Occasional. Exotic and weed.

Uses: *Plant paste is applied externally for burns.

Etymology: Malethumbe and Malanthumba (hill Leucas) are due to its resemblance with *Leucas* and restriction to higher altitudes.

Note: Rapidly spreading weed.

482. *Hyptis suaveolens* (L.) Poit. (Plate 81 E)

Family: Lamiaceae

Vernacular Name: San: Bhustrna
   Eng: Ganga basil
   Kan: Ganga tulasi, Vilayathi tulasi, Kaadu tulasi
   Mal: Kattutulasi
   Tulu: Kattutolasi

Habit: Tall herb.

Habitat: Weed in waste lands and roadsides.

Status: Common. Exotic.

Description: Tall glandular hairy herb. Leaves simple, broadly ovate, densely pilose beneath. Flowers axillary, in fascicles. Calyx deflexed, 10-nerved; throat villous; teeth aristate. Corolla 2-lipped, bluish-violet. Stamens 4, didynamous. Fruit oblong, compressed nutlets, pubescent with mucilaginous hairs.

Uses: *Leaf paste is applied for rashes, to heal fresh wounds and skin diseases. Leaf extract is a liver stimulant. *Plant decoction is used for dysentery and diarrhoea.
*Seeds soaked in water are drunk as a sexual stimulant.
Etymology: Vilayathi tulasi (foreign basil), Kaadu tulasi, Kattutulasi and Kattutolasi (wild basil) are due to its wild nature, exotic origin and aroma which resemble that of basil.

Note: Leaves are used as condiment in curries.

**483. Ichnocarpus frutescens** (L.) R. Br. (Plate 82 A)

Syn: *Apocynum frutescens* L.

Family: Apocynaceae

Vernacular Name: San: Bhadra, Gopavallika, Krishnasariva, Krishnashariva, Sariva
Eng: Black creeper
Kan: Gauri balli, Karihambu, Koogal balli, Haaluballi
Mal: Palvalli, Parvalli
Tulu: Peruballu, Illabooru

Habit: Twining shrub.

Habitat: Along hedges.

Status: Common.

Description: Large twining shrub, with red-tomentose branchlets. Leaves simple, ovate-lanceolate, pubescent beneath. Flowers in red-tomentose cymes, on large terminal leafy panicles. Calyx 5-lobed, tomentose. Corolla salver-shaped, white; lobes 5, linear, falcate, deflexed at tip, hairy within. Stamens 5. Fruit divaricate follicles, rusty pubescent when young.

Uses: *Root ground in coconut oil is kept in a copper vessel until the oil gets the colour of copper sulphate. This oil is applied for old ulcers and wounds. Root decoction has similar properties of *Hemidesmus indicus* and is used for skin diseases and kidney disorders. It is a diuretic and tonic. *Whole plant decoction is recommended internally, while paste is applied externally for rheumatism and swellings. Root decoction is given for biliousness, blood disorders, liver and spleen problems. Root extract is given to decrease appetite. *Decoction made of its root
and *Naravelia zeylanica* is used for krait bite. *Crushed root is applied for septic wounds and ulcers.*

Etymology: Bhadra (prosperous), Krishnasariva (black sarsaparilla), Karihambu (black vine), Haaluballi, Palvalli, Peruballu (milk vine) and Illabooru (house vine) are due to its diverse uses, black colour, use as sarsaparilla, presence of milky latex and usage for tying rafters.

Note: Stem is often used to tie the rafters. It is usually used as a substitute for *Hemidesmus indicus*. It is used for preparing *Saribadyasava, Pindataila, Vidaryadi lehya, Draksadi kashaya* and *Jatyadi ghrta* (Sivarajan & Balachandran, 1996).

**484. *Impatiens flaccida* Arn. (Plate 82 B)**

Family: Balsaminaceae

Vernacular Name: Kan: Kaadu sone hoo  
Mal: Kattu mashithandu  
Tulu: Kattu sone poo

Habit: Erect herb.

Habitat: Outskirts of moist shady forests.

Status: Occasional. Weed.

Description: Erect fleshy herb. Leaves simple, ovate to ovate-lanceate, glanduliferous. Flowers usually in pairs, showy. Sepals 5, posterior one produced into a spur; laterals lanceate. Petals 5, laterals united in pairs, pale rose coloured. Stamens 5. Fruit ellipsoid capsule.

Uses: *Whole plant along with cumin seeds are ground in sweet butter milk, boiled and is given with cardamom powder for continuous vomiting. *Whole plant along with turmeric powder ground in rice cooked water, heated and is applied for septic wounds. *Plant decoction is used for nervous debility, loss of memory, rheumatism, skin diseases and swellings.
Etymology: Kaadu sone hoo, Kattu mashithandu and Kattu sone poo (wild or forest *Impatiens minor*) are due to its restriction to the forests and resemblance with *Impatiens minor*.

Note: Sometimes used as a substitute for *Impatiens minor*.

**485. Impatiens minor** (DC.) Bennet (Plate 82 C)


Family: Balsaminaceae

Vernacular Name: San: Shravani  
  Kan: Sone hoo  
  Mal: Mashithandu  
  Tulu: Sone poo, Slate kaddi

Habit: Annual herb.

Habitat: Along walls and waste places during monsoon.

Status: Common. Weed.

Description: Slender annual flaccid herb. Leaves simple, elliptic-lanceolate; petiole glandular. Flowers small, pink or purple, in axillary pairs; pedicels filiform, deflexed. Sepals 5, subulate; lip saccate with an elongated straight spur. Petals 5; standard ovate, dorsally winged; laterals stipitate. Stamens 5. Fruit narrow, fusiform capsule.

Uses: Plant ground in milk is given for leucorrhoea, urinary disorders. It is a blood purifier, tonic and increases intellect. *Its extract in milk is consumed during the month of Shravana*, which is believed to increase the fertility in females and also helps to get a male child. *Whole plant along with ½ spoon cumin seed juice and cardamom is given for vomiting. *Whole plant paste with turmeric is applied for blisters. Whole plant paste is applied for swellings. *Three shoot tips are ground with cumin seeds and the extract is given in the morning for three cycles in case of menstrual pain. *Three shoot tips along with cumin seeds are ground in fresh milk
and given at morning in empty stomach for three days from the 4th day of menses for purification of uterus. *Plant paste is applied for burning sensation due to burns. *Legs are placed in the whole decoction for relief from fungal infection.

Etymology: Shravani (flowering during Shravana*), Sone hoo, Sone poo (Shravana* flower), Mashithandu (flaccid stem) and Slate kaddi (slate stem) arose due to its blooming during the month of Shravana*, flaccid stem and use of stem to erase the words on slate.

Note: Flowers are used to worship (Hostilu pooja*) in the month of Sona* (Shravana*). Ladies wear its flowering twigs on their head.

486. *Imperata cylindrica* (L.) Raeusch. (Plate 82 D)

Syn: *Imperata arundinacea* Cyrillo.; *Imperata cylindrica* (L.) Raeusch. var. major (Nees) C. E. Hubb. ex Hubb. & Vaughan

Family: Poaceae

Vernacular Name: San: Darbha, Darbhah

Eng: Blady grass, Cogon grass, Sword grass, Elephant grass

Kan: Darbhe, Darbhe hullu, Sanna darbhe

Mal: Vidulam, Darbhapullu

Tulu: Darbhe, Darbe

Habit: Perennial grass.

Habitat: Plains and often grown.

Status: Occasional.

Description: Perennial erect herbs, with stoloniferous rootstocks; nodes bearded. Leaf blades basal, lanceolate, glabrous; sheaths overlapping, ciliate near mouth; ligule membranous. Spikelets elliptic-lanceolate, 2-nate in dense, silvery-white panicles. Lower glume lanceolate, hyaline, long pilose outside, apex bidentate. Upper glume lanceolate, hyaline, apex fringed; lower lemma oblong, margin
scaberulous; upper lemma lanceolate; palea inrolled. Stamens 2 – 3. Fruit oblong caryopsis.

Uses: *Root or whole plant decoction has diuretic and blood purifying properties. It is given for skin diseases, dysentery, jaundice, menorrhagia, asthma, fits, mouth ulcers, itches, urinary stones and eye diseases. *Plant is burnt into ashes and by mixing with ghee is used as *anjana* for eye diseases. *Whole plant decoction is used for hydrocoele. *Fried plant paste is applied for scabies. Whole plant decoction is recommended for rheumatism. *Root stock decoction is recommended for kidney and bladder stones. *Root decoction is taken for leucorrhoea.

Etymology: Sanna darbhe (smaller Darbha) is due to its miniature habit in comparison with *Desmostachya bipinnata* and *Saccharum munja* other sources of Darbha.

Note: It has magnetic power; if a *saligrama* is kept over it, it rotates. This is always placed in clock wise direction. It is used in the preparation of *Varanadi kashaya*, *Brhat candanadi taila*, *Sukumara ghṛta*, *Karpuradyarka*, *Brahma rasayana* and *Traikantaka ghṛta*. Cylindrin, arundoin, fernenon, isoburneol and simiarenol are the active principles (Dey, 1994; Sivarajan & Balachandran, 1996).

487. *Indigofera linnaei* Ali (*Plate 82 E*)

Syn: *Indigofera enneaphylla* L.

Family: Papilionaceae

Vernacular Name: Kan: Kenneggilu, Kirineggilu
    Mal: Cherupulladi, Chempulladi
    Tulu: Ellya neggilu

Habit: Prostrate herb.

Habitat: Open forests and bare grounds.

Status: Occasional. Weed.

Uses: *Plant juice is given for urinary disorders. *Whole plant extract is used for urinary disorders, fever and cough.

Etymology: Kenneggilu (red Tribulus), Kirineggilu and Ellya neggilu (smaller Tribulus) are due to its pink flowers, herbaceous habit and use for urinary disorders just like Tribulus terrestris.

Note: Mostly used for urinary tract disorders.

488. Indigofera tinctoria L. (Plate 82 F)

Syn: Indigofera sumatrana Gaertn.

Family: Papilionaceae

Vernacular Name: San: Neela, Neelinee, Nilapushpika, Nilika, Nilini  
Eng: Bengal indigo, Common indigo, Indian indigo  
Kan: Neeligida, Neeliberu, Olleneeli  
Mal: Amari, Neelayamari, Neelichedi, Vellaamari  
Tulu: Neeli, Neelichappu

Habit: Shrub.

Habitat: Open places in plains.

Status: Common.

Uses: *Root ground in lime juice is used for treating food poisoning. *Paste made of its leaf, *Cynodon dactylon* and sandal wood is applied for skin diseases like urticaria. *Paste made of its leaves, which of *Plectranthus amboinicus*, *Breynia vitis-idaea*, *Cynodon dactylon* plant, turmeric and sandal wood is applied for measles and erysipelas. *Leaf juice and leaf powder are given with cooked rice for rabies poison. Root decoction is given for bacterial infections and liver disorders. *Leaf juice along with honey is used for indigestion. Leaf juice is applied for skin diseases and rashes. *Root or leaf decoction is recommended internally for jaundice, biliousness and infections after delivery. *Leaf powder mixed with honey is taken for pancreatic disorders. Leaf paste is applied for scabies. *Root decoction is used for kidney and bladder stones. *Leaf paste is applied over lower abdomen to relieve urine block. *Tender shoot tip extract with honey is used for thrush in tongue. *Root extract is given for epilepsy and urticaria. Tender leaf and flower paste have cooling effect. *Leaf and flower decoction is given for leprosy, scabies and infections after delivery. *Root is chewed for toothache. Whole plant paste is applied for swellings. *Root cooked with rice is given for urticaria and rabid dog bite. *Root paste is applied externally for snake bite while its extract with lime juice is given internally. Plant paste is applied for swellings. *Oil prepared using plant juice or root paste with lime juice is used for rabid dog and snake bites. Whole plant decoction is used for urinary disorders. Root juice with lime juice is given for snake bite, while its paste for scabies. Stem is used as tooth brush for dental cavities and toothache. *Leaf decoction is taken for rat bite. *Its leaf and *Holarrhena pubescens* leaf are ground in rice washed water and is applied for eczema. *Leaf ground with cumin seeds in milk is taken internally for mouth ulcers. *Leaf and *Aristolochia indica* root ground in lime juice is applied for herpes in children. *Leaf ground with fresh turmeric in buttermilk is used internally, while *Abrus precatorius* root paste with lime juice is applied externally for *agnivisarpa* (a kind of erysipelas). *Plant paste is applied for breast swelling and mastitis.

Etymology: Neela, Neeli (indigo or blue), Neelinee, Nilika, Neeligida, Neelichedi (indigo plant), Neeliberu (indigo root), Olleneeli (proper indigo) and Neelichappu (indigo leaf) arose as indigo; a blue dye is obtained from this plant.
Note: It is used in the preparation of Nilibhringadi taila, Mahapancagavya ghrta, Aravindasava, Triphaladi tailа, Nilikadya tailа and Gorocanadi vati (Sharma et al., 1998).

489. *Ipomoea aculeata* Blume (Plate 83 A)

Syn: *Convolvulus aculeatus* L.

Family: Convolvulaceae

Vernacular Name: Kan: Gorada balli, Mullu amrtaballi  
Tulu: Goratha ballu, Mullu amrtaballu

Habit: Twining shrub.

Habitat: Along hedges.

Status: Rare.

Description: Large twiner, with muricate stem. Leaves simple, ovate-cordate, entire or 3 – 5-lobed. Flowers in axillary 1 or few flowered cymes. Sepals 5, broadly elliptic to orbicular. Corolla white, nocturnal, salver – shaped. Stamens 5. Fruit 4 – 6-valved capsule, enclosed by the sepals.

Uses: *Three drops of plant juice is given orally and bath with plant decoction is recommended for seven days in case of very serious measles. *Plant juice is recommended for malnutrition and malabsorption in children. *Decoction prepared from whole plant is used for bath in case of skin rashes and urticaria. *Plant decoction with milk or its lehyam* is used for malnutrition in children. *Whole plant along with tender coconut husk (red) and *Pandanus odorifer* leaf are cooked with rice and used for children suffering from malnutrition. *Leaf paste with butter is applied for furuncles. *Whole plant along with *Sida cordata* and *Hemidesmus indicus* leaves are ground in milk or cooked with rice and are given for IBS.

Etymology: Gorada balli, Goratha ballu (climber for measles), Mullu amrtaballi and Mullu amrtaballu (spiny *Tinospora cordifolia*) are due to its muricate stem, cordate
leaves resembling that of *Tinospora cordifolia* and therapeutic efficacy against measles.

Note: Much valued drug for malnutrition in children and measles.

**490. *Ipomoea alba* L. (Plate 83 B)**

Syn: *Ipomoea bona-nox* L.

Family: Convolvulaceae

Vernacular Name: Eng: Moon flower  
Kan: Chandrakanthi, Chandrapushpa  
Mal: Mandavalli  
Tulu: Chandrakanthi

Habit: Twining herb.

Habitat: Along waste lands.

Status: Common. Exotic and weed.

Description: Extensive twining herb. Leaves simple, cordiform, base cordate. Flowers white, solitary or few in axillary cymes. Calyx 5-lobed; lobes subequal. Corolla salver-shaped. Stamens 5, subexerted. Fruit subglobose capsule, with pubescent seeds.

Uses: *Root extract is used internally while its paste is applied externally for snake bite.*

Etymology: Chandrakanthi (moon light) and Chandrapushpa (moon flower) are due to its white flowers.

Note: Now widely naturalized.

**491. *Ipomoea aquatica* Forssk. (Plate 83 C)**

Syn: *Ipomoea reptans* Poir.

Family: Convolvulaceae

Vernacular Name: San: Kalambah, Kalambi, Nalika  
Eng: Swamp morning glory, Water spinach
Habit: Creeping herb.

Habitat: Fresh water ponds and fallow fields.

Status: Common. Weed.

Description: Creeping or floating aquatic herb. Leaves simple, varies in form, oblong-lanceate or narrowly triangular, base hastate. Flowers purplish-white, solitary or few in axillary cymes. Sepals 5, subequal. Corolla funnel-shaped. Stamens 5, included. Fruit globose capsule.

Uses: *Root decoction is recommended for diabetes, also used as tonic for increasing sexual power and lactation.

Etymology: Bilehambu, Bilihambu (white creeper), Neeru biligadde and Neer boldukande (water white tuber) are due to its aquatic nature, white stem, tubers and whitish flowers.

Note: Mostly used as tonic.

492. *Ipomoea asarifolia* (Desr.) Roem. & Schult. (Plate 83 D)

Syn: *Ipomoea repens* Lam.; *Convolvulus asarifolius* Desr.

Family: Convolvulaceae

Vernacular Name: Kan: Biliadambu, Sanna adambu
            Mal: Belladambu
            Tulu: Bolladambu

Habit: Creeping herb.

Habitat: Damp fields.

Status: Common. Exotic and weed.
Description: Creeping aquatic herb. Leaves simple, ovate-cordate to reniform or deeply emarginate. Flowers purple or white, in axillary pedunculate cymes. Sepals 5, subequal, ovate. Corolla funnel-shaped. Stamens 5. Fruit 4 – 6-valved capsule.

Uses: *Plant paste is used to treat a kind of urticaria known as *sarpakempu*. *Whole plant decoction is given for gas trouble and *raktavata*. *Plant paste is applied for rashes, urticaria and other skin diseases.

Etymology: Biliadambu, Belladambu, Bolladambu (white *Ipomoea pes-caprae*) and Sanna adambu (smaller *Ipomoea pes-caprae*) are due to its whitish plant body, resemblance with *Ipomoea pes-caprae* due to occasional emarginate leaves and miniature habit.

Note: Much used for skin diseases.

493. *Ipomoea batatas* (L.) Lam. (Plate 83 E - 1, E - 2)

Syn: *Convulvulus batatas* L.

Family: Convolvulaceae

Vernacular Name: San: Pindalu, Pindaluh, Raktaluh, Sthulakanda, Svduskandaka
   Eng: Camote, Sweet potato
   Kan: Genasu, Sihigenasu
   Mal: Chakkarakizhangu, Madhurakizhangu, Mathurakizhangu
   Tulu: Kirengu, Kerengu

Habit: Creeping herb.

Habitat: Cultivated in fields.

Status: Common. Exotic.

Description: Creeping herb, with tuberous roots and fleshy stem. Leaves simple, variable, cordate to ovate, entire or deeply 5 – 7-lobed. Flowers solitary or in few-flowered cymes. Sepals 5, oblong. Corolla funnel-shaped, rose-purple. Stamens 5. Fruit rarely formed.
Uses: Cooked tuber is nutritive. *Hot cooked tuber paste is applied for whitlow. *Tuber ground in water and mixed with coconut oil is heated. This mixture is applied for cracks and fungal infections of skin. *Tuber along with rhizome of Curcuma longa and cow dung ash are ground, mixed with butter and is applied at night for piles.

Etymology: Sthulakanda (thick tuber), Svadukandaka (tasty tuber), Sihigenasu, Chakkarakizhangu and Madhurakizhangu (sweet tuber) are due to its characteristic sweet and thick tubers.

Note: Tubers are used as nutritive food, while the leaves as vegetable.

494. Ipomoea marginata (Desr.) Verdc. (Plate 84 A)

Syn: Ipomoea sepiaria Roxb.

Family: Convolvulaceae

Vernacular Name: San: Laksmana, Vachagandha
    Kan: Muguthi balli, Vajigandha, Thirutali
    Mal: Chuttithiruthali, Thirutali
    Tulu: Tirutali

Habit: Twining herb.

Habitat: Moist places and along hedges.

Status: Common. Weed.

Description: Slender twiner, with hirsute stem. Leaves simple, ovate-cordate, with rounded to hastate basal lobes and reddish blotches above. Flowers in subumbellate cymes; pedicels clavate in fruits. Sepals 5, elliptic-oblong to ovate. Corolla funnel-form, pink with purple tube. Stamens 5. Fruit globose capsule, with densely tomentose seeds.

Uses: Whole plant extract in milk is used as general health tonic. *Whole plant paste with Indigofera tinctoria leaf and sandalwood in rice washed water is applied for
swellings due to urticaria and rashes. *Plant paste is applied externally for urticaria, rashes and other skin diseases.

Etymology: Thirutali, Tirutali (turning herb) and Chuttithiruthali (twining and turning herb) are due to its twining habit.

Note: It is used in the preparation of *Manasamitra vataka* and has deobstruent property. It is also used as antidote for arsenic poisoning (Jain *et al.*, 1991; Sivarajan & Balachandran, 1996).

**495. *Ipomoea mauritiana* Jacq. (Plate 84 B)**

Syn: *Ipomoea paniculata* R. Br.; *Ipomoea digitata* sensu Clarke

Family: Convolvulaceae

Vernacular Name: San: Ksiravidari, Vidari  
Eng: Giant potato  
Kan: Nelagumbala, Musalikanda  
Mal: Anchilathali, Giant potato  
Tulu: Nelakumbudo

Habit: Large climber.

Habitat: Along bushes and hedges.

Status: Common.

Description: Large climber, with large ovoid or elongated tubers. Leaves often palmately 5 – 7-lobed; lobes ovate-lanceolate, glabrous. Flowers in many-flowered corymbosely paniculate cymes. Sepals 5, orbicular or elliptic. Corolla funnel-shaped, reddish-purple to rose pink. Stamens 5. Fruit ovoid capsule.

Uses: *Its tuber cooked water mixed with sugar is used internally to overcome weakness after any disease. *Oil prepared from plant juice is used as hair oil for blackening of hair, hair fall and good hair growth. Tuber extract in milk is given as a tonic, also has diuretic action. *Tuber extract is given for diarrhoea, while its
decoction for tuberculosis. *Tuber decoction with milk is recommended to increase sperm count. *Dried tuber decoction is given as tonic, while with sugar in empty stomach to increase breast milk. Tuber juice is used as tonic for biliousness, menstrual problems and tuberculosis. *Tuber juice mixed with cumin extract is used as sexual tonic. Plant paste is applied for urticaria, rashes and other skin diseases. *Tuber along with cumin, coriander and fenugreek seeds are boiled in water, reduced after adding milk and is given by adding sugarcandy, ghee and honey at night after food for weakness and growth retardation in children. *Tuber juice or decoction mixed with cumin seed powder is given at morning in empty stomach for 2 – 4 weeks to increase sexual vigour in humans. Tuber decoction is recommended for biliousness, breathing problem, fever, rheumatism, menstrual problems and spleen disorders. *Lehyam* or plant powder is a tonic, laxative, clears sound, diuretic and thirst quencher.

Etymology: Ksiravidari (milky tearing plant), Vidari (tearing), Anchilathali (five leaved herb), Nelagumbala and Nelakumbudo (ground ash gourd) are due to its underground large ovoid tubers with milky latex and palmately lobed leaves.

Note: Leaf is used as vegetable. It is used in the preparation of Vidaryadi ghrta, Dasamularista and Chyavanaprasha (Sivarajan & Balachandran, 1996).

496. Ipomoea nil (L.) Roth. (Plate 84 C)

Syn: Convolvulus nil L.; Ipomoea hederacea sensu Hook. f.

Family: Convolvulaceae

Vernacular Name: San: Kalanjani, Krsnabija, Krsnabijah 
    Eng: Morning glory, Pharbitis seeds 
    Kan: Kollibeeja, Gauri beeja, Chitabogari 
    Mal: Thaliyari 
    Tulu: Chitbogri

Habit: Climbing herb.

Habitat: Along waste lands and roadsides.
Status: Common. Exotic and weed.

Description: Slender climber, with hirsute stems. Leaves simple, ovate to suborbicular, entire or palmately 3-lobed, pubescent; petioles retrorsely hirsute. Flowers in axillary few-flowered cymes. Sepals 5, linear-lanceolate, sparsely hirsute at the base. Corolla funnel-shaped, blue or pink. Stamens 5. Fruit subglobose capsule, with black, densely pubescent seeds.

Uses: *Dried seed ground in lime juice or butter milk is inhaled, while four drops are poured into nose for migraine. *Seed powder along with rock salt dissolved in sweet butter milk is used for stomach swelling and pain. *Seed extract is purgative. Antidote for over dose is butter milk. Plant decoction is used for digestive disorders, pain, gas trouble, worms, phlegm, fever, diabetes, oedema, breathing problems and skin diseases.

Etymology: Krsnabija (black or dark coloured seeds) is due to its characteristic seeds.

Note: It is used in the preparation of Pancagavya ghrta and Krisnabijadi churna. It has pharbitin with anthelmintic and purgative properties (Dey, 1994; Kapoor, 1990; Sivarajan & Balachandran, 1996).

497. Ipomoea obscura (L.) Ker-Gawl. (Plate 84 D)

Syn: Convolvulus obscurus L.

Family: Convolvulaceae

Vernacular Name: San: Laksmana, Vachagandha
  Kan: Muguthi balli, Vajigandha, Thirutali, Urutele balli
  Mal: Chuttithiruthali, Thirutali
  Tulu: Tirutali

Habit: Twining herb.

Habitat: Along hedges and bushes.
Status: Frequent. Weed.

Description: Twining or trailing herb, with glabrescent stem. Leaves simple, ovate to cordate, glabrescent. Flowers axillary, 1 or 2 together. Sepals 5, ovate. Corolla funnel-shaped, white to yellow, with a red-purple centre. Stamens 5. Fruit globose capsule, with ovoid, dark-brown, appressed pubescent seeds.

Uses: Whole plant extract in milk is used as general health tonic. *Paste made of whole plant, *Indigofera tinctoria* leaf and sandalwood in rice washed water is applied for swellings due to urticaria and rashes. *Plant paste is applied externally for urticaria, rashes and other skin diseases.

Etymology: Thirutali, Tirutali (turning herb) and Chuttithiruthali (twining and turning herb) are due to its twining habit. Urutele balli (round leaf vine) is due to its characteristic leaves.

Note: It is used in the preparation of *Manasamitra vataka* and has deobstruent property. It is also used as antidote for arsenic poisoning (Jain *et al.*, 1991; Sivarajan & Balachandran, 1996).

**498. Ipomoea pes-caprae** (L.) R. Br. ssp. *pes-caprae* (Plate 84 E)

Syn: *Ipomoea biloba* Forssk.

Family: Convolvulaceae

Vernacular Name: San: Maryadavalli, Sagaramekhala, Vrdhadaruka, Yugmapatra

Eng: Goat’s foot creeper

Kan: Adambu balli, Bangada balli

Mal: Adambuvalli, Chuvanna adambu

Tulu: Adambu booru, Adambu ballu

Habit: Trailing herb.

Habitat: Along sea shores.

Status: Common. Weed.

Uses: *Leaf paste with milk is applied over head for insanity. *Plant cooked with rice is consumed or plant extract in buttermilk or rice cooked water is poured into head in the form of dhara for insanity, while in milk for anxiety neurosis. *Plant extract in butter milk is given for stomachache and rheumatism. *Heated leaf is rubbed over stomach for severe stomachache. *Leaf decoction is used for rheumatism. Plant decoction is also used for biliousness.

Etymology: Sagaramekhala (restricted to coast), Yugmapatra (two leaved), Adambu balli, Adambuvalli, Adambu booru, Adambu ballu (insanity vine) and Chuvanna adambu (red insanity vine) are due to its restriction to coastal areas, deeply bilobed leaves, use for insanity and red flowers.

Note: Much valued drug for mental disorders.

499. *Ipomoea pes-tigridis* L. (Plate 84 F)

Syn: *Ipomoea hepaticifolia* L.

Family: Convolvulaceae

Vernacular Name: San: Vyaghranakhi

   Eng: Bind weed, Cupid’s flower, Tiger’s foot

   Kan: Hulimettu

   Mal: Naripadam, Pulichuvadi, Pulichuvattu

   Tulu: Pilimuttu

Habit: Climbing herb.

Habitat: Along hedges.

Status: Occasional.
Description: Hispid climbing herb. Leaves deeply palmately 7 – 9-lobed; lobes narrowly oval to obovate, hirsute; petioles hairy. Flowers in axillary long pedunculate bracteate heads; outer bracts ovate-oblong, hirsute; inner smaller. Sepals 5, unequal, outer oblong-lanceolate, inner lanceolate-acuminate, strigose. Corolla tubular-campanulate, white or pink. Stamens 5. Fruit ovoid capsule, with grey-pubescent seeds.

Uses: *Whole plant extract is used internally while its paste externally for rabid dog bites.

Etymology: Vyaghranakhi (tigers’ nail), Hulimettu, Pulichuvadi, Pulichuvattu and Pilimuttu (tiger’s foot) are due to its characteristic leaves.

Note: Much valued drug for wound healing.

500. *Ipomoea triloba* L. (Plate 85 A)

Syn: *Convolvulus dentatus* Blanco.; *Ipomoea blancoii* Choisy in DC.

Family: Convolvulaceae

Vernacular Name: San: Laksmana, Vachagandha  
Kan: Muguthi balli, Vajigandha, Thirutali  
Mal: Chuttithiruthali, Thirutali  
Tulu: Tirutali

Habit: Climbing herb.

Habitat: Along hedges and wastelands.

Status: Common. Exotic and weed.

Description: Slender pubescent climber. Leaves simple, broadly ovate to orbicular, entire or 3-lobed. Flowers in axillary pedunculate sub umbellate cymes. Sepals 5, oblong to elliptic-oblong, sparsely pubescent on the back. Corolla funnel-shaped, pink or pale-red-purple. Stamens 5. Fruit subglobose, bristly hairy capsule.
Uses: Whole plant extract in milk is used as general health tonic. *Paste made of whole plant, *Indigofera tinctoria* leaf and sandalwood in rice water is applied for swellings due to urticaria and rashes. *Plant paste is applied externally for urticaria, rashes and other skin diseases in the absence of *Ipomoea asarifolia*.

Etymology: Thirutali, Tirutali (turning herb) and Chuttithiruthali (twining and turning herb) are due to its twining habit.

Note: It is used as a substitute both for *Ipomoea marginata* and *Ipomoea asarifolia*.

501. *Ixora brachiata* Roxb. ex DC. (Plate 85 B)

Family: Rubiaceae

Vernacular Name: Kan: Goravi, Koraji

Mal: Marachekki, Marachethi

Tulu: Koraji, Korajji

Habit: Small tree.

Habitat: Plains and forests.

Status: Common.


Uses: *Bark decoction being hot in nature increases biliousness and blood pressure, usually used to abort the foetus. *Tender shoot tip is used for preparing *tambuli*, which is digestive. *Bark is cooked with rice or its decoction is given for gonorrhoea. *Bark decoction is also recommended for rheumatism. *Bark paste is applied externally for skin diseases.

Etymology: Marachekki and Marachethi (tree *Ixora*) are due to its tree habit and small flowers resembling that of *Ixora*.

Note: Stem is used as a support for medicinal herbs.
502. *Ixora coccinea* L. (Plate 85 C)

Family: Rubiaceae

Vernacular Name: San: Bandhuka, Bandhujivaka, Paranti, Raktaka  
Eng: Jungle flame *Ixora*, Jungle Geranium, Needle flower  
Kan: Kusumale, Kepala, Kepula, Kisukara  
Mal: Chethi, Kattuchethi, Thechi, Thetti  
Tulu: Chepula, Kepula

Habit: Much branched shrub.

Habitat: Degraded forests and along bushes.

Status: Common.

Description: Much branched shrub. Leaves simple, oblong or elliptic, coriaceous; stipules cuspidate. Flowers bright scarlet, in dense peduncled corymbose cymes. Calyx 5-lobed; lobes triangular. Corolla salver-shaped; tube slender; lobes 5, ovate. Stamens 5. Fruit globose drupe, red when ripe.

Uses: *Flower bud and cumin seeds are chewed for mouth sores. *Root decoction is recommended for washing ulcers and septic wounds. *Whole plant decoction with milk is used in case of penis ulcers. *Root ground into a paste with *Memecylon umbellatum* and *Desmodium triquetrum* in milk is applied for herpes. *Root ground in milk is drunk for DUB. Flower juice is poured into eye during eye infections. *Flower and gingelly seed paste is applied over head for sleeplessness and headache. *Root ground in milk is given for five days for stomachache is ladies during menses. *Root extract in water is given for blood in phlegm or saliva. *Root extract with milk is given for hemiplosis. *Root paste is applied for septic blisters. Root bark paste is applied for skin diseases. *Flower paste cooked with rice is given for biliousness. *Flower (after removing stamens) extract with cumin seeds is applied for conjunctivitis and redness in eye. *Flower juice is used as an eye drop for small children. *Paste prepared by grinding root in coconut milk is applied for urticaria and rashes. *Root paste with tender coconut husk juice (red variety) is applied for
eczema and erysipelas. *Paste prepared using its flowers, white gingelly seeds, inflorescence of *Areca catechu*, tender shoot tips of *Jatropha curcas* and *Kalanchoe pinnata* cooked in milk is applied over head (kept for 3 hrs) in case of malnutrition in children. *Decoction prepared by crushing its three roots is given to cattle (for three days) for conception. Flowers are chewed for getting relief from mouth ulcers. Root decoction is given internally for skin diseases. *Flower, leaf and root paste is applied over head for rickets. *Oil prepared from root juice is used for massaging the body of children. Root decoction is given internally and also as wash for scabies. *Paste prepared from its root, *Centella asiatica* and *Cynodon dactylon* is applied for chicken pox.

Root paste is applied for urticaria and rashes. *Oil prepared from crushed root and turmeric in gingelly oil is applied for scabies and boils in the body. Root decoction is diuretic, wound healer, also used for menstrual disorders and uterine bleeding. *Root bark extract in water is given for urine block and burning urination. *It is recommended in alternate week in order to dissolve kidney stones. *Extract of root bark crushed in fresh milk is used in empty stomach at early morning for one week; after a gap of three weeks again used for one week in case of kidney or bladder stone. *Paste of root bark ground in water is applied externally, while extract with milk is given internally for scabies, urticaria, rashes and watery boils due to burn. *Flowers (stamen removed) chewed, juice is swallowed which relieves thirst and weakness. *Tender shoot tip, young fruit or flower juice (5 – 6 drops) is given for 41 days to children as sour agent. Root decoction is used for urinary diseases, septic wounds, ulcers, mouth ulcers, gastric ulcers, digestive problems, skin diseases and breathing problems. *Root bark decoction is given with food after insemination for conception in cattle. Root extract with cumin seeds is given for urinary tract infections. *Root decoction mixed with cumin seeds is given for body pain in pregnant ladies, while root juice decoction with cumin seeds and milk is used as a cooling agent. *Root, turmeric and *Vernonia anthelmintica* seeds ground and heated in coconut oil is applied for ring worm. *Tambuli* made of its young shoot tip, *Calycopteris floribunda*, *Caesalpinia mimosoides*, *Careya arborea*, *Melastoma malabathricum*, *Syzygium caryophyllatum*, *Psidium guajava* and *Holigarna*
*Arnottiana* is given for indigestion in children. *Extract obtained by crushing and grinding its flowers (stamen removed), *Strychnos nux-vomica* shoot tip and *Cynodon dactylon* shoot tip in fresh milk is poured into eyes in case of conjunctivitis. *Equal quantity of its flower, *Cynodon dactylon*, *Geophila repens*, *Alternanthera sessilis*, *Ipomoea marginata*, *Coccinia grandis* leaf juices and coconut oil are heated. To this mixture dried gooseberry, *Cyperus rotundus*, *Acorus calamus*, *Glycyrrhiza glabra* rhizome, *Coscinium fenestratum* root, *Cedrus deodara* heart wood, *Nigella sativa*, *Saussurea lappa* seeds and arecanut inflorescence ground in ghee are added. This preparation is applied over head for rickets and malnutrition in children.

*Flower fried in ghee, ground with cumin and sugarcandy in milk is given for dysmenorrhoea. *Root crushed with cumin and kept in gingelly oil for 15 days is used to massage the body of small children. *Powdered root decoction is used with milk and sugarcandy for menstrual disorders. *Flower along with *Oxalis corniculata*, *Cyperus rotundus* and coriander seeds are cooked in butter milk, ground and given for urticaria and rashes. *Flowe,r and cumin seeds ground in coconut milk are applied all over the body and bath with *nalpamara* decoction is recommended for 12 days in case of urticaria and blood disorders. *Root bark ground with coconut milk, mixed with *Quercus infectoria* seed powder is applied for contagious skin diseases. *Root, turmeric and *Vernonia anthelmintica* seeds are ground, boiled with gingelly oil and is applied for itches, ringworm, scabies and blisters. *Regular use of *tambuli* prepared from its flower is recommended for clear and bright eyes, especially in children. *Tambuli* prepared from flowers is recommended with cumin seeds for mouth ulcers.

Etymology: Bandhuka (bonded), Raktaka (reddish) and Kattuchethi (wild *Ixora*) are due to its wild nature, scarlet flowers and diverse uses, making it close to the hearts.

Note: Ripe fruits are eaten raw. It is used in the preparation of *Parantyadi taila* and *Cemparutyadi kera* (Sivarajan & Balachandran, 1996).
503. *Ixora nigricans* R. Br. ex Wight & Arn. (Plate 85 D)

Family: Rubiaceae

Vernacular Name: Kan: Elegara, Adyala, Kisukara, Kepala, Kusumale  
              Tulu: Kusumale

Habit: Large shrub.

Habitat: Forest undergrowths of evergreen forests.

Status: Frequent.

Description: Large shrub. Leaves simple, elliptic-lanceate to oblanceate, chartaceous, shiny, black when dry. Flowers in terminal paniculate cymes; bracteoles subulate. Calyx minute, 5-toothed. Corolla salver-shaped, white. Stamens 5. Fruit globose berry.

Uses: *Flowers dried in sunlight are powdered, dissolved in milk and taken twice a day for protein discharge through urine. *Root extract with milk is also used for the same in small children. *Root ground with lime juice is given twice a day for malabsorption in children.

Etymology: Kisukara, Kepala (jungle flame *Ixora*) and Kusumale (garland) are due to the close resemblance of its flowers with that of *Ixora coccinea*.

Note: Much valued for children’s diseases.

504. *Jasminum angustifolium* (L.) Willd. var. *angustifolium* (Plate 85 E)

Syn: *Nyctanthes angustifolia* L.

Family: Oleaceae

Vernacular Name: San: Kananamallika, Malati, Vanamallika  
              Eng: Wild jasmine  
              Kan: Adavi mallige, Kaadu mallige  
              Mal: Kattumallika, Kattumulla  
              Tulu: Kattumallige
Habit: Climbing shrub.

Habitat: Along exposed slopes and thickets.

Status: Frequent.

Description: Climbing shrub. Leaves simple, ovate or lanceate, chartaceous. Flowers in terminal 1 – 3-flowered cymes; bracts linear. Calyx-lobes 5 – 6, linear. Corolla salver-form, white; lobes 5 – 9. Stamens 2, included. Fruit globose berry.

Uses: *Root paste is applied around the navel of a child suffering from stomachache. *Leaf cooked with rice is given up to 7th month of pregnancy to prevent habitual abortion and proper growth of the baby. *Paste made of its root and *Acorus calamus rhizome in lime juice is applied for septic wounds and ulcers. Leaf juice is given to induce vomiting and thereby to remove poison from body. *Leaf cooked with rice is consumed for fits. Root decoction is a best aphrodisiac. *Leaf paste is good for controlling vomiting. *Dried leaf powder mixed with pepper seed powder and honey is given for asthma. Leaf or root extract or decoction is given for mouth and stomach ulcers. Plant or leaf paste is applied for swellings. *Leaf paste is used as wound healer. Leaf and root paste is also applied for skin diseases.

Etymology: Kananamallika, Vanamallika, Adavi mallige, Kaadu mallige, Kattumallika, Kattumulla and Kattumallige (wild or forest jasmine) are due to its wild nature and restriction to the forests.

Note: It is used in the preparation of *Malatyadi taila, *Jatyadi ghṛta, *Kalyanaka ghṛta and *Aranyatulasyadi kera as a substitute for *Jasminum grandiflorum (Sivarajan & Balachandran, 1996). Its roots are used as substitute or are adulterated for *Salacia chinensis.

**Jasminum auriculatum** Vahl. *(Plate 85 F)*

Syn: *Jasminum ovalifolium* Wight.

Family: Oleaceae

Vernacular Name: San: Jati, Malati, Yuthika
Eng: Needle jasmine  
Kan: Sanna mallige, Sooji mallige  
Mal: Soochimulla, Thoosimulla  
Tulu: Soojimallige

Habit: Scandent shrub.

Habitat: Along thickets, forest borders, also cultivated.

Status: Occasional.


Uses: *Leaf paste is applied for ringworm. Its root decoction is a diuretic, cardiac tonic and is given for burning sensation, ulcers, eye diseases, urinary diseases and kidney troubles. *Plant decoction is used as blood purifier and for diseases of children.

Etymology: Sanna mallige (small jasmine), Sooji mallige, Soochimulla and Thoosimulla (needle jasmine) are due to its characteristic small flowers with tubular petals.

Note: Much used for skin diseases.

506. *Jasminum coarctatum* Roxb. (Plate 86 A)

Syn: *Jasminum rottlerianum* Wall. ex DC.

Family: Oleaceae

Vernacular Name: San: Vanamallika  
Eng: Wild jasmine  
Kan: Varamallige, Kaadumallige  
Mal: Vellakattumulla, Kattumulla  
Tulu: Kattu mallige
Habit: Climbing shrub.

Habitat: Deciduous forests and along hedges.

Status: Common.


Uses: *Leaf ground in water is applied for itches, scabies, fungal infections, rashes and urticaria. *Tender shoot tip ground in rice washed water with cumin seeds is given at morning for digestive disorders in children. Plant decoction is used for diseases of ladies after delivery, children and skin diseases. *Leaf cooked with rice is given for three days from the day of heat, again given after 20 days for conception in cattle.

Etymology: Vanamallika, Kaadumallige, Kattumulla, Kattu mallige (wild or forest jasmine) and Vellakattumulla (white wild jasmine) are due to its white flowers and wild habit.

Note: Much used as veterinary medicine.

**507. *Jasminum flexile* Vahl. var. *flexile* (Plate 86 B)**

Syn: *Jasminum azoricum* Burm. f.

Family: Oleaceae

Vernacular Name: San: Vanamallika
    Eng: River jasmine, Scrambling vine
    Kan: Nithya mallige, Kaadu mallige
    Mal: Kattumulla
    Tulu: Kattu mallige

Habit: Climbing shrub.
Habitat: Forests and along forest borders.

Status: Frequent.

Description: Large glabrous climbing shrub. Leaves trifoliolate; leaflets ovate, shining, laterals slightly smaller. Flowers in terminal or axillary lax panicked cymes; bracts linear. Calyx 5-lobed, minute. Corolla salver-shaped, white, pink outside in bud; lobes 6. Stamens 2. Fruit ellipsoid berry, black when ripe.

Uses: *Leaf juice is given to remove poison from stomach through vomiting. *Plant decoction is used for blood disorders in children.

Etymology: Vanamallika, Kaadu mallige, Kattumulla and Kattu mallige (wild or forest jasmine) are due to its white flowers and wild habit.

Note: Flower has strong smell. It has properties similar to that of *Jasminum malabaricum*.

508. *Jasminum grandiflorum* L. (Plate 86 C)

Family: Oleaceae

Vernacular Name: San: Jati, Malati, Manohara, Surapriya

Eng: Spanish jasmine, Common jasmine, Catalanian jasmine

Kan: Jaaji, Jaaji hoo, Jaaji mallige

Mal: Malathi, Pichakam, Pichakamulla

Tulu: Jaaji mallige

Habit: Subscandent shrub.

Habitat: Cultivated in gardens.

Status: Common.

Description: Large subscandent shrub. Leaves imparipinnate; leaflets 7 – 11, terminal somewhat larger than the laterals, dark green. Flowers fragrant, in axillary and terminal cymes longer than the leaves. Calyx-lobes 5, linear. Corolla salver-shaped, white, often tinged with red outside; lobes 6, elliptic. Stamens 2. Fruit subglobose berry.
Uses: *Leaf paste with *Vernonia anthelmintica seed and *Curcuma longa rhizome is applied for skin diseases. Leaf paste is applied internally for mouth ulcers. *Oil prepared from leaf juice is applied for bruises. Leaf paste or oil extracted from flower is applied for skin diseases. *Tender shoot tip is chewed and discarded for mouth ulcers. *Tender shoot tip along with that of *Flueggea leucopyrus, *Loeseneriella arnottiana, *Albizia chinensis and *Indigofera tinctoria are made into a paste with rice washed water and is applied externally for allergies. *Tender shoot tip along with *Thevetia neriifolia root, *Plumbago zeylanica root and *Pongamia pinnata bark are crushed, boiled with equal quantity of gingelly or coconut oil and applied for hair fall. *Oil prepared from leaf mixed with turmeric powder is applied for scabies in children. Flower juice is used as an eye drop for eye pain. *Oil extracted from leaf mixed with neem oil is applied for skin diseases. *Leaf along with *Cynodon dactylon and *Vernonia anthelmintica seeds are boiled in coconut oil and applied for bruises. Leaf paste is applied for bruises in children and to remove marks on skin. Leaf is heated and pressed for swellings. Leaf juice is recommended for biliousness, while its paste is a wound healer. *Tambuli* prepared using shoot tip is given for pregnant ladies and to those with DUB, urinary disorders and thrush. *Leaf along with *Lawsonia inermis leaves ground in water is applied externally and wash with its decoction is recommended for dermatitis and microbial infections. Leaf heated in coconut oil is applied for cuts and wounds. *Flower buds, gingelly seeds and jaggery are ground and eaten to stop menstrual discharge. *Root extract in milk is given with cumin and jaggery for kidney stones as well as urinary tract infections. *Leaf crushed and boiled in coconut oil is applied for ring worm and scabies. *Fresh leaves along with *Curcuma longa fresh rhizome and *Vernonia anthelmintica seeds are ground with milk and heated with coconut oil. This oil is applied externally for tinea versicolor and scabies.

Etymology: Jati (braid), Manohara (attractive) and Surapriya (favourite of gods) are due to its white attractive flowers which are used for worship and to wear on heads.
Note: Flowers are used for worship. It is used in the preparation of *Malatyadi taila*, *Jatyadi ghrt*, *Jatyadi taila*, *Jatyadi vati*, *Jatipatradi kvatha*, *Kalyanaka ghrt* and *Aranyatulasyadi kera* (Dey, 1994; Sivarajan & Balachandran, 1996).

**509. Jasminum malabaricum** Wight var. *malabaricum* (Plate 86 D)

Family: Oleaceae

Vernacular Name: San: Mudgara  
Eng: Wild jasmine  
Kan: Kaadu mallige  
Mal: Kadambavalli, Kattumulla  
Tulu: Edroli

Habit: Climbing shrub.

Habitat: Forests and plains.

Status: Frequent.


Uses: *Oil prepared from leaf juice is used for pus release from ear and recurrent cold. *Two glasses of leaf juice is drunk to remove poison from stomach by vomiting. Oil prepared from leaf juice is applied for bruises with pain. *Leaf powder mixed with lime juice is poured in to ear for earache. *Leaf decoction is used to wash bruises. *Bark decoction or the water oozing out from the cut stem is used to wash eyes during conjunctivitis and other eye diseases. Oil prepared from leaf juice is applied for spasms, pain and to wash ulcers. *Stem and leaf decoction with that of *Ixora coccinea* is used internally and externally for urticaria and rashes. Leaf paste is applied for allergic skin diseases. *Paste prepared from whole plant, *Erythroxylum monogynum* bark, *Jasminum angustifolium* bark and *Alseodaphne semecarpifolia* bark is applied for bone fracture. Oil prepared using leaf juice is
applied externally for rheumatism. Bark paste is applied for swellings. *Leaf decoction is used to wash gangrene. Leaf paste is applied for septic wounds and ulcers. *Leaf cooked with rice, coconut milk, coconut inflorescence and milk is given for four days before four days of menstruation for conception in cattle. *Leaf cooked with rice is given for three days from the day of heat, again given after 20 days for conception in cattle. *Ghee prepared from its seeds and that of *Catunaregam spinosa is used for stammering. Leaf decoction is given by adding a little rock salt for venereal diseases; relief is though purgation. *A common test employed by the healers to detect the poisonous nature of bitten snake is to allowing the patient to experience the bitter taste of its leaf (bitter taste support non poisonous nature). Leaf cooked with rice is given for conception in cattle. *Leaf decoction is given for thirst in ladies after delivery. *Leaf juice mixed with equal quantity of coconut or gingelly oil is heated and is used as hair oil before bath to prevent repeated attack of cold, also useful for toothache and earache. *Decoction prepared from its leaf, which of *Calycopteris floribunda and a piece of full grown *Cocos nucifera leaf is used as a bath for itches and swellings.

Etymology: Kaadu mallige and Kattumulla (wild jasmine) are due to its wild nature.

Note: Seeds are used as substitute for red gram.

510. *Jasminum multiflorum* (Burm. f.) Andr. (Plate 86 E)

Syn: *Jasminum pubescens* Willd.; *Jasminum bracteatum* sensu Wight.

Family: Oleaceae

Vernacular Name: San: Kunda, Kundah
                  Eng: Common jasmine, Downy jasmine
                  Kan: Kasturi mallige, Magi mallige
                  Mal: Kasthurimulla, Kudamulla, Kurukkuthimulla
                  Tulu: Kasturi mallige, Kundo

Habit: Scandent shrub.

Habitat: Cultivated in gardens.
Status: Common.

Description: Scandent or erect shrub, with velvety-tomentose young parts. Leaves simple, ovate, pubescent. Flowers sessile, in dense terminal capitate cymes; bracts ovate-lanceolate. Calyx densely hairy; lobes 5 – 7, subulate. Corolla white, salver shaped; lobes 6 – 9, oblong-lanceolate. Stamens 2. Fruit usually not formed.

Uses: *Leaf boiled in coconut oil is applied for eye diseases.  *Root paste with Acorus calamus root is applied for snake bite.  *Root extract is given for snake bite, stomach ulcers, while it's paste for ringworm and wounds.  *Leaf juice is given in large doses to induce vomiting to remove the poisons that entered the body.  *Flowers are tied to breast for three days to arrest lactation.

Etymology: Kasturi mallige and Kasthurimulla (musk jasmine) are due to its characteristic fragrance.

Note: Much valued drug for poisonous bites.

511. *Jasminum sambac* (L.) Ait. (Plate 86 F)

Syn: *Nyctanthes sambac* L.

Family: Oleaceae

Vernacular Name: San: Atigandha, Gandharaja, Mallika, Mudgara

   Eng: Arabian jasmine, Moss rose jasmine, Sambac jasmine

   Kan: Gundu mallige, Dundu mallige, Elusuttina mallige

   Mal: Mulla, Kudamulla

   Tulu: Dundu mallige

Habit: Scandent shrub.

Habitat: Cultivated in gardens.

Status: Common.

Description: Scandent or suberect shrub, with pubescent branchlets. Leaves simple, elliptic to obovate-oblanceolate, pubescent. Flowers fragrant, solitary or in 3 – 7-flowered terminal cymes; bracts linear-subulate. Calyx-lobes 5 – 7, linear-subulate.
Corolla white, salver-shaped; lobes 5 – 9, oblong. Stamens 2. Fruit usually not formed.

Uses: *Paste of leaf boiled in coconut oil is applied for eye diseases and poor eye sight. *Leaf or flower paste is applied over breast to arrest lactation. *Root and leaf decoction is used to wash eyes in eye infections. Leaf paste is applied for skin diseases. Leaf decoction is given for fever. Flower extract acts as laxative, taken for leprosy and insanity. *Tender shoot tip extract is poured into eye for conjunctivitis and other eye diseases. *Tender shoot tip juice mixed with Psidium guajava shoot tip juice is given as sour agent to small children. *2 – 3 spoon of leaf extract or juice is given for foul smell of urine in children. Plant decoction is used for menstrual disorders. Oil prepared using flower juice is used as hair oil. Flower juice is used as eye drop in case of eye infections. *Flower paste is applied over breast for breast pain. *Tambuli* prepared from shoot tip is given for infections after delivery, over bleeding and mouth ulcers.

Etymology: Atigandha (highly fragrant), Gandharaja (king of fragrance), Gundu mallige and Dundu mallige (round jasmine) are due to its characteristic aroma and shape of buds.

Note: Benzyl acetate, linalool, methyl anthanilate and indole are the active constituents with deobstruent, diuretic and emmenagogue actions (Kapoor, 1990).

512. Jatropha curcas L. (Plate 87 A)

Family: Euphorbiaceae

Vernacular Name: San: Akhuparnika, Dravanti, Kanana eranda, Parvatayeranda  
Eng: Curcas nut, Physic nut, Purging nut  
Kan: Adalu haralu, Beli oudala, Kaadu oudala  
Mal: Kadalavanakku, Kattavanakku  
Tulu: Beli almuda, Katalmuda, Goalmuda

Habit: Large shrub.

Habitat: Grown as hedge plant.

Status: Common.
Description: Large glabrous shrub, with smooth greenish-white bark. Leaves simple, orbicular-cordate, entire or shallowly 5-lobed or-angled; stipules fugacious. Flowers monoecious, in lateral, paired, subcorymbose cymes. Calyx 5-lobed. Petals 5, yellowish-green, connate at base. Stamens 10. Fruit broadly ellipsoid capsule.

Uses: *Latex along with salt is made into a paste and is used for gingivitis, tooth decay and dental cavities. Same preparation is also recommended for swellings. *Oil prepared from the seeds is applied to head in case of running nose. Latex of the plant is applied over boils, ulcers and also as wound healer. Leaf decoction is given to increase lactation, for jaundice, constipation and as a laxative. *Seed oil is applied externally for rheumatism and over navel region for stomach pain. *Leaf juice or tender shoot cooked with milk is applied over head and massaged for malnutrition with symptoms like weakness, anaemia, thirst, digestive problem, hair fall, giddiness and sleeplessness. Latex is applied for ulcers, piles and bruises. *Leaf heated after smearing with castor oil is applied over furuncles and blisters. Stem is used as toothbrush for dental cavities, gum diseases and pain in gums. Seed oil is poisonous. *Young shoot tip paste with rice cooked water is applied on head for sleeplessness and giddiness due to biliousness, while it is given internally for diarrhoea in children. *Latex is applied on the scalp for dandruff. Seed oil is applied for scabies, all over the stomach for stomachache and worms. Seed powder is a strong purgative. Plant juice is recommended for bleeding piles. *Leaf decoction is recommended to increase lactation. Stem is used as toothbrush to clean and strengthening the gums and teeth. *Latex is applied to stop bleeding from cuts and wounds. *Bark cooked with rice is eaten with jaggery and lime pickle for 15 days for getting control over diabetes. Leaf paste is applied for swellings. *Plant along with Sida rhombifolia root and Tribulus terrestris seeds are made into a decoction (300 ml reduced to 150 ml) and are given by mixing with milk for stomachache during pregnancy. *Latex mixed with butter is applied for burns. *Stem cooked with rice is given for protein in urine and malnutrition in children. Latex is applied for skin diseases, wounds, herpes and piles, while internally for dysentery. If latex comes in direct contact with blood it causes varicose aneurism. Oil prepared from seed is applied for rheumatism. *Root along with Glycyrrhiza glabra rhizome and
Pedalium murex seed are made into a decoction which is used for chest pain due to vata. *Juice of whole plant boiled with onion plant extract in gingelly oil is applied to stop bleeding from cuts and wounds. *Latex is applied over centre of head for jaundice. *Gruel prepared by cooking bark with rice is used for venereal diseases. Latex is applied repeatedly for one week to get relief from ring worm. *Latex mixed with opium (4:1) in a copper vessel is spread over its leaf and is covered with another leaf, tied, given a coat with soil, heated by keeping it over burning charcoal until the soil gets dried. Then the drug kept over the leaf is powdered by crushing it with camphor and mixed with ghee or milk so as to apply in case of chronic ulcers or wounds in which bones are exposed. Smoke of cashew nut seed coat is given during this treatment to prevent other infections. Root extract with milk is given by adding sugar for seven days for scabies and other skin diseases. *Latex is applied to wound caused by sea frog shell. Twig is used as tooth brush for toothache. *Root paste with lime juice is applied for hair fall. Same paste is heated and applied for scabies. *Bark, cumin, Trachyspermum ammi, Vernonia anthelmintica, pepper seeds and turmeric are powdered and are applied for nervine pain. Latex is applied for warts and corns. Stem is used as tooth brush, while leaf decoction is used as gargle to overcome mouth ulcers.

Etymology: Akhuparnika (entire leaved), Dravanti (liquid oozing), Kanana eranda, Kaadu oudala, Kattavanakku, Katalmuda (wild castor), Beli oudala, Beli almuda (hedge castor) and Kadalavanakku (sea castor) are due to its simple, entire leaves, presence of watery latex, wild nature, resemblance of seeds with that of castor, use as hedge plant and introduction to India through sea route.

Note: It is known for its astringent and anthelmintic properties (Sivarajan & Balachandran, 1996). *Seed pulp mixed with food is used as rat poison.

513. *Jatropha glandulifera* Roxb. (Plate 87 B)

Family: Euphorbiaceae

Vernacular Name: San: Dravanti, Nikumba, Nyagrodhi
Kan: Seeme haralu, Thottla gida
Mal: Kannatti, Adala  
Tulu: Seemealmuda

Habit: Shrub.

Habitat: Waste lands and scrub forests.

Status: Occasional. Exotic and poison.


Uses: *Seed oil is applied for rheumatism and paralytic stroke. *Leaf juice is poured into the eyes for cataract.

Etymology: Dravanti (liquid oozing), Seeme haralu and Seemealmuda (coastal castor) are due to the presence of watery latex which oozes out from cut stem and distribution in wastelands along the coastal belt as well as plains.

Note: Jatrophin, jatropholone A, fraxetin and coumarino-lignin are the active constituents. It is used in the preparation of Misraka sneha (Sharma et al., 1998).

514. **Jatropha gossypifolia** L. (Plate 87 C)

Family: Euphorbiaceae

Vernacular Name: San: Dravanti  
Eng: Belly ache bush, Cotton leaf, Physic nut  
Kan: Chikka kaadu haralu, Vilayathi haralu, Hatthiele haralu  
Mal: Chuvannakadalavanakku, Seemayavanakku  
Tulu: Kempu almuda

Habit: Small shrub.

Habitat: Wastelands and plains.
Status: Common. Exotic.


Uses: Seeds cause drastic purgation and mental imbalance. *Latex is applied for carbuncles, eczema and itches. *Young shoot tip cooked or boiled in milk is given for liver, spleen and eye diseases. *Paste of fried and powdered seed is applied for ankle and knee pain.

Etymology: Dravanti (liquid oozing), Chikka kaadu haralu (smaller physic nut), Vilayathi haralu (foreign castor), Hatthiele haralu (cotton leaved castor), Chuvannakadalavanakku and Kempu almuda (red physic nut) are due to the presence of watery latex, smaller habit than that of Jatropha curcas, reddish branchlets and resemblance of seeds with that of castor.

Note: It is known for its astringent and anthelmintic properties (Sivarajan & Balachandran, 1996).

515. Jatropha multifida L. (Plate 87 D)

Family: Euphorbiaceae

Vernacular Name: San: Bhadradanti, Virechani  
Eng: Coral tree physic nut, French physic nut  
Kan: Hawalada mara, Vilayathi haralu  
Mal: Churakkalli  
Tulu: Seeme oudalo

Habit: Shrub.

Habitat: Grown in gardens.

Status: Frequent. Exotic.
Description: Erect shrub, with reddish tender parts. Leaves large, deeply 8 – 10 fid; lobes lanceolate, distantly pinnatifid; stipules subulate. Flowers monoecious, in terminal subcorymbose cymes. Calyx 5-lobed. Petals 5, reddish, connate below, obovate. Stamens 8 – 10; filaments shortly connate. Fruit obovoid capsule, yellowish when ripe.

Uses: Seed oil and leaf decoction are used as purgative agents.

Etymology: Hawalada mara (coral tree) and Vilayathi haralu (foreign castor) are due to its shrubby nature, purgative property, reddish stem and flowers.

Note: Usually planted as ornamental plant in gardens.

516. *Justicia adhatoda* L. *(Plate 87 E)*

Syn: *Adhatoda zeylanica* Medic.; *Adhatoda vasica* Nees in Wall.

Family: Acanthaceae

Vernacular Name: San: Vasa, Vasaka

Eng: Vasa, Vasaka, Malabar nut

Kan: Aadusoge, Aadumuttada gida

Mal: Adalodakam

Tulu: Aadusoge, Aadlodu

Habit: Shrub.

Habitat: Grown as hedge plant.

Status: Common.

Description: Large shrub, with pubescent young branches. Leaves simple, ovate-lanceolate, minutely puberulous. Flowers in terminal and axillary dense spikes; bracts ovate, herbaceous. Calyx 5-lobed; lobes oblong-lanceolate. Corolla white; limb 2-lipped; lower lip spreading, 3-lobed, crested with purple lines. Stamens 2. Fruit obovoid capsule.

Uses: Leaf juice mixed with honey is given for cough and phlegm. *Leaf juice is
given by mixing it with ginger juice for cough, cold and asthma. Its *panchanga kvatha* is given for cold and lung infections. *Flower juice is poured into eye in case of eye infections. Leaf decoction is given for rheumatism, tuberculosis and blood discharge during vomiting or blood in stool. Root, leaf or flower decoction is useful for intermittent fever and lung diseases. *Flower is tied over eyes during eye infections. Root extract is given in limited dose for asthma and bronchitis. *Leaf juice mixed with honey is given in empty stomach to arrest bleeding from nose. Leaf or root decoction is used for asthma, bronchitis and cough. *Leaf juice decoction with fresh turmeric is given for asthma and bronchitis. *Leaf juice is massaged over the feet for burning sensation in legs. Leaf juice mixed with honey is recommended for over menstrual bleeding. Leaf extract in hot water or root decoction is recommended for fever. Leaf decoction is given for biliousness and gas trouble. *Juice extracted by crushing its leaf along with *Piper betle (panchavalli* variety), *Plectranthus amboinicus* leaves and rhizome of *Zingiber officinale* is recommended with honey for asthma and bronchitis. *Root paste with rice washed water is applied externally and also taken internally for tinea versicolor. One tsp of leaf juice mixed with half tsp honey is given for three days in case of bronchitis. *Leaf juice along with sandal wood paste and sugarcandy is given to control bleeding. *Leaf juice mixed with garlic juice is used for fits or convulsion due to phlegm. *Shade dried leaf powder along with *Glycyrrhiza glabra* rhizome dissolved in hot water is given in empty stomach for asthma. Leaf juice mixed with honey is used for *raktapitta*. Whole plant decoction is given with honey for arthritis. Leaf juice mixed with ginger juice and honey is used for phlegm. *Leaf juice mixed with cumin seed extract is used for jaundice. *Lehyam* prepared by adding long pepper powder to its leaf, *Eclipta prostrata, Vitex negundo, Barleria prionitis* and *Solanum torvum* leaf juices (in equal quantity) is given with honey for 30 days in case of bronchitis. *Leaf juice mixed with sugar is recommended two times a day for dysmenorrhoea. Leaf decoction is given with honey for stomachache. *2 – 4 spoon extract of root ground with water is given to expel intestinal worms. Shade dried leaf boiled with water is given for body pain, headache and gas trouble. *Bath with its leaf decoction is recommended for DUB.
Etymology: Aadumuttada gida (plant not touched or eaten by goat) as it is one among those rare plants which are not consumed by the goats.

Note: Eating the leaves causes sterility in goats. It is used as green manure due to its high nitrogen content. Vasicine, hydroxypeganine, oscine, paganine and vasicinone are the active constituents responsible for its expectorant and antispasmodic properties (Kapoor, 1990). It is used for preparing Vasarista, Brhat rasnadi kashaya, Chyavanaprasha and Gulgulutiktaka ghrta (Sivarajan & Balachandran, 1996). Plant extract is anti aphrodisiac and it causes sterility in goats.

517. **Justicia gendarussa** Burm. f. (Plate 87 F)

Syn: Gendarussa vulgaris Nees in Wall.

Family: Acanthaceae

Vernacular Name: San: Krishna nirgundi, Krishnasurasa, Nila nirgundi, Vataghna  
    Eng: Gandarussa, Water willow  
    Kan: Karilakki, Karinekki  
    Mal: Karunochi, Vathamkolli, Vathakodi  
    Tulu: Karinekki, Vathamkolli

Habit: Undershrub.

Habitat: Along hedges and streams.

Status: Frequent.


Uses: Whole plant decoction is given internally followed by an external bath for rheumatism, joint pain, body pain and fever. *Leaf along with salt and coconut gratings are heated and pressed in the form of *kizhi* for rheumatism. Tender shoot tip juice is given for chronic rheumatism. Leaf decoction is recommended for fever.
*Leaf paste with salt is heated and pressed for osteoarthritis. *Leaf decoction with mustard seed extract is given to stop vomiting. Leaf juice is given for cough and to expel phlegm. Leaf is heated and pressed for relieving rheumatic pain and other body pains. Leaf paste is applied for toothache, headache and swelling. *Leaf decoction is given to cause vomiting and thereby to remove poison from body. One half of the juice prepared by grinding its leaves in water are mixed with lime juice, heated and is mixed with the other half. This is applied thrice a day for large blisters in legs and hand due to impure blood. *Leaf juice mixed with milk is given once a day in empty stomach for jaundice.

Etymology: Krishna nirgundi, Karilakki, Karinekki, Karunochi (black Vitex), Vataghna and Vathamkolli (rheumatism killer) are due to its blackish plant body which resembles *Vitex negundo* and much use for rheumatic complaints.

Note: Much valued drug for rheumatic complaints.

518. *Justicia nagpurensis* Graham. (Plate 88 A)

Syn: *Justicia serpyllifolia* (Benth. ex Clarke) Gamble; *Justicia simplex* var. *serpyllifolia* Benth. ex Clarke

Family: Acanthaceae

Vernacular Name: San: Kavacanamaka, Parpata, Renu, Varatikta  
Kan: Nelabevu, Hucchu nelabevu  
Mal: Tsjeru tartaval  
Tulu: Poddolu poo

Habit: Diffuse herb.

Habitat: Weed in waste lands.

Status: Common. Weed.

Description: Small diffuse or prostrate herb, with zigzag, pubescent stem. Leaves simple, orbicular or suborbicular, pubescent. Flowers in terminal spikes; bracts

Uses: *Whole plant extract or decoction is used to control protein discharge through urine. *Whole plant along with *Vernonia cinerea* root ground with water is applied for chronic ulcers. *Whole plant along with *Gmelina arborea* leaf and *Cordia obliqua* leaf ground with water are mixed with curd and given to drink for quick heal in case of bone fracture in cattle.

Etymology: Nelabevu (*Andrographis*), Hucchu nelabevu (mad *Andrographis*) and Poddolu poo ( parched rice flower) are due to its habit resembling that of *Andrographis paniculata* and flowers resembling parched rice.

Note: It is used in synonymous with *Justicia procumbens*.

**519. *Justicia procumbens* L. (Plate 88 B)**

Family: Acanthaceae

Vernacular Name: San: Kavacanamaka, Parpata, Renu, Varatikta  
Kan: Nelabevu, Hucchu nelabevu  
Mal: Tsjeru tartaval  
Tulu: Poddolu poo  

Habit: Diffuse herb.

Habitat: Grassy slopes.

Status: Common. Weed.

Description: Diffuse herb, with procumbent, pubescent stem. Leaves simple, ovate or orbicular, softly pubescent. Flowers in terminal simple spikes; bracts linear-lanceolate, shortly ciliate. Calyx 4-lobed; lobes linear-lanceolate, with scarious ciliate margins. Corolla pale violet-pink, 2-lipped. Stamens 2. Fruit oblong capsule, constricted between seeds, bristly at tips.

Uses: *Same as *Justicia nagpurensis*. 
Etymology: Nelabevu (*Andrographis*), Hucchu nelabevu (mad *Andrographis*) and Poddolu poo (parched rice flower) are due to its habit resembling that of *Andrographis paniculata* and flowers resembling parched rice.

Note: It is used in synonymous with *Justicia nagpurensis*.

520. *Justicia trinervia* Vahl. (Plate 88 C)

Family: Acanthaceae

Vernacular Name: Kan: Elukootti
Mal: Elukootti
Tulu: Elukootti

Habit: Procumbent herb.

Habitat: Waste lands.

Status: Frequent. Weed.

Description: Procumbent herb, with a woody root-stock. Leaves simple, ovate or oblong. Flowers in terminal dense spikes; bracts lanceolate, white with green nerves. Calyx 5-lobed; lobes lanceolate, pubescent. Corolla white, 2-lipped. Stamens 2. Fruit oblong-clavate, pubescent capsule.

Uses: *Plant extract is given for gastritis. *Plant paste is used for the treatment of bone fracture and due to its cooling effect also applied over head for biliousness.

Etymology: Elukootti (bone binder) is due to its use for the treatment of bone fracture.

Note: Plant is used as a green vegetable.

521. *Kaempferia galanga* L. (Plate 88 D)

Syn: *Alpinia sessilis* Koenig in Retz.

Family: Zingiberaceae
Vernacular Name: San: Chandramulika, Corakah, Kacurah, Sugandhamula, Sugandhavacha  
Eng: Galanga  
Kan: Kachora, Kacchura  
Mal: Kacholam, Kachoori, Kachoram  
Tulu: Kacchura, Kacchuro  

Habit: Acaulescent herb.  
Habitat: Cultivated in gardens.  
Status: Frequent.  

Description: Acaulescent herb; rootstock tuberous, aromatic; root-fibres fleshy, cylindric. Leaves few, spreading horizontally on the surface of the ground, orbicular to round-ovate, green, often with a narrow reddish edge above. Flowers borne terminally on the leafy stem, fugacious, fragrant; bracts lanceolate. Calyx tubular, 3-toothed. Corolla-lobes white, narrow. Lateral staminodes white, obovate; labellum broad, deeply 2-lobed; lobes white with lilac spot at the base. Fruit oblong capsule.  

Uses: Rhizome powder is given with honey for cough, bronchitis and asthma. *Oil prepared from rhizome juice is applied over forehead for sleeplessness, anxiety, burning sensation in body, burning in head, giddiness, sneezing, sinusitis, headache and phlegm. Rhizome decoction is used internally to expel phlegm, for fever and to improve digestion. *Rhizome ground with breast milk is applied on the centre of the head for fever in small children. *Rhizome paste is applied all over the body for fever. Rhizome extract is recommended for malnutrition and biliousness. *Rhizome paste is chewed three times a day for cough and breathing problems. *Rhizome ground in water is used with honey for chronic vomiting. *Rhizome and Ocimum tenuiflorum leaf decoction is used internally and heated paste of rhizome ground in gingelly oil is applied over the chest and stomach for difficulty in breathing, asthma and bronchitis. Rhizome decoction is used for running nose, cold, fever, phlegm, neck wounds, carbuncles, itches and swellings. *Rhizome powder mixed with honey is consumed at bed time for vomiting in pregnant women.
Etymology: Sugandhamula (aromatic root) and Sugandhavacha (aromatic flag root) arose due to its aromatic tubers and root-fibres sharing resemblance with rhizome of *Acorus calamus*.

Note: It is used in the preparation of *Dasamularista*, *Brhat rasnadi kashaya*, *Kaccoradi churna*, *Asanaeladi taila* and *Brhat Narayana taila* (Sivarajan & Balachandran, 1996).

522. *Kaempferia rotunda* L. (Plate 88 E)

Family: Zingiberaceae

Vernacular Name: San: Bhuchampaka, Bhumaticampaka, Hallakah, Hallakam, Utpala
   Eng: Indian crocus
   Kan: Nelasampige, Utpala hoo, Nelasuruli, Kusunde
   Mal: Malan-kua, Chengazhi, Chengazhineerkizhangu
   Tulu: Nelasampai, Nelasampage

Habit: Acaulescent herb.

Habitat: Cultivated in gardens.

Status: Occasional.

Description: Acaulescent herb, with tuberous rootstock and succulent root-fibres bearing oblong tubers. Leaves few, erect, oblong-acuminate, mottled green above, pale red-purple beneath. Flowers appearing before the leaves, in 4 – 6 flowered spikes, fragrant; bracts oblong. Calyx minutely 3-toothed. Corolla-lobes linear, white. Lateral staminodes white, oblong, erect; labellum purple or lilac, deeply 2-lobed; lobes ovate-oblong. Fruit oblong capsule.

Uses: *Oil extracted from the rhizome is used as hair oil for hair fall, proper hair growth and colour. *Rhizome paste is applied for swellings over skin and skin diseases. Rhizome decoction is taken for tonsillitis and indigestion. *Rhizome decoction is recommended to increase urine flow and also for blood purification. *Dried plant powder is applied for cuts and wounds. *Dried rhizome decoction is
used for hardened blood clots. Rhizome paste is used as a cosmetic. Rhizome decoction is consumed internally for menstrual irregularities. Rhizome decoction is recommended for phlegm, fever and rheumatism. *Rhizome paste is applied on the head for biliousness and headache. Plant paste is useful for swellings. Rhizome extract is used to expel phlegm, for fever and biliousness.

Etymology: Bhuchampaka, Bhumicampaka, Nelasampige and Nelasampage (ground champak) arose due to its flowers which are highly fragrant, borne at ground level and sharing resemblance with that of *Michelia champaca*. Nelasuruli (ground *Hedychium*) arose as the flowers resemble that of *Hedychium*.

Note: It is one of the ingredients of *Aravindasava, Asokarista, Chyavanaprasha, Kalyanaka ghṛta* and *Baladhatryadi taila* (Sivarajan & Balachandran, 1996).

523. *Kalanchoe pinnata* (Lam.) Pers. (Plate 88 F)

Syn: *Bryophyllum calycinum* Salisb.; *Bryophyllum pinnatum* (Lam.) Kurz.

Family: Crassulaceae

Vernacular Name: San: Asthibhaksha, Parnabija, Parnabijah

Eng: Air plant, Good luck leaf, Hawaiian air plant, Life plant

Kan: Kaadubasale, Dadabadike, Patrajeeva

Mal: Elachedi, Elamulachi, Ilamarunnu, Ilamulachi

Tulu: Kaattu basale, Appalathappu, Tatapataki, Kaadubasale

Habit: Succulent herb.

Habitat: Shady places.

Status: Common. Exotic.

Uses: *Leaf paste or heated leaf is applied over swellings due to bruises. *Oil prepared from plant juice is applied for burns. *Plant juice is used to arrest bleeding from cuts and wounds. Leaf juice is taken internally for kidney and bladder stones. *Peeled leaf is applied over wounds as a wound healer. *One leaf is recommended daily for imparting sweet smell to sweat and to ward off foul body odour. *Whole plant paste with cumin seeds is applied for furuncles in fingers. Plant or leaf paste is applied externally for burns. Plant extract is recommended internally for urinary tract infections. *Plant crushed with cumin seeds or its oil with coconut oil is applied for burns, furuncles and carbuncles. Heated leaf is pressed over the body for rheumatism. Eating leaves is beneficial for kidney stones. *Leaf juice mixed with salt is applied to expel spines and thorns from the body. *Leaf paste is applied for mastitis in cattle. *Leaf juice mixed with sugar or jaggery is applied to arrest bleeding from wounds. *Leaf paste with *Citrus aurantium* fruit juice is applied for furuncles in the back. *Leaf ground with pepper and gingelly oil is used for leucorrhoea. Plant paste is applied for breast swelling. *Thick coating with its leaf paste (when the coating becomes black in colour, new coating is given and is repeated) is given for chronic wounds and ulcers. *Leaf, shoot tip of *Crinum asiaticum*, leaves of *Jasminum sambac*, *Ixora coccinea*, *Physalis peruviana*, *Strychnos nux-vomica*, pepper, *Vernonia anthelmintica* seeds, turmeric and rabbit excreta ashes are dusted over chronic ulcers and wounds. *Fried leaf powder mixed with coconut oil is applied for burns. 

*Leaf and *Piper nigrum* leaf powder mixed with oil is applied for cuts and wounds. *Leaf juice extracted mixed with coconut oil is applied to the scalp (before one hour of sleeping) to get rid of dandruff. *Crushed leaf tied in a cloth is heated on an iron pan and is massaged for nervine pain. Leaf juice is given twice a day for indigestion. *Leaves along with that of *Lawsonia inermis* and *Solanum americanum* (2:10:5) ground with milk and eaten for rickets. Leaf paste is applied for bruises. *Fresh leaf juice mixed with coconut oil (2:1) is heated with one handful human hairs and is applied for cuts, wounds and bruises. *Fresh leaf juice is used as *dhara* for burns.
Etymology: Parnabija (leaf seed), Patrajeeva (leaf of life) and Ilamulachi (rooting leaf) arose as its leaf has the capacity to produce roots and there by new plants. Kaadubasale and Kaattu basale (wild spinach) as the fleshy leaves resemble that of spinach. When the leaves are folded they produce a trembling sound, hence Dadabadike (trembling). Ilamarunnu (leaf medicine) as the leaves are the officinal part used for medicine.

Note: Plant is much valued drug for burns and wounds.

524. *Kammetia caryophyllata* (Roxb.) Nicolson & Suresh (Plate 89 A)

Syn: *Ellertonia rheedei* Wight.

Family: Apocynaceae

Vernacular Name: Kan: Kodasaballi
Mal: Narumarathivu
Tulu: Illa booru

Habit: Woody climber.

Habitat: Semi evergreen forests.

Status: Occasional.

Description: Glabrous woody climber. Leaves simple, opposite or in whorls of 3, ovate to elliptic-acuminate, glabrous. Flowers white, with reddish tube, in terminal corymbose cymes. Calyx small; lobes 5. Corolla salver-shaped; tube cylindric, red; lobes 5, linear-acute. Stamens 5. Fruit 2 divaricate linear follicles; seeds flattened, winged at both ends.

Uses: *Plant cooked with rice is given for urticaria and rashes.*

Etymology: Kodasaballi (climbing *Holarrhena*) and Illa booru (house vine) arose as its flowers resemble that of *Holarrhena pubescens* and the stem is used to tie the rafters.

Note: Stem is used as thread to tie the rafters.
525. *Kingiodendron pinnatum* (Roxb. ex DC.) Harms (Plate 89 B)

Syn: *Hardwickia pinnata* Roxb. ex DC.

Family: Caesalpiniaceae

Vernacular Name: Kan: Ennemara, Kodapala, Kaadu konde  
Mal: Churali, Ennappayin, Kiyavu, Kulavu, Madayan-samranni  
Tulu: Ennetha maro, Kaattu konde

Habit: Tree.

Habitat: Evergreen forests.

Status: Very rare.


Uses: Oil obtained from this tree is applied externally for rheumatism. *Crushed bark is used as bed in case of rheumatism.*

Etymology: Ennemara and Ennetha maro (oil tree) as oil is extracted from its wood. Kaadu konde and Kaattu konde (wild *Cassia fistula*) as its leaves resemble that of *Cassia fistula* and restriction to the forests.

Note: Wood is much valued for oil extraction.

526. *Knema attenuata* (Hook. f. & Thoms) Warb. (Plate 89 C)

Syn: *Myristica attenuata* Wall. ex Hook. f. & Thoms; *Myristica corticosa* Bedd.

Family: Myristicaceae

Vernacular Name: Kan: Raktamara
Mal: Chennelli, Chorapali, Chorappathiri, Chorappayin
Tulu: Netheru maro

Habit: Medium-sized tree.

Habitat: Forests and Myristica swamps.

Status: Frequent.

Description: Medium-sized tree, with horizontal branches; young branches and leaves rusty-tomentose. Leaves simple, elliptic-lanceolate, glaucous beneath. Flowers fascicled on short, woody, axillary peduncle; pedicels tomentose. Perianth brown, stellate-tomentose outside, pink inside; lobes 3, triangular-orbicular. Filaments and connective connate forming peltate disk, with 8 – 20 anthers. Ovary ovoid, hairy. Fruit oblong-ovoid, rusty-tomentose; aril crimson, completely covering the seed.

Uses: *Bath with its bark decoction is useful in case of rheumatism.

Etymology: Raktamara and Netheru maro (blood tree) arose from its blood red exudates and crimson arils. Chennelli (red gooseberry) is due to its oblong-ovoid fruits with crimson aril. Chorappayin (blood dammar) as the colour of bark exudates is blood red.

Note: Often found in Myristica swamps.

527. *Kyllinga brevifolia* Rottb. var. *brevifolia* (Plate 89 D)

Syn: *Cyperus brevifolius* (Rottb.) Hassk.

Family: Cyperaceae

Vernacular Name: San: Musta, Svetanirvisa
    Eng: Nut sedge
    Kan: Ananthakonde hullu, Neeru vishamusthe
    Mal: Muttanna, Muttanga
    Tulu: Boldu nirvisho
Habit: Slender herb.

Habitat: Moist sandy places.

Status: Common. Weed.


Uses: *Root stock decoction is used for urinary disorders.

Etymology: Svetanirvisa, Boldu nirvisho (white poison remover) and Ananthakonde hullu (endless tassel grass) arose due to greenish white inflorescence, use as a substitute for the drug Musta (Cyperus rotundus), inflorescence resembling tassel and rapid colonization.

Note: It is used in synonymous with Kyllinga nemoralis.

528. *Kyllinga nemoralis* (J. R. & G. Forst.) Dandy ex Hutch. & Dalz. (Plate 89 E)

Syn: Kyllinga monocephala Rottb.; Cyperus kyllinga Endl.

Family: Cyperaceae

Vernacular Name: San: Musta, Svetanirvisa

    Eng: White head spike sedge
    Kan: Ananthakonde hullu, Neeru vishamusthe
    Mal: Paalnirvasi, Peemuthanga, Veluttha nirvasi
    Tulu: Boldu nirvisho

Habit: Slender herb.

Habitat: Moist shady areas.
Status: Common. Weed.


Uses: *Root stock decoction is used for urinary tract infections and diseases.

Etymology: Svetanirvisa, Veluttha nirvasi, Boldu nirvisho (white poison remover) and Ananthakonde hulla (endless tassel grass) arose due to white spikes, use as a substitute for the drug Musta (*Cyperus rotundus*), inflorescence resembling tassel and rapid colonization.

Note: It is used as a substitute for *Cyperus rotundus*.

**529. Lablab purpureus** (L.) Sweet (*Plate 89 F*)

Syn: *Dolichos purpureus* L.; *Dolichos lablab* L.

Family: Papilionaceae

Vernacular Name: San: Nispavah  
Eng: Hyacinth bean, Lablab bean, Indian butter bean  
Kan: Avare, Avarakaayi, Holadavare, Chapparada avare  
Mal: Amara, Avara  
Tulu: Abare

Habit: Climbing herb.

Habitat: Cultivated in paddy fields.

Status: Occasional.

Description: Climbing herb with glandular-pubescent branchlets. Leaves 3-foliolate; leaflets ovate, papery, pubescent, ciliate; stipules lanceolate. Flowers pinkish-violet,
in racemes. Sepals campanulate, united. Petals clawed; standard auricled with 2 callose appendages at base. Stamens 9 + 1. Fruit septate pod, with whitish strophiole.

Uses: Nutritious seeds are eaten after cooking. Seeds are not easily digestible and can cause gas trouble.

Etymology: Nispavah (cleaning grain) arose as the seeds help to clean the digestive tract. It is usually cultivated in paddy fields with temporary hut for the plants and hence the names, Holadavare (plough-field butter bean) and Chapparada avare (temporary hut butter bean).

Note: Seeds are much valued pulse crop.

530. *Lagenandra ovata* (L.) Thw. (Plate 90 A)

Syn: *Arum ovatum* L.; *Lagenandra insignis* Trimen

Family: Araceae

Vernacular Name: San: Hallakam

Kan: Neeru koove

Mal: Andavazha, Karin-pola

Tulu: Neerkoove

Habit: Aquatic herb.

Habitat: Along streamside marshes.

Status: Occasional.

Description: Marshy herb with stout rhizome. Leaves simple, long-petioled, elliptic-oblong, margin slightly waxy, greenish. Spathe dark-purple, warty outside the limb; tip thick. Female flowers below, spirally arranged; male above, both separated by slender interstice. Male flowers many, forming a cylindric mass; stamens 1 – 2. Fruit berries in a syncarpium.

Uses: *Rhizome cooked with rice is given for jaundice, while by mixing with
*Pandanus odorifer* for jaundice and water in legs. Rhizome extract is nutritive and is useful for diarrhoea and gastritis. *Paste prepared from rhizome pieces fried with gingelly oil or ghee is applied for ringworm. *Bath with whole plant decoction is taken for allergies and itches in the body. Rhizome paste is applied externally for ulcers in feet. *Rhizome cooked with rice is given for malabsorption in children and allergic swellings. Whole plant paste is applied for rheumatism, septic wounds, ulcers and scabies. *Three rhizome pieces tied with coconut leaflet vein are immersed in rice during cooking and resulting gruel is given for watery swelling all over the body. *Rhizome decoction is used to wash itchy warts. *Rhizome juice mixed with coconut oil or fried rhizome paste is applied for ring worm. *Rhizome ground with soaked rice (1: 3) is mixed with jaggery, covered with banana leaf, baked with burning charcoal and eaten at bed time of nerve pain due to gas trouble. *Rhizome, *Zanthoxylum rhetsa* bark, *Elaeagnus conferta* bark (2: 1: 1) are crushed and extract with rice washed water is used for weakness of legs in cattle. *Rhizome powder mixed with raw rice is given to eat in case of throat pain in cattle. *Rhizome, *Oroxylum indicum* bark, *Elaeagnus conferta* bark (1: 2: 2), chillies and, pepper seed extract with rice washed water is given twice a day for rheumatic problem in cattle.

Etymology: Neeru koove and Neerkoove (water arrowroot) are due to its aquatic habit and resemblance with *Maranta* and *Curcuma* species.

Note: Rhizome has properties similar to that of arrowroot. In order to remove its hot and toxic nature, it is boiled in water and this water should be discarded before use. It is used in synonymous with *Lagenandra toxicaria*.

**531. Lagenandra toxicaria** Dalz. var. toxicaria *(Plate 90 B)*

Family: Araceae

Vernacular Name: San: Hallakam
Kan: Neeru koove
Mal: Andavazha, Neerchengazhi
Tulu: Neerkoove
Habit: Aquatic herb.

Habitat: Along streams.

Status: Common.

Description: Stout herb with creeping rhizome. Leaves simple, long-petioled, oblong or elliptic-oblong. Spathe tubular below, greenish-purple outside, dark-purple within; limb ovate-lanceolate, caudate-acuminate. Spadix slender. Male flowers: numerous, forming an oblong mass near the apex; stamens 1 – 2. Female flowers: ovaries numerous at the base, spirally arranged. Fruit a syncarpium with berries.

Uses: Same as *Lagenandra ovata*.

Etymology: Neeru koove and Neerkoove (water arrowroot) are due to its aquatic habit and resemblance with *Maranta* and *Curcuma* species.

Note: Rhizome has properties similar to that of arrowroot. In order to remove its hot and toxic nature, it is boiled in water and this water should be discarded before use. It is used in synonymous with *Lagenandra toxicaria*. It is used in the preparation of *Asokarista, Chyavanaprasha, Kalyanaka ghṛta* and *Baladhatryadi taila* (Sivarajan & Balachandran, 1996).

532. *Lagenaria siceraria* (Molina) Standley (Plate 90 C)

Syn: *Lagenaria vulgaris* Seringe.; *Cucurbita siceraria* Molina

Family: Cucurbitaceae

Vernacular Name: San: Alavu, Iksvaku, Iksvakuh, Pindaphala
    Eng: Bottle gourd, Calabash gourd
    Kan: Sorekaayi, Haalukumbala, Kahisore
    Mal: Bellashora, Churakka, Peechura
    Tulu: Turekkayi, Kattuture

Habit: Climbing herb.

Habitat: Cultivated.
Status: Common.


Uses: *Fruit rind paste with lime juice is applied for poisonous bites. *Leaf juice (15 – 20 ml) is given (for 2 – 3 days) for jaundice which results in release of yellow water through nose. Overdose is poisonous. Fruit is used as vegetable to bring down serum cholesterol, for biliousness, gastric ulcer and urinary disorders. *Oil prepared from smashed fruit juice is applied over head for sleeplessness and giddiness. *Root is given as feed to cattle for increasing lactation. *Its fruit preparations are highly recommended for jaundice and biliousness. Fruit extract is used for vitiated indigestion in children. Root paste is applied for swellings. *Leaf decoction is taken with sugar for jaundice. Fruit extract is given for bile disorders and leucorrhoea. *Fruit is rich in water content and removes metallic poisons from the body. *Fruit alone or its juice is taken as food after fasting. *Cooked fruit pulp and leaf paste is applied on centre of head, forehead and sole for mental debility, anxiety, sleeplessness and increased body heat. *Young fruit pulp ground in milk and mixed with butter is applied on the sides of stomach and vagina for over bleeding, bleeding during pregnancy and stomachache. Fruit is a nerve tonic and increases body weight. *Leaf, stem and root decoction is used for biliousness, skin diseases and pus release from ear. Stem extract is used for poisonous bites and urinary disorders. Root decoction is given for jaundice. *Plant or fruit juice is applied to expel maggots from septic wounds. *Seed extract is poured into nose as nasya for getting relief from jaundice (relief is by oozing out of yellow liquid through nose). The same is poured into ear for ear ache. Fruit pulp extract is given for diarrhoea. *Oil prepared from fruit juice is externally massaged for rheumatism. *Seed paste dissolved in coconut oil is put into ear to kill the insect that entered the ear. Whole plant decoction is given for skin diseases and blood purification. Oil extracted from seed
is applied over head for headache. Fruit extract is diuretic, emetic, used for vaginal disorders, asthma and rheumatism. *Leaf juice is applied to expel maggots from wounds and ulcers.

Etymology: Pindaphala (globe fruit) is due to the globular shape of its fruits. Kahisore (bitter bottle gourd) arose as the fruits of wild varieties are bitter.

Note: If toddy is covered with its fruit rind, the quality and taste of toddy gets increased. Seed powder is given internally to induce vomiting during panchakarma*. Fruits are eaten as vegetable. It is used in the preparation of Kaccoradi taila, Parantyadi kera and Mahavisagarbha taila (Sharma et al., 1998; Sivarajan & Balachandran, 1996).

533. *Lagerstroemia microcarpa* Wight (Plate 90 D)

Syn: *Lagerstroemia lanceolata* Wall. ex Clarke

Family: Lythraceae

Vernacular Name: San: Nandivriksha

   Eng: Virgin tree of the forest, Naked tree of the forest

   Kan: Nandimara, Belmatthi, Bendeku

   Mal: Vellilavu, Venthekku

   Tulu: Bendeku, Nandimaro

Habit: Large tree.

Habitat: Evergreen and semi evergreen forests.

Status: Occasional.

Description: Large deciduous tree with white peeling bark. Leaves simple, elliptic-ovate, coriaceous, hairy and glaucous beneath. Flowers white, in axillary and terminal panicles. Calyx pink, campanulate; lobes 6. Petals 6, obovate-spathulate, caducous, with a slender claw, white. Stamens numerous. Fruit ellipsoid capsule.
Uses: *Leaf or young shoot tip paste is applied for cuts, wounds and also for skin diseases. *Leaf decoction is used to wash septic wounds. Bark paste is applied for several skin diseases.

Etymology: Nandivriksha and Nandimara (delight tree) arose as this tree with smooth white bark gives a delightful scene. Belmatthi (white Arjuna tree) is due to its white bark and resemblance with *Terminalia arjuna*.

Note: It is a timber tree.

**534. *Lagerstroemia speciosa* (L.) Pers. (Plate 90 E)**


Family: Lythraceae

Vernacular Name: San: Jarula, Kramuka
Eng: Pride of India, Queen of flowers
Kan: Channangi, Hole daasavala, Holematthi
Mal: Chemmaruthu, Manimaruthu, Nirmaruthu, Poomaruthu
Tulu: Challa

Habit: Large tree.

Habitat: River banks, also cultivated as ornamental tree.

Status: Common.

Description: Large deciduous tree with white bark. Leaves simple, oblong-lanceolate. Flowers purple-lilac, in large terminal panicles; pedicels articulate. Calyx-tube ribbed outside, tomentose; lobes 6, persistent. Petals 6, suborbicular, long-clawed. Stamens numerous. Fruit broadly ovoid capsule, seated on the woody ribbed calyx.

Uses: Bark decoction is used as a cardiac tonic. *Before bath its bark paste is applied all over the body for epilepsy. *Bark paste with honey is applied for
pimples. *Leaf paste is applied over head for three months to prevent hair fall. *Leaf is used as shampoo during treatment for dandruff. *Ground leaves are eaten for diabetes.

Etymology: Hole daasavala (river *Hibiscus*), Holematthi (river Arjuna tree), Nirmaruthu (water *Terminalia*) and Poomaruthu (flower *Terminalia*) are due to its riparian nature, resemblance of attractive flowers with that of *Hibiscus* and resemblance of the plant with *Terminalia arjuna*.

Note: It is usually used as a substitute for *Terminalia arjuna*.

**535. Lannea coromandelica** (Houtt.) Merr. (Plate 90 F)

Syn: *Odina wodier* Roxb.

Family: Anacardiaceae

Vernacular Name: San: Ajasringi, Jhingini, Jingini  
Kan: Godda, Ajasringi, Oodimara, Kuratige  
Mal: Anakkaram, Karayam, Karilavu, Odiyamaram  
Tulu: Purli

Habit: Medium-sized tree.

Habitat: Dry rocky areas.

Status: Common.


Uses: Bark extract is applied for bruises, wounds, sores, sore ulcer and sore eyes. *Bark juice promotes healing of chronic ulcers. *Gum powder is given for asthma. *Paste of leaf boiled in coconut oil is applied for local swelling and sprains. *Leaf paste with pepper seeds is applied for rheumatism. Gum decoction is used as
cardiac and nervine tonic. *Bark cooked with rice is given for malnutrition in children. Bark decoction is used for constipation and recommended for patients suffering from phlegm. It is also used to wash septic wound and ulcers. *Paste of leaf or bark with coconut milk is used for wounds.

Etymology: Ajasringi (goat horned) arose as its fruits resemble goat’s horn.

Note: Good timber tree.

536. *Lantana camara* L. var. camara (Plate 91 A)

Syn: *Lantana aculeata* L.; *Lantana camara* L. var. *aculeata* (L.) Moldenke

Family: Verbenaceae

Vernacular Name: Eng: Lantana, Wild sage
   Kan: Nathada hoo, Kaadugulabi
   Mal: Arippoo, Konginippoo
   Tulu: Kattugulabi

Habit: Rambling shrub.

Habitat: Waste places and hedges.

Status: Common. Exotic.

Description: Aromatic, prickly rambling shrub. Leaves simple, ovate or elliptic-ovate, pubescent, scabrous. Flowers in axillary and terminal capitate spikes. Calyx membranous, small. Corolla orange, red, pink or white; limb 5-lobed. Stamens didynamous. Fruit fleshy drupe, purple or black when ripe.

Uses: *Leaf juice is used to stop bleeding and to heal cuts, wounds and ulcers. Plant decoction or leaf paste is used for rheumatism. *Ground leaf heated with coconut oil is applied for black marks and ulcers caused by burn. *Leaf ground with turmeric powder is applied for septic ulcers with foul smell. *Leaf cooked with barley is given for ladies after delivery. Plant decoction is recommended for vomiting,
anaemia, wounds, cuts, fever, cold, rheumatism, poisonous bites, scrotal swelling and tuberculosis. *Oil prepared from flower juice is applied for bruises in children.

Etymology: Nathada hoo (foetid flower), Kaadugulabi and Kattugulabi (wild rose) are due to its characteristic fragrance, attractive corolla, prickly nature and capitate inflorescence.

Note: Leaf extract has antibacterial effect and leaves are used for preserving meat. Ripe fruits are edible.

537. *Laportea interrupta* (L.) Chew. (*Plate 91 B*)

Syn: *Urtica interrupta* L.

Family: Urticaceae

Vernacular Name: Kan: Pancharangi

Mal: Choriyanam, Chenthotti

Tulu: Aakire, Urusanige

Habit: Erect herb.

Habitat: Weed in gardens.

Status: Common. Weed.

Description: Erect herb with stinging hairs and furrowed stem. Leaves simple, ovate, membranous; stipules bifid at apex. Flowers monoecious, greenish, on interrupted axillary spikes. Perianth-lobes in male 4 – 5; in female 4. Stamens 4 – 5. Fruit compressed achene, with narrow winged margin.

Uses: *Root decoction is used internally and paste is applied externally for itches, urticaria and viral diseases. *Root paste is applied for allergies, urticaria and rashes due to its anti histamine property. *Root ground in lime juice is applied into vagina in case of cancerous ulcers.

Etymology: Choriyanam (itchy) arose as its stinging hairs cause severe itch.

Note: Plant is used as leafy vegetable. It is much valued drug for skin diseases.
538. *Lawsonia inermis* L. (Plate 91 C)

Syn: *Lawsonia alba* Lam.

Family: Lythraceae

Vernacular Name: San: Madayanti, Madayantika, Medika, Nakharanjaka  
Eng: Henna, Egyptian privet, Cypress shrub  
Kan: Goranti, Gorante, Madarangi, Madurangi  
Mal: Mailanchi, Mylanchi  
Tulu: Madrengi

Habit: Large shrub.

Habitat: Cultivated as hedge plant.

Status: Frequent.

Description: Glabrous shrub with tetragonous branches. Leaves simple, ovate or lanceolate. Flowers small, white or rose, in axillary and terminal panicles. Calyx-lobes 4, ovate, spreading. Petals 4, wrinkled. Stamens 8. Fruit globose capsule, tipped with persistent style.

Uses: *Leaf juice with cumin seeds are given for three days from the 4th day of menses in three cycles in case of dysmenorrhoea and irregular periods. Leaf paste is applied on head for dandruff and skin diseases. Oil prepared from leaf juice is applied on head for proper growth of hair and to prevent hair fall. *Leaves ground in milk or rice washed water is given for four days from menses as a blood purifier and for conception. *Chewed leaf is swallowed for headache and mouth ulcers. Oil prepared from its leaf juice is applied for skin diseases and burns. *Leaf or stem decoction is given for jaundice and blood in stool. *Paste of leaf boiled with milk is applied on head for sleeplessness. Yong leaf juice is given for leprosy, worms and jaundice. *Leaf, bark and flower decoction is given for epilepsy. Leaf paste is applied for scabies, tinea versicolor and whitlow. *Leaf poultice with lime juice is recommended for burning sensation in limbs. *Leaf paste with garlic is applied for corns and warts. Leaf decoction is used for menstrual irregularities. *Leaf
decoction is given internally to overcome anaemia in case of some eczema and erysipelas. Leaf or stem decoction is recommended for jaundice. *Leaf paste is applied externally for allergic skin diseases, scabies, swellings and cuts, while extract is recommended internally for acidity. Leaf juice is given in empty stomach for leucorrhoea. *Leaf juice is applied on the sole for burning sensation in feet. Plant extract is used for blood disorders, menstrual problems and urinary diseases. *Plant decoction or that cooked with rice is given for DUB in ladies. Root extract in milk is given for stomachache during menses. *Tambuli* prepared from its shoot tip is used for menstrual and urinary disorders (not recommended for pregnant ladies and should not be plucked on Tuesdays). Leaf ground and boiled with coconut oil is applied on head for headache. *Leaf ground with cumin seeds in water is applied at bed time for burning sensation in legs and eyes. *Leaf decoction is given with milk and sugar as a blood purifying agent. *Leaf, coriander and cumin seeds ground with milk are given twice a day for anaemia. *Ground leaf and cumin powder are taken with milk for proper development of foetus.

Etymology: Nakharanjaka (nail colouring) arose as the leaves are used by the women to colour their nails, hands, feet and hair.

Note: Plant extract has the capacity to impart or increase faminity. Applying mehandi* over body helps to increase faminity. Lawson, hennotannic acid and β-ionone are the active constituents. It is used in the preparation of Gorocanadi vati and Madayantyadi churna (Dey, 1994; Sharma et al., 1998).

539. *Leea asiatica* (L.) Ridsd. (Plate 91 D)


Family: Leeaceae

Vernacular Name: Kan: Kaadu maridrakshi, Sanna nedthe  
Mal: Nalugu  
Tulu: Ellya nedil

Habit: Shrub.
Habitat: Semi evergreen forests.

Status: Common.

Description: Erect shrub. Leaves unipinnate; leaflets ovate or oblong. Flowers greenish-white, in axillary divaricate pubescent cymes. Calyx with 5 broad shallow lobes. Petals 5. Stamens 5. Fruit depressed-globose, 4 – 6-lobed berry, black when ripe.

Uses: *Tuber paste is applied for poisonous bites. *Whole plant cooked with rice is recommended for five days in case of herpes.

Etymology: Sanna nedthe and Ellya nedil (smaller Leea indica) are due to its habit which is miniature of Leea indica.

Note: Much valued drug for poisonous bites and skin diseases.

540. Leea indica (Burm. f.) Merr. (Plate 91 E)

Syn: Staphylea indica Burm. f.; Leea sambucina (L.) Willd

Family: Leeaceae

Vernacular Name: San: Chatri, Karkatajihva

Kan: Andilu, Nedthe

Mal: Njallu, Njaku, Njazhuku

Tulu: Nedil thappu

Habit: Large shrub.

Habitat: Forest undergrowths.

Status: Common.

Description: Large shrub. Leaves bi-or tripinnate; leaflets ovate or oblong-lanceolate, glabrous. Flowers greenish-white, in large terminal compound corymbose cymes. Calyx 5-lobed. Petals 5, spreading, slightly reflexed. Staminal tube white, 5-lobed. Fruit depressed-globose, 2 – 6-lobed berry, purple-black when ripe.
Uses: *Rhizome cooked with rice is given along with Embelia ribes root for skin diseases. Root juice mixed with milk is given for skin diseases. *Root and cumin seed paste is applied for joint swellings. Root juice is applied for skin diseases. *Root juice mixed with cumin seed extract is recommended for tonsillitis. *Juice extracted by grinding its tender shoot tip with that of Lawsonia inermis boiled with coconut oil is applied for burns. *Stem, tender shoot tip of Strychnos nux-vomica, Calophyllum inophyllum oil, neem oil and Aerva lanata oil are boiled and the resulting oil is applied for ringworm and allergy. *Stem crushed and boiled with gingelly oil is mixed with Hydnocarpus alpina oil, neem oil and Calophyllum inophyllum oil. This oil is applied externally for cancerous ulcers and leprosy. Stem extract is a nerve tonic and is given for diabetes. *Tender shoot tip fried in coconut oil is applied for furuncles in the finger. *Paste of leaf fried in ghee is applied to the centre of head for giddiness. *Leaf paste with mustard seeds is applied for headache. Plant decoction is used for pain, bone fracture, blood dysentery, stomach swelling, urinary disorders, carbuncles, blood disorders and sleeplessness. *White portion of inner stem ground with cumin seeds is applied for eye injury caused by paddy grains. *Root paste with rice washed water is applied for carbuncles. *Root ground with butter milk is taken twice a day for amoebiasis and with milk for bleeding piles. *Tender shoot tip ground with rice washed water is applied all over the body for insect bites. Crushed bark juice is given once in the morning for burning sensation in stomach due to biliousness. *Root paste is applied over head at bed time for sleeplessness. *Root extract with lime juice is taken twice a day for dysentery. *Shoot tip powder dissolved in butter milk is given for dysentery in cattle. *Root ground with Citrus aurantium fruit juice is given in the morning for three days in case of weakness of legs in cattle. *Paste prepared by grinding its stem piece with that of Smilax zeylanica (in equal quantity) is applied for swelling and pain, while decoction is used internally.

Etymology: Chatri (umbrella) is due to its characteristic growth pattern.

Note: Hitting with its stem is deadly for python. Tender shoot tip, leaf, flower and fruits are edible. It is also used in black magic.
541. *Lemna perpusilla* Torrey (Plate 91 F)


Family: Lemnaceae

Vernacular Name: Kan: Neerata
Mal: Payal
Tulu: Neerato

Habit: Free-floating herb.

Habitat: Paddy fields and still water.

Status: Frequent.

Description: Free-floating thalloid herb with capillary roots; daughter thallus budding from lateral pocket. Thalli in groups of 1 – 3, ovate-oblong, asymmetrical, obscurely 3-nerved. Floral pocket lateral with spathe enclosing 2 male and 1 female flowers. Stamens 1 or 2. Ovary 1-celled. Fruit 1-seeded utricle.

Uses: *Whole plant ground in rice washed water is applied for herpes and skin diseases.* *Plant paste is applied for poisonous bites, urticaria, wounds and eye diseases.* Decoction is used as a blood purifier for epilepsy, indigestion, wounds, nervous debility and eye diseases.

Etymology: Neerata and Neerato (floating in water) arose due to its characteristic free-floating habit.

Note: It has water purifying property.

542. *Lepidagathis incurva* Buch.-Ham ex D. Don var. *mucronata* (Nees) Clarke ex Cooke (Plate 92 A)

Syn: *Lepidagathis mucronata* Nees in Wall.

Family: Acanthaceae

Vernacular Name: Kan: Elukootti
Tulu: Elukootti, Haadjod
Habit: Herb.

Habitat: Forest undergrowths.

Status: Frequent.

Description: Erect or prostrate perennial herb. Leaves simple, lanceolate or obovate, decurrent at base, pubescent beneath. Flowers in axillary or terminal 1-sided, hairy spikes; bracts spinescent, ciliate. Calyx deeply 5-lobed. Corolla 2-lipped, white, with pink or brown spots on lower lip. Stamens didynamous. Fruit oblong-lanceolate capsule.

Uses: *Leaf juice is used for cough. *Whole plant paste is applied externally for healing bone fracture and wounds

Etymology: Elukootti (bone binder) is due to its use in the treatment of bone fracture.

Note: Much valued drug for the traditional bone setters.

543. *Lepidagathis keralensis* Madhu. & Singh (Plate 92 B)

Family: Acanthaceae

Vernacular Name: Kan: Paremullu

Mal: Paramullu, Venappacha

Tulu: Pademullu

Habit: Undershrub.

Habitat: Exposed lateritic rocks.

Status: Common.

Description: Rigid prostrate undershrub with woody rootstock. Leaves rigid, plicate, oblong-lanceolate, blunt acuminate, glabrous. Flowers in terminal pubescent spikes on short lateral ascending branches; bracts oblong-ovobate, glandular-pubescent,

Uses: *Spines tied in a cloth are cooked with rice and resulting gruel is given to children as a preventive medicine for malnutrition, malabsorption and digestive disorders. *Plant paste is applied on the head for same purpose. *Whole plant decoction is recommended for kidney stone and malnutrition. *Whole plant decoction with cumin seeds is given for chest pain. *Whole plant decoction is used for albumin in urine and digestive disorders. *It is a blood purifier and increases blood.

Etymology: Paremullu, Paramullu and Pademullu (rock spines) arose due to its spiny nature and habitat.

Note: Much valued drug for children’s diseases.

544. *Lepidagathis prostrata* Dalz. (Plate 92 C)

Family: Acanthaceae

Vernacular Name: Kan: Paremullu  
Mal: Paramullu, Venappacha  
Tulu: Pademullu

Habit: Undershrub.

Habitat: Exposed lateritic rocks.

Status: Common.


Uses: Same as *Lepidagathis keralensis*. 
Etymology: Paremullu, Paramullu and Pademullu (rock spines) arose due to its spiny nature and habitat.

Note: Much valued drug for children’s diseases.

545. *Leptadenia reticulata* (Retz.) Wight & Arn. *(Plate 92 D - 1, D - 2)*

Syn: *Leptadenia imberbis* Wight

Family: Asclepiadaceae

Vernacular Name: San: Jivanti, Madhusrava, Caksusya
                     Eng: Cork swallow wort
                     Kan: Jeevahale, Petthathajanku
                     Mal: Palachedi
                     Tulu: Petthathajanku

Habit: Twining shrub.

Habitat: Along hedges.

Status: Frequent.

Description: Twining shrub with slender pubescent branches. Leaves simple, ovate to lanceolate, pubescent beneath. Flowers in axillary umbellate cymes. Calyx shortly 5-lobed. Corolla yellowish; lobes 5, densely puberulous, margins revolute, with brown spots inside. Corona double. Pollinia solitary in each anther-sac. Fruit ovoid-oblong follicles.

Uses: *Whole plant decoction is given for paralysis and stroke. *Dried tuber decoction is given with sugar in empty stomach to increase breast milk. Dried tuber decoction is also used as a health tonic.

Etymology: Jivanti (life giving), Jeevahale (life giving lateciferous plant) and Petthathajanku (cow herb) arose due to its rejuvenative property, presence of watery latex and much use as galactagogue for cattle.
Note: It is usually used in synonymous with *Holostemma ada-kodien*. It is used in the preparation of *Jivantyadya ghṛta, Jivantyadi taila, Manasamitra vataka, Balarista* and *Anutaila* (Kapoor, 1990; Sivarajan & Balachandran, 1996).

546. *Leucas aspera* (Willd.) Link. (Plate 92 E)

Syn: *Phlomis aspera* Willd.

Family: Lamiaceae

Vernacular Name: San: Dronapuspi, Ksavaka
Eng: Thumba
Kan: Thumbe, Ollethumbe
Mal: Thumba, Chiruthumba
Tulu: Thumbya, Thumbe

Habit: Herb.

Habitat: Open wastelands.

Status: Common. Weed.


Uses: *Leaf juice mixed with lime is applied for mumps. *Root decoction with salt is used as gargle for toothache. *Plant juice is poured into nose as *nasya* (for 3 – 4 days) for sinusitis and headache. Same juice is poured into eye for pterigium. *Juice extracted from whole plant, green outer peel of *Areca catechu* leaf petiole and cumin seeds are poured into eyes in case of conjunctivitis or dust in eyes. *Leaf powder is snuffed for cold, headache and sinusitis. *Leaf juice is poured into nose in the form of *nasya* for malignant growths in nose. *Plant juice with *Vernonia anthelmintica* seed extract is poured into nose of cattle for same purpose. Leaf juice is poured into ear for stomachache. *Juices of whole plant and *Scoparia dulcis* heated by adding
ghee is given for leg swelling due to accumulation of impure blood. *Whole plant extract is given to expel intestinal worms. Plant juice is given internally to expel phlegm and externally for allergy, ulcers and poisonous bites. *Whole plant decoction with Ocimum tenuiflorum root is used as a preventive for viral fevers. Plant decoction is recommended for asthma. Whole plant juice mixed with honey is given for asthma, bronchitis and cough. *Plant juice paste with lime is applied several times for mumps. *Plant juice is used as nasya in case of unconsciousness after snake bite. *Whole plant ground in milk is given for food poisoning. *Flower ground in milk or cooked with rice is given for jaundice. *Root boiled in butter milk is given to expel intestinal worms. Leaf juice is applied in case of injury to eyes and snake bite. *Four drops of crushed plant extract are poured into eyes in case of severe stomachache, injury and eye pain. Plant juice is used for indigestion, eye diseases, rhinitis, breathing problems, migraine, phlegm, worms and liver problems. *Plant juice is applied for shoe bite. *Plant juice mixed with pepper powder and honey is given for leucoderma. *Seven flowers, three pepper seeds and salt ground in betel leaf juice is used for malaria. *Leaf, root of Combretum latifolium and bark of Terminalia chebula are made into a paste and applied for body pain. *Crushed whole plant is applied for carbuncles. Its paste with turmeric is used externally for skin diseases. *10 young shoot tip and 10 rice seeds ground and cooked with water are given with honey at bed time for cough and cold. *Leaf juice mixed with pepper powder is given thrice a day for cold and fever. *One spoon plant juice mixed with one spoon lime water is used for piles. *Tender shoot tip covered with banana leaf is cooked in charcoal, ground with rock salt and is given for indigestion. *Leaf, garlic, curry leaf, cumin and mustard seeds are made into chutney which is beneficial for indigestion. *One spoon plant juice mixed with one spoon lime juice and salt is recommended for three days in case of body pain during menstruation. *Plant juice and honey (1:2) is given twice a day for jaundice. *5 – 10 tender shoot tips and 4 – 5 pepper seeds are chewed early morning for diabetes. *Leaf paste with lime juice is applied for prickly heat, itches, ring worm and eczema. *Leaf juice mixed with garlic juice is used as nasya and flower ground in milk is applied on head for headache. *Leaf juice mixed with honey is used as eye drop twice a day for 15 days
in case of cataract. *One handful flower cooked in steam is eaten with sugarcandy for leucorrhoea. Leaf juice is used as nasya* for bleeding from nose. *Extract of leaf and Ocimum tenuiflorum is given with honey for asthma and bronchitis. *Juice of shoot tip, Vitex negundo leaf and onion is taken for phlegm. *Leaf juice mixed with ginger juice and Plectranthus amboinicus leaf juice is also used for phlegm. *Decoction prepared from fried and powdered root, ginger, pepper, Hyoscyamus niger, coriander and cardamom seed coat and coconut leaflet mid vein is used for vomiting and dysentery. *Root and garlic decoction is used for vomiting due to worm infestation. Two drops of crushed flower juice are used as eye drop for injuries in eye and cataract. *Flower decoction with milk helps in conception. *Extract of root powder mixed with long pepper powder in water is used for fever with cold. *Plant juice filled in one half of seed removed lemon is given a coating with musk paste, heated in charcoal and is chewed once a day for typhoid. Leaf juice mixed with pepper powder (2:1) is given twice a day for typhoid. *Leaf juice mixed with lime juice and salt is taken two times a day for three days in case of menstrual disorders. *Two tsp leaf juice is given with 1/4 tsp pepper powder three times a day for running nose, fever and cold. 7 – 8 leaves and 10 rice seeds ground in its leaf juice is heated and taken with honey at bed time for three days in case of cold and cough. *One handful steam cooked leaf mixed with salt is fried with ghee, garlic, curry leaf, cumin and mustard seeds. This mixture is eaten with rice to improve digestive power and also appetite. *Leaf juice, lime juice (1:1) and a little salt are taken twice a day for three days during menses for pain. *Leaf ground with 4 – 5 pepper seeds is eaten early morning for 7 – 8 days in case of diabetes. Leaf juice is recommended with honey (1:2) twice a day for jaundice. Leaf juice mixed with equal quantity of garlic juice is used as nasya* for headache. *4 – 5 drops of juice extracted by grinding tender leaves with pepper seeds is used as nasya* two times a day for foul smell from nose and migraine. *Flower and root decoction with milk is given by adding sugarcandy for worm infestation in children. *Flower juice crushed with asafoetida is used as anjana* for yellow eyes. *Leaf, Ocimum tenuiflorum leaf and very tender coconut are ground with water and applied for penis tip swelling in children. *Four drops of crushed root boiled in coconut oil are poured into opposite
side ear only once for toothache. Leaf decoction is recommended for throat pain. *Leaf juice mixed with lime and jaggery is applied once a day for bubo. *Leaf, those of Vitex negundo and Tagetes erecta are powdered, dissolved in water and applied all over the body. Same extract after dipping a hot iron rod in it is used internally for frog like swelling in throat of cattle. *Root decoction is given in empty stomach to expel intestinal worms in children. Whole plant juice is used internally to expel phlegm. Root decoction is used as a gargoyle by adding salt for toothache. Leaf juice paste with lime is applied externally for mumps and parotitis. *Three drops of whole plant collected before sunrise are poured into nose for chronic sinusitis (repeated for 3 – 6 days).

Etymology: Dronapuspi (trough flower) is due to the characteristic shape of its corolla.

Note: Plant is used in black magic and astrology (Astamangala prashna*). It is used in the preparation of Kaccoradi taila, Lasuna ghrita, Pathadi gutika and Kompancadi gutika (Sivarajan & Balachandran, 1996). Flowers are used for worship.

547. *Leucas biflora* (Vahl.) R. Br. (Plate 93 A)

Syn: Philomis biflora Vahl.; Leucas procumbens Desf.

Family: Lamiaceae

Vernacular Name: Kan: Grahani gida
Tulu: Krani dai

Habit: Herb.

Habitat: Forest undergrowths.

Status: Common. Weed.

Description: Slender procumbent herb with pubescent branches. Leaves simple, ovate or elliptic, pubescent. Flowers in 2 – 4-flowered lax verticils. Calyx tubular-
campanulate; mouth straight, 10-toothed. Corolla 2-lipped, white; upper lip hooded with red spots. Stamens didynamous. Fruit ovoid nutlets.

Uses: *Gruel prepared from whole plant is used for digestive disorders like malabsorption and malnutrition in children, skin diseases and ENT problems.

Etymology: Grahani gida and Krani dai (malnutrition herb) arose from its use in the treatment for malnutrition in children.

Note: Much valued drug for the treatment of malnutrition.

548. *Leucas lavandulifolia* J. E. Smith (Plate 93 B)

Syn: *Leucas indica* (L.) R. Br. ex Vatke.; *Phlomis linifolia* Roth.

Family: Lamiaceae

Vernacular Name: San: Rudrapushpa
- Kan: Hasiruthumbe, Devathumbe, Heddumbe
- Mal: Thumba, Rudrapushpam
- Tulu: Malla thumbe

Habit: Herb.

Habitat: Weed in waste places.

Status: Occasional.


Uses: *Plant decoction is given for indigestion, rheumatism, worms, furuncles and scabies. *Leaf juice is poured to eyes to wake up the unconscious person.

Etymology: Rudrapushpa (Shiva’s *Leucas*), Devathumbe (god’s *Leucas*), Hasiruthumbe (green *Leucas*), Heddumbe and Malla thumbe (larger or greater
Leucas) are due to its use for worship, dark green plant body, and larger habit than that of Leucas aspera.

Note: Flowers are used for worship.

549. *Limnophila indica* (L.) Druce (Plate 93 C)

Syn: Limnophila gratioloides R. Br.

Family: Scrophulariaceae

Vernacular Name: San: Amragandhah  
Kan: Amaragandhi, Mangannari  
Mal: Manganari  
Tulu: Mangannari

Habit: Aquatic herb.

Habitat: Marshy fields.

Status: Frequent. Weed.

Description: Small marsh herb with glandular-pubescent stem. Upper leaves mostly absent or linear-oblong; middle ones whorled, laciniate; submerged leaves pinnately dissected. Flowers solitary in the upper axils. Calyx 5-partite. Corolla pale yellow, 2-lipped. Stamens didynamous. Fruit subglobose capsule.

Uses: *Plant juice or tambuli* is given for gastric disorders.

Etymology: Amragandhah, Amaragandhi, Mangannari and Manganari (smell of mango) arose due to the characteristic aroma of this plant.

Note: Plant is used as an appetizer and digestive agent.

550. *Limnophila repens* (Benth.) Benth (Plate 93 D)

Syn: Stemodia repens Benth.; Limnophila conferta Benth.

Family: Scrophulariaceae

Vernacular Name: San: Amragandhah  
Kan: Amaragandhi, Mangannari
Mal: Manganari  
Tulu: Mangannari

Habit: Diffuse herb.

Habitat: Shallow ponds and marshes.

Status: Common. Weed.


Uses: *Same as that of Limnophila indica.

Etymology: Amragandhah, Amaragandhi, Mangannari and Manganari (smell of mango) arose due to the characteristic aroma of this plant.

Note: Plant is used as an appetizer and digestive agent.

551. **Limonia acidissima** L. (Plate 93 E)

Syn: *Feronia elephantum* Correa

Family: Rutaceae

Vernacular Name: San: Kapitthah, Dadhiphala  
Eng: Elephant apple, Wood apple, Monkey fruit  
Kan: Bilwara, Bela, Belada mara  
Mal: Vilankai, Vilavu  
Tulu: Belo

Habit: Small tree.

Habitat: Foothills of scrub forest.

Status: Rare.

Description: Thorny deciduous tree with black, deeply fissured bark. Leaves 3 – 9-foliolate; leaflets oblong to obovate; petiole and rachis narrowly winged. Flowers
polygamous, greenish-yellow, in lateral or terminal panicles. Sepals 5. Petals 5.
Stamens 10 – 12. Fruit globose, woody berry.

Uses: *Fruit pulp juice along with jaggery is given for biliousness, gastric ulcers, 
gastritis and dysentery. *Bark decoction is recommended for biliousness, diarrhoea, 
dysentery, vomiting, cough and piles. *Gum mixed with honey is used for 
odigestion and dysentery. *Leaf decoction is used for gastrointestinal disorders. 
Fruit decoction is a blood purifier. *Fruit juice is consumed for biliousness and as a 
thirst quencher.

Etymology: Dadhiphala (curd fruit) is due to its characteristic fruit pulp.

Note: Much used for digestive tract disorders. Fruit is used for worship.

552. *Lindernia caespitosa* (Blume) Panigrahi (Plate 93 F)

Syn: *Lindernia pusilla* (Willd.) Boldingh.; *Vandellia scabra* Benth.

Family: Scrophulariaceae

Vernacular Name: San: Kakaphala
               Kan: Kakaphala
               Tulu: Pedammela

Habit: Diffuse herb.

Habitat: Moist places.

Status: Frequent.

Description: Diffuse, hirsute herb. Leaves simple, ovate-cordate. Flowers solitary, 
axillary or in pairs; pedicels glandular-pubescent. Calyx 5-partite; lobes lanceolate, 
glandular-pilose. Corolla 2-lipped, white with brown upper lip. Stamens 
didynamous. Fruit globose capsule.

Uses: *Root decoction is given for phlegm in small children. *Root of this plant is 
tied to the waist of children by the *Aati kalanja* in the month of *Aati* as a 
preventive medicine for rickets. *Whole plant is heated in coconut oil and the
resulting oil is applied over the head for malnutrition in children. *Extract of two plants is given to stop loose motion in small children.

Etymology: Kakaphala (crow fruit) arose as its fruits are eaten by the crows and brown upper lip of corolla.

Note: Much valued drug for children’s diseases.

553. *Lindernia crustacea* (L.) F. v. Muell *(Plate 94 A)*

Syn: *Vandellia crustacea* (L.) Benth.

Family: Scrophulariaceae

Vernacular Name: Kan: Vakapushpi

Tulu: Vakapushpo

Habit: Diffuse herb.

Habitat: Wet places.

Status: Common. Weed.

Description: Glabrous, diffuse herb. Leaves simple, ovate or lanceolate. Flowers axillary and solitary or subracemose at the ends of the branches. Calyx ribbed, shallowly 5-lobed. Corolla 2-lipped, purplish-blue. Stamens didynamous. Fruit oblong-ovoid capsule.

Uses: *Whole plant juice is given internally to cause vomiting during the treatment for jaundice, digestive problems and other liver disorders.*

Etymology: Vakapushpi and Vakapushpo (vomiting flower) arose as this plant juice is given to cause vomiting.

Note: Much valued drug for liver disorders.

554. *Litsea coriacea* (Heyne ex Meisner) Hook. f. *(Plate 94 B)*

Syn: *Tetranthera coriacea* Heyne ex Meisner

Family: Lauraceae
Vernacular Name: Kan: Muja, Erchikootti  
    Mal: Pannithali, Vettithali  
    Tulu: Erchikootti

Habit: Medium-sized tree.

Habitat: Semi evergreen forests.

Status: Common.


Uses: *Bark paste and oil prepared from bark juice is used to heal muscle fractures (torned muscles), wounds and bruises. *Bark paste with egg white is used for setting the fractured bone. *Bark paste with barks of *Litsea glutinosa and *Alseodaphne semecarpifolia is used for bone setting. *Dried bark cooked with rice is given to cattle to strengthen their body. *Dried bark or leaf powder mixed with *Allophylus cobbe leaf powder and egg white is applied for bone fracture.

Etymology: Erchikootti (muscle binder) arose as the leaves are much used to heal muscle torsion.

Note: When the leaf is cut it gets cut in zigzag manner. Much valued drug for traditional bone setters.

555. *Litsea ghatica* Saldanha (Plate 94 C)

Family: Lauraceae

Vernacular Name: Kan: Elukootti  
    Mal: Ellukootti  
    Tulu: Ellukootti
Habit: Medium-sized tree.

Habitat: Evergreen forests and sacred groves.

Status: Occasional.

Description: Medium-sized tree with densely tomentose branchlets. Leaves simple, obovate or oblong, glabrous above, white tomentose beneath. Flowers unisexual, in small racemes from the leaf scars; bracts tomentose. Perianth silky, cupular. Stamens 12. Fruit berry.

Uses: *Bark paste is applied for healing bone fractures. *Bark powder paste with coconut milk is used in setting the broken bones. *Paste prepared from its leaf or bark, which of *Litsea coriacea*, leaf of *Eupatorium triplinerve* and egg white is applied to heal bone fracture. *Root ground with lime juice is taken at bedtime for stomachache due to worm infestation. *Root extract with lime juice is given twice a day for dysentery. *Decoction prepared from its root and *Ceiba pentandra* is given with milk for cold and fever.

Etymology: Elukootti (bone binder) is due to its use for treating bone fracture.

Note: Much used by the traditional bone setters.

556. *Litsea glutinosa* (Lour.) Robins (Plate 94 D)


Family: Lauraceae

Vernacular Name: San: Medasaka
    Kan: Lakki, Elukootti
    Mal: Ellukootti
    Tulu: Ellukootti

Habit: Small tree.

Habitat: Semi evergreen forests and sacred groves.
Status: Occasional.

Description: Small tree with tomentose branchlets. Leaves simple, elliptic or ovate-lanceolate, grey-pubescent beneath. Flowers unisexual, in pedunculate tomentose umbels or corymbs. Perianth-tube silky, funnel-shaped. Stamens up to 20; filaments hairy. Fruit globose berry, purple when ripe.

Uses: *Same as Litsea ghatica.

Etymology: Elukootti (bone binder) is due to its use for treating bone fracture.

Note: Much used by the traditional bone setters. Actinodaphnine, β-sitosterol, kaempferol, pelargonidin, naringerin, ocimene, α-pinene, d-limonene, terpenolene, α-terpinene, carvone, caryophyllene, β-amyrin, α-thujone, linalool, boldine, laurotetraine, η-methylaurotetane, sebiferine and litseferine are the major components. It is used in the preparation of Asthisandhanaka lepa, Citrakadi taila and Cintamani rasa (Kapoor, 1990; Sharma et al., 1998).

557. Lobelia nicotianifolia Roth ex Roem. & Schult var. nicotianifolia (Plate 94 E)

Family: Lobeliaceae

Vernacular Name: San: Dhamana, Mridupatra, Vanya
          Eng: Wild tobacco
          Kan: Kaadu hogesoppu, Heddumbe
          Mal: Kattu pukayila
          Tulu: Kattupugare

Habit: Shrub.

Habitat: Along evergreen forest borders in upper hills.

Status: Common.

Description: Erect shrub with hollow stem. Leaves simple, lanceate, margin glandular serrulate, herbaceous. Flowers in terminal dense racemes; bracts

Uses: *Plant paste with garlic or plant powder paste is applied for lymph node enlargement, tonsillitis and breast swelling. *Plant juice is a wound healer and is also used for asthma. Leaf paste is applied for bruises and ulcers. If plant juice comes in contact with fresh cut, it can cause vomiting. *Leaf and *Leucas aspera* (1:4) paste with water is applied for tonsillitis (gives relief within 2 hours).

Etymology: Dhamana (taming), Mridupatra (soft leaved), Kaadu hogesoppu, Kattu pukayila, Kattupugare (wild tobacco) and Hedumbe (greater *Leucas*) are due to its strong nature, soft leaves resembling that of tobacco, wild habit and flowers sharing resemblance with that of *Leucas*.

Note: When this plant blooms wasps flee away from that area. Lobeline and norlobelanine are active constituents with antiseptic properties (Kapoor, 1990). *If honey was prepared from this plant nectar, then its intake causes headache. *Leaf or plant paste is applied to kill or expel the leeches.

**558. Loeseneriella arnottiana** (Wight.) A. C. Smith *(Plate 94 F)*

Syn: *Hippocratea arnottiana* Wight

Family: Hippocrateaceae

Vernacular Name: Kan: Maaderi balli, Madri balli  
Mal: Puramkody  
Tulu: Maaderi ballu

Habit: Climbing shrub.

Habitat: Semi evergreen forests.

Status: Common.

Description: Climbing shrub. Leaves simple, elliptic-oblong, glabrous. Flowers greenish, in axillary and terminal panicled cymes. Calyx minute, 5-lobed. Petals 5,
greenish yellow, orbicular, with a narrow claw. Disc fleshy, prominent. Stamens 5, recurved. Fruit 3 divergent flattened follicles.

Uses: *Root bark decoction with pepper seeds is used for constipation in children. Root paste is applied over navel region of children for indigestion, gas trouble and constipation. *Oil prepared from its root is applied for lice. *Young shoot tip tambuli* is given as a digestive tonic. Plant decoction is used as a blood purifier and for syphilis. *Oil prepared from plant juice is applied for ulcers on penis. *The water oozing out from cut stem is poured into eye for eye pain and dust in eyes. *Stem or leaf decoction is given for acidity. Whole plant decoction is used for blood disorders and urinary disorders. Root decoction is used both internally and also as wash for scabies. *Root paste is applied for septic wounds and ulcers. Leaf paste is applied for rheumatism, general pain and leg pain. *Tender shoot tip is chewed to get relief from mouth ulcers. *Young shoot tip and *Ixora coccinea* flower are chewed and juice swallowed for mouth ulcers. *Shoot tip, *Memecylon randerianum* and *triphala* decoction is used for jaundice and giddiness due to biliousness.

Note: It is used as a substitute for *Salacia chinensis*. Stem is used in basketry. Tender shoot tip is edible.

559. *Lophopetalum wightianum* Arn. (Plate 95 A)

Family: Celastraceae

Vernacular Name: Kan: Balpaale, Bilihaale, Bilihalsu
Mal: Vembala, Venkadavam, Venkkotta
Tulu: Bolpaale

Habit: Large tree.

Habitat: Semi evergreen forests.

Status: Frequent.

Description: Large evergreen tree. Leaves simple, broadly elliptic. Flowers in large axillary or terminal cymes. Calyx 5-lobed. Petals 5, yellow with red, lamellate inside. Stamens 5. Fruit long, triangular capsule, with broadly winged thin seeds.
Uses: *Bark decoction has cooling effect. It is used for rheumatism, skin diseases and biliousness.

Etymology: Bilihaale and Bolpaale (white *Alstonia*) are due to its whitish bark in which it shares resemblance with *Alstonia scholaris*.

Note: It is a soft-wooded tree.

**560. *Ludwigia hyssopifolia* (G. Don) Exell (Plate 95 B)**

Syn: *Jussiaea hyssopifolia* G. Don.; *Fissendocarpa linifolia* (Vahl.) Bennet.

Family: Onagraceae

Vernacular Name: San: Bhulavangah  
Eng: False primrose, Kamole, Swamp primrose  
Kan: Neerudantu, Neerulavanga  
Mal: Neergrampu, Kattu grampu, Kattu karayambu  
Tulu: Neerlavango

Habit: Erect herb.

Habitat: Marshy fields, banks of fresh water ponds and streams.

Status: Common. Weed.


Uses: Whole plant juice is recommended for jaundice, liver, bile and digestive tract disorders.

Etymology: Bhulavangah (ground clove), Neerudantu (water herb), Neerulavanga, Neergrampu, Neerlavango (water clove), Kattu grampu and Kattu karayambu (wild clove) are due the similarity between its fruits and cloves, aquatic habit and wild nature.
Note: It is one of the major ingredients of *Sukhaprasavada ghrta* and is widely used for ulcers and skin diseases (Jain *et al.*, 1991; Sivarajan & Balachandran, 1996).

**561. Ludwigia octovalvis** (Jacq.) Raven *ssp. sessiliflora* (Michx) Raven *(Plate 95 C)*

**Syn:** *Jussiaea suffruticosa* L.

**Family:** Onagraceae

**Vernacular Name:** San: Bhulavangah
- Eng: False primrose, Kamole, Swamp primrose
- Kan: Neerudantu, Neerulavanga
- Mal: Neergrampu, Kattu grampu, Kattu karayambu
- Tulu: Neerlavango

**Habit:** Subshrub.

**Habitat:** Marshy fields, banks of fresh water ponds and streams.

**Status:** Common. Weed.


**Uses:** Whole plant decoction is recommended internally for dyspepsia, flatulence, dropsy, cough, asthma, bronchitis and nervous disorders.

**Etymology:** Bhulavangah (ground clove), Neerudantu (water herb), Neerulavanga, Neergrampu, Neerlavango (water clove), Kattu grampu and Kattu karayambu (wild clove) are due the similarity between its fruits and cloves, aquatic habit and wild nature.

Note: It is one of the major ingredients of *Sukhaprasavada ghrta* and is widely used for dysentery (Ambasta, 1986; Sivarajan & Balachandran, 1996).
962. *Luffa acutangula* (L.) Roxb. var. *acutangula* (Plate 95 D)

Family: Cucurbitaceae

Vernacular Name: San: Kosataki, Rajakosataki
   Eng: Angled Luffa, Ribbed gourd, Ridged gourd
   Kan: Heerekaayi, Daarale
   Mal: Peechinga
   Tulu: Daarepeere

Habit: Climbing herb.

Habitat: Cultivated.

Status: Common


Uses:
* Seed decoction is given for inducing vomiting and purgation. * Root decoction is recommended for diarrhoea and typhoid fever. Fruit extract relieves biliousness. * Fried seed powder paste with butter is applied for cancerous ulcers. * Seed paste with ghee or butter is applied for piles. * Mature seed paste with its leaf juice is applied for septic wounds and ulcers. * Dried fruit powder mixed with lime juice is applied at night for bleeding piles. Leaf decoction is recommended for skin diseases, spleen problems, swellings, jaundice, rhinitis and digestive disorders. It is a digestive and laxative. Fruit decoction is used for stomach, liver, spleen disorders, constipation and urine block. * Seed and leaf paste is applied for breast cyst. * Root paste or root powder, turmeric powder and rock salt paste with cow urine is applied for piles. * Plant powder ground with cow dung extract is applied for bleeding piles. * Whole plant paste is applied for poisonous bites.
Etymology: Rajakosataki (king Luffa), Heerekaayi (sucking fruit) and Daarepeere (ribbed Momordica) are due to its fruit morphology. Its fruits are the largest among the Luffa, resembles Momordica fruits by the presence of ridges and fruit pulp is spongy.

Note: It has cucurbitacins B, D, E, G, H, oleaeric acid and saponins as active components (Kapoor, 1990). It is used in the preparation of Madanadi gana and Abhaya lavana (Sharma et al., 1998; Sivarajan & Balachandran, 1996). Fruits are used as vegetable.

963. Luffa acutangula (L.) Roxb. var. amara (Roxb.) Clarke (Plate 95 E)

Family: Cucurbitaceae

Vernacular Name: San: Ghantali, Kosataki, Sutikta
Eng: Wild Luffa, Wild ribbed gourd
Kan: Kahiheere, Naagadaali, Kaaduheere
Mal: Athanga, Kattupeechil, Kaypanpadavalam
Tulu: Kattupeere, Kaippepeere

Habit: Climbing herb.

Habitat: Along hedges.

Status: Occasional.


Uses: *Fruit or seed decoction is given to remove poison through vomiting. *Seed powder is given in large dose to cause vomiting, while in small dose for stomachache and gastritis. *Fruit juice is applied over cheeks and head for headache and running nose. Fruit or seed decoction is given as an emetic and purgative. *Fried
fruit extract is applied over forehead for headache. *Leaf juice is applied to expel worms from wounds or ulcers.

Etymology: Even though the fruits are highly bitter, it forms very important drug. Hence it got the name Sutikta (good bitter). Kahiheere (bitter ribbed gourd), Kaippepeere (bitter Momordica), Kaaduheere, Kattupeechil (wild ribbed gourd) and Kattupeere (wild Momordica) are due to its bitter taste, wild habit and resemblance with ribbed gourd and Momordica fruits.

Note: It has cucurbitacins B, D, E, G, H, oleanolic acid and saponins as active components (Kapoor, 1990). It is used in the preparation of Madanadi gana and Abhaya lavana (Sharma et al., 1998; Sivarajan & Balachandran, 1996).

964. *Luffa cylindrica* (L.) Roem. (Plate 95 F)

Syn: *Momordica cylindrica* L.; *Luffa aegyptiaca* Mill.

Family: Cucurbitaceae

Vernacular Name: San: Aibhi, Brhat kosataki, Maha kosataki

Eng: Sponge gourd, Vegetable sponge

Kan: Arippe daarakale, Thuppaheere, Boluheere

Mal: Peechinga, Perumpeeram

Tulu: Arippepeere, Bogoipeere

Habit: Large climber.

Habitat: Cultivated.

Status: Frequent.

Uses: *Leaf or whole plant paste is applied for skin diseases. *Daily consumption of this fruit preparation can increase biliousness.

Etymology: Brhat kosataki (larger ribbed gourd), Maha kosataki (greater ribbed gourd), Arippe daarale (spongy ribbed gourd) and Thuppaheere (ghee ribbed gourd) are due to its soft texture, sponge like dried fibrous interior of fruit, appealing taste and close resemblance with ribbed gourd.

Note: Tender fruits are used as vegetable. Amarin, gypsogenin, gypsogenin acetate, aegyptinin A & B, choline and phytin are the active components with emetic, cathartic and diuretic actions (Kapoor, 1990).

965. Lycopersicon esculentum Mill. (Plate 96 A)

Syn: Lycopersicon lycopersicum (L.) Karsten.; Solanum lycopersicum L.

Family: Solanaceae

Vernacular Name: Eng: Tomato, Love apple
   Kan: Goodehannu, Kadagolu mandekaayi, Tomato
   Mal: Thakkali
   Tulu: Tomato

Habit: Fleshy herb.

Habitat: Cultivated.

Status: Occasional. Exotic.

Description: Fleshy herb with hairy-pubescent, strong-smelling stem. Leaves pinnate with small leaflets interposed; main leaflets 5 – 9, ovate to oblong, irregularly toothed. Flowers 3 – 7 in lateral cymes, nodding. Calyx 5-lobed. Corolla yellow; lobes 5. Stamens 5. Fruit depressed globose pulpy berry, red when ripe.

Uses: Fruit juice is given internally for debility, bronchitis, digestive tract, liver and bile disorders.
Etymology: Kadagolu mandekaayi (churning stick fruit) arose as the fruit resembles the churning stick.

Note: Fruits are much used as vegetable.

966. *Lygodium flexuosum* (L.) Sw. *(Plate 96 B)*

Family: Lygodiaceae

Vernacular Name: Kan: Poliballi  
Mal: Polivalli  
Tulu: Poliballu

Habit: Climbing fern.

Habitat: Forest undergrowths and plains.

Status: Common.

Description: Climbing fern with twining rachis. Pinnae digitately lobed; lamina tripartite, dimorphic, bearing fertile and sterile parts; veins forked, free. Sporangia subtended by an indusium like outgrowth, margined in biseriate spike.

Uses: *Root decoction is given with honey for bronchitis and bronchial asthma.  *Decoction prepared from about 40 gm root is given after mixing with honey in small dose for asthma.  *It is strong and has a property to decrease the quantity of urine.  *Plant is tied around the body for urticaria and rashes.  *Whole plant decoction is used internally, while paste externally for joint pain.  Whole plant extract or paste is applied for skin diseases.  *Root crushed with mustard seeds and boiled in gingly or coconut or cotton seed oil is applied for furuncles on one side of the body.  *Leaf ground with sugar in milk is applied to the centre of head to arrest bleeding.  Plant paste is applied for wounds, boils, swellings, itches, septic swellings and rheumatism.  *Root decoction is recommended for mental disorders and to expel intestinal worms.  *Root boiled with coconut or gingly oil is applied over depression found on face of young children.
Etymology: Poliballi, Polivalli and Poliballu (climber used in Poli*) are due to its usage in Poli*, a traditional ceremony related with paddy harvest.

Note: Rope made from its stem is tied around the house as a sacred thread during house warming ceremony. It is also used in house filling. It is known for its expectorant activity (Jain et al., 1991).

567. *Macaranga peltata* (Roxb.) Muell.-Arg. (Plate 96 C)

Syn: *Mappa peltata* (Roxb.) Wight.; *Macaranga roxburghii* Wight

Family: Euphorbiaceae

Vernacular Name: Eng: Kenda
  Kan: Chandakala, Uppalige
  Mal: Uppila, Vatta, Vattayila
  Tulu: Uppalige

Habit: Large tree.

Habitat: Disturbed forests.

Status: Common.

Description: Large resinous tree. Leaves simple, orbicular, peltate, brown-pubescent when young, red-glandular beneath. Flowers unisexual, in terminal and axillary panicles; bracts broad and close, concealing the flowers. Calyx in male 2 – 3-lobed; in female lobes absent. Petals absent. Stamens 3. Fruit globose capsule, densely covered with waxy resinous glands.

Uses: *Resinous exudate of stem is applied for healing furuncles. *Same is applied on head for malnutrition, swellings and boils. *Bark extract is used as a wound healer. Resin is applied externally for rheumatism, gonorrhoea, to heal chronic wounds and syphilis. *Resin decoction helps to decrease body temperature. *Root is tied to the stomach of cattle to expel the worms.
Etymology: Uppalige (one which used by the salt-maker) and Vattayila (orbicular leaf) are due to, its traditional use to wrap salt by the salt-maker community and orbicular leaves.

Note: Leaf is used as a cover for salt to prevent its melting process. It is a soft wooded tree.

568. *Macrotyloma uniflorum* (Lam.) Verdc. *(Plate 96 D)*

Syn: *Dolichos biflorus* L.

Family: Papilionaceae

Vernacular Name: San: Kulatthah
   Eng: Horse gram
   Kan: Huruli
   Mal: Muthira
   Tulu: Kudu

Habit: Twining herb.

Habitat: Cultivated.

Status: Common.

Description: Twining herb with pilose stem. Leaves 3-foliolate; leaflets ovate-rhomboid, obovate or elliptic, membranous, pilose. Flowers 1 – 3 together in leaf-axils. Calyx 5-lobed; lobes setaceous. Corolla greenish yellow; standard with 2 linear appendages. Stamens 9 + 1. Fruit falcate or straight, 4 – 7-seeded, densely pubescent pod.

Uses: *Rasam* prepared using the seeds are given during viral infections. *Seeds are boiled in oil and resulting oil is applied for rheumatoid arthritis. Seed decoction is given for septic infections. Seed decoction mixed with gingelly oil is applied for rheumatism. *Seed rasam* increases immunity. *Seeds boiled in coconut oil are applied to expel ticks and as pain reliever in cattle. Seeds fried with ghee are pressed over the body for rheumatoid arthritis. Seed is a nervine tonic. *Black variety or old
seed rasam* is used for diabetes. *Fried seeds cooked with young banana are eaten inorder to correct the excretion. Seeds are aphrodisiac and their rasam* is also recommended for piles. *Paste prepared by grinding seeds washed in salt and hot water mixed with pepper and Vernonia anthelmintica seeds is applied for lymph node swelling and tumours. *Seeds and salt boiled in water are tied in a cloth, dipped in this extract and pressed over the knee for knee pain and swelling. Fried seed powder is used for rheumatoid arthritis, stomach swelling and kidney stones. *Paste of fried seeds soaked in water is given for one month for conception in cattle. *Seeds, pepper seeds, Tephrosia purpurea seeds, turmeric and rock salt (in equal quantity) are ground in human urine and applied for leprosy. *Rasam* prepared from its seeds is useful for rheumatism and blood purification.

Note: Seeds are the rich source of easily absorbable protein. Seeds are used as nutritious food for humans and fodder for cattle.

569. Madhuca longifolia (Koenig) Macbr. var. latifolia (Roxb.) A. Chew. (Plate 96 E)

Syn: Bassia latifolia Roxb.; Madhuca indica J.; Madhuca latifolia (Roxb.) J. F. Macbr.

Family: Sapotaceae

Vernacular Name: San: Gudapushpa, Madhuca
Eng: Mahua
Kan: Hippe, Ippe, Doddippe
Mal: Ilupa, Irippa, Njannal
Tulu: Ippe, Irpe

Habit: Large tree.

Habitat: Deciduous forests.

Status: Frequent.

Uses: Bark and heart wood decoction is tonic, blood purifier and is given for jaundice. *The residue obtained after the extraction of oil is used to brush the body as a preventive of many skin diseases. Bark decoction is used for rheumatism. *Liquor extracted from the bark or flowers is used for stomachache in horses. *Its liquor is a tonic and is recommended for weakness. Heart wood decoction is consumed for rheumatism, arthritis and biliousness. *Seed oil is applied for skin diseases. Flower extract is used as a tonic and given for biliousness. *Bark decoction is used as tonic for biliousness, skin diseases and digestive tract disorders.

Etymology: Madhuca (sweet) and Doddippe (larger Madhuca) are due to its large habit and sweet scented flowers.

Note: Flower is nutritive and is used to prepare good liquor. Flower is used in vine preparation. It is used in the preparation of Madhukasava, Draksadi kvatha, Draksadi churna, Eladi modaka, Kutajarista, Kanakasava and Parthadyarista (Dey, 1994; Sharma et al., 1998).

570. Madhuca neriifolia (Moon) H. J. Lam. (Plate 96 F)

Syn: Bassia neriifolia Moon.; Bassia malabarica Bedd.

Family: Sapotaceae

Vernacular Name: San: Madhuca, Jalamadhuca
          Eng: Mahua, Mahwa
          Kan: Naanilu, Sannippe
          Mal: Attu-ilippa, Iluppa, Kattirippa, Neeririppa
          Tulu: Naanilu

Habit: Moderate-sized tree.
Habitat: Along banks of rivers and streams.

Status: Common.


Uses: *Tender leaf tambuli* is used as a cooling agent and also to regulate the gastrointestinal tract. *Fruit pulp decoction is used to wash wounds, bruises and rheumatic joints. *Liquor extracted from the flower is used for weakness. Seed oil is used for skin diseases. *Bark decoction is recommended for rheumatism while its paste for dog bites. Bark decoction is used externally to wash ulcers and is also used internally. *Oil extracted from the seeds is applied for rheumatism and arthritis. Bark decoction is used for biliousness, skin diseases and digestive disorders. It is a tonic. *Bark decoction is consumed for fibroids and all types of discharges in ladies. *Roties* prepared by grinding tender shoot tip with raw rice are eaten at morning for over menstrual bleeding. *Seed oil is applied over the head as a cooling agent. *Fruit paste is applied externally for wounds caused by fish vertebrae.

Etymology: Madhuca (sweet), Jalamadhuca, Neeririppa (water Madhuca), Sannippe (smaller Madhuca) and Kattirippa (wild Madhuca) are due to its sweet scented flowers, smaller habit and riparian habitat.

Note: Palmitin, linolein, β-sitosterol, quercetin, dihydroquercetin, myricetin, lupeol, β-amyrin and α-spinasterol are the major components (Kapoor, 1990). Tender shoot is used as vegetable.

**571. *Maesa indica* (Roxb.) DC. (Plate 97 A)**

Syn: *Maesa dubia* (Wall.) DC.; *Maesa perrottetiana* A. DC.

Family: Myrsinaceae

Vernacular Name: Kan: Thanipala, Mandase
Mal: Kattuvizhal, Vannathi, Vannanmaram  
Tulu: Thanipale

Habit: Shrub.

Habitat: Along forest clearings.

Status: Common.

Description: Shrub. Leaves simple, ovate to elliptic-lanceate, dentate-serrate. Flowers small, in axillary or terminal panicles. Calyx 5-lobed. Corolla white; lobes 5. Stamens 5. Fruit globose berry, white when ripe.

Uses: *Fruit decoction is recommended internally for digestive disorders and intestinal worms.

Etymology: Kattuvizhal (wild Embelia ribes) is due to the similarity of its fruits with that of Embelia ribes.

Note: Ripe fruits are edible.

572. Mallotus philippensis (Lam.) Muell.-Arg. var. philippensis (Plate 97 B)

Syn: Croton philippensis Lam.

Family: Euphorbiaceae

Vernacular Name: San: Kampillakah, Kapila, Raktaphala  
Eng: Monkey face tree, Kamala tree  
Kan: Kunkumada mara  
Mal: Kapila, Kurangumanjal, Sindooram  
Tulu: Kunkumatha maro

Habit: Small tree.

Habitat: Degraded forests.

Status: Common.
Description: Small tree with pubescent branchlets. Leaves simple, ovate or ovate-lanceolate, fulvous-tomentose and red-glandular beneath. Flowers unisexual, in axillary racemes; male clustered; female solitary. Perianth 3 – 5-lobed. Stamens numerous. Fruit 3-lobed, globose capsule, covered with red powder.

Uses: *Oil prepared from leaf juice is used for cold. *The red or saffron coloured powder obtained from the fruits is given to expel tape worms. *Leaf oil is applied on head for running nose. *Young fruit ground and mixed with honey is applied for insect bites. Bark decoction is given for rheumatism. Bark oil is used for ENT problems.

Etymology: Kapila (tawny), Raktaphala (red fruit), Kunkumada mara, Kunkumatha maro (saffron tree), Kurangumanjal (monkey turmeric) and Sindooram (saffron) are due to its characteristic fruit and red resinous powder yielding a valuable dye.

Note: It is used in the preparation of Jivantyadi yamaka, Vindu ghrta, Abhram (101), Dhanvantara ghrta, Misraka sneha (Sharma et al., 1998; Sivarajan & Balachandran, 1996). It has rottlerin, acetyl aleuritolic acid, α-amyrin, β-sitosterol, iso-allorottlerin, kamalin I & ii, lupeol and bergenin as active constituents with cathartic and anthelmintic properties (Dey, 1994; Kapoor, 1990).

573. Mammea suriga (Buch.-Ham. ex Roxb.) Kosterm. (Plate 97 C)

Syn: Mammea longifolia (Wight) Planch & Triana.; Ochrocarpus longifolius (Wight) Anders

Family: Clusiaceae

Vernacular Name: San: Punnaga
    Eng: Indian laurel
    Kan: Suragi
    Mal: Punna, Suran-punna
    Tulu: Surgi

Habit: Large tree.
Habitat: Evergreen and semi evergreen forests.

Status: Occasional.


Uses: *Bark decoction is recommended for toothache, ENT problems and mouth ulcers. *Bark extract or gruel is highly abortive and given to induce abortion. *Tambuli* prepared from flowers is used as a health tonic for women after delivery. Bark paste is applied for wounds and ulcers. *Male flower ground in hot water is given for three days from 3rd day of delivery to induce sterility.

Etymology: Suragi (one which related with gods) arose as its fragrant flowers (especially male flowers) are used for worship.

Note: Sacred tree. Wood is used as timber. Flowers are much valued for garland making.

**574. Mangifera indica L. (Plate 97 D)**

Family: Anacardiaceae

Vernacular Name: San: Amra, Amrah, Chuta

  Eng: Mango, Mango tree

  Kan: Mavu, Mavina mara

  Mal: Mavu

  Tulu: Kukku, Kukkutha maro

Habit: Large tree.

Habitat: Semi evergreen forests and roadsides. It is also widely cultivated.

Status: Common.
Description: Medium to large tree. Leaves simple, oblong-lanceolate, glabrous. Flowers small, polygamous, in terminal panicles. Sepals 5, ovate. Petals 5, oblong, yellowish, tinged with purple. Stamens 4 – 5, only one fertile. Fruit ovoid to ellipsoid fleshy drupe.

Uses: *Bark cooked with rice is given for gastritis. *Seed kernel ground in butter milk is applied on head for dandruff. *Preserved acrid juice of fruit stalk is used to stop bleeding from cuts and wounds. *Mature yellow leaf decoction is given along with honey for sound fall. Leaf and bark decoction is given for liver problems, sore throat and sound fall. Tender shoot tip extract is recommended for sound fall and as a blood purifier. *Bark decoction is a blood purifier, while its extract in butter milk is given for gastrointestinal disorders. *Gum from stem mixed with lime juice is applied for septic wounds and ulcers. Seed pulp is eaten for piles. *Bark juice mixed with egg white is used for dysentery. Leaf decoction is recommended for biliousness. *Dendrophthoe falcata growing on this tree is ground in milk and given for over urination. *Tambuli* prepared from seed pulp is used for blood dysentery and upset stomach. *Fried and dried seed kernel ground with butter milk is consumed for indigestion. *Petiole of very sour mango burnt with ghee lamp fire is used to burn the warts and pimples. *Petiole decoction with cumin seeds and turmeric is given for sound fall. *Paste of very sour mango leaf with coconut gratings is applied over forehead for toothache. Bark decoction is recommended for acidity, allergy and intestinal worms. *Wild variety bark decoction is beneficial for some patients suffering from diabetes. *Leaf coated with rice husk ash is used to brush teeth for removing bad breath and foul smell of gums. *Burnt seed and cumin seeds ground in butter milk are given for stomachache and diarrhoea. *Wild variety bark paste is applied externally and its decoction is given internally for gonorrhoea. *Bark extract in goat’s milk is used for diarrhoea, also applied externally for scabies and penis ulcers in children. *Gum released from stem due to insect attack is dissolved in water and given for backache. *Tambuli* prepared from shoot tip is useful for tridoshas* and dysentery (used in winter). *6 – 8 leaf petioles, cumin and coriander seeds decoction is given with honey and leaf decoction is used as gargle for sound fall. *Preserved fruit juice cake is given with rice for breathing problems.
and lung disorders in children. Latex is applied for skin diseases. *Leaf and seed coat powder are used as tooth powder for mouth and teeth problems. *Leaf, lime, cumin and jaggery paste is applied for eczema. Leaf ash is applied for ulcers, wounds and cuts. *Green bark ground in milk is given for a week in case of azoosperma. *Fruit rind fried in ghee is eaten for over menstrual bleeding, vision problem and to increase hearing power. Fruit is recommended as cardiac and nerve tonic for weakness and to increase semen. *Young fruit with salt and honey is recommended for diarrhoea, piles and indigestion. *Young fruit cooked with tamarind leaves is eaten for jaundice and blood dysentery. *Sour mango leaf petiole, garlic, Trachyspermum ammi seed, pepper and coconut leaflet vein decoction is given to expel intestinal worms. *Bark juice mixed with lime water (4:1) is given for seven days in case of gonorrhoea. *Sour mango bark extract with goat’s milk is given at morning for leucorrhoea. *Seed kernel and chebulic myrobalan (in equal quantity) ground and applied repeatedly for venereal diseases. *Sour variety bark extract in goat milk is consumed and bark paste with butter milk is applied externally for septic ulcers. *Tambuli* prepared from dried and preserved mango juice is given for constipation in children.

Etymology: Mavu (yellowish green) is due to the characteristic colour of the ripe fruits.

Note: Flower extract is insecticidal. Fruits are delicious. Wood is used as timber. Pyrogalloyl inns, protocatechuic acid, catechin, mangiferin, α-amino butyric acid, kinic acid and shikimic acid are the active constituents. Pusyanuga churna, Brhat gangadhara churna, Asokarista, Nyagrodhadi churna, Nyagrodhadi kvatha, Candanasava, Grahanimihira taila, Mutra samgrahaniya kashaya and Mutra samgrahaniya churna are the important formulations (Sharma et al., 1998).

575. Manihot esculenta Crantz. (Plate 97 E)

Syn: Manihot utilisima Phol.

Family: Euphorbiaceae

Vernacular Name: San: Darukandah, Kalpakandah

693
Eng: Tapioca, Cassava  
Kan: Maragenasu  
Mal: Maracheeni, Kappa, Poolakizhangu  
Tulu: Marakirengu

Habit: Shrub.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Herbaceous shrub with elongate tuberous roots. Leaves deeply 3 – 13-lobed; lobes lanceolate to obovate, glaucous beneath. Flowers monoecious, in terminal or axillary panicles, pinkish outside, cream inside. Perianth 5-lobed, petaloid. Stamens 10. Fruit globose, 6-angled or -winged capsule.

Uses: Tubers are highly nutritious and useful for ulcers. Over use may result in constipation. *Root bark paste is applied for septic ulcers.

Etymology: Darukandah, Maragenasu, Marakirengu (wood tuber) and Kalpakandah (desired tuber) are due to its woody tuberous roots with diverse uses.

Note: Raw tuber is toxic. Cooked tubers are edible.

*Manilkara hexandra* (Roxb.) Dubard (Plate 97 F)

Syn: *Mimusops hexandra* Roxb.

Family: Sapotaceae

Vernacular Name: San: Rajadana, Rajadanah  
Eng: Palu  
Kan: Kiranimara  
Mal: Mullupala, Khirni  
Tulu: Kiranimaro

Habit: Medium-sized tree.
Habitat: Cultivated.

Status: Occasional.

Description: Medium-sized tree. Leaves simple, broadly ovate, glabrous. Flowers pale-yellow, axillary, fascicled on slender peduncles. Sepals 6, ovate, pubescent outside. Corolla-lobes 6, elliptic, divided to the base into 3 segments. Stamens 6, alternating with fimbriate staminodes. Fruit ellipsoid berry.

Uses: *Bark decoction is used for fever. *Oil extracted from the seeds is applied as wound healer for cuts and ulcers.

Etymology: Mullupala (spinous lactiferous tree) arose due to the presence of milky latex and spines at the base of the tree.

Note: *Gruel prepared from the leaves is used as fodder. Ripe fruits are edible. It is used as stock for sapota grafts and if the scion dries out then it grows.

577. *Manilkara zapota* (L.) P. Royen (Plate 98 A)

Syn: *Achras zapota* L.; *Achras sapota* L.

Family: Sapotaceae

Vernacular Name: Eng: Naseberry, Sapote
               Kan: Chikku, Sapota
               Mal: Chiku, Sappota
               Tulu: Chikku

Habit: Small tree.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Small evergreen tree. Leaves simple, elliptic or oblong-elliptic, shining. Flowers solitary or paired. Calyx-lobes 6. Corolla greenish white, urceolate; lobes 6. Stamens 6, alternating with petaloid staminodes. Fruit ovoid or ellipsoid berry, with rusty-brown skin.
Uses: *Unripe fruit is ground and given for blood dysentery.

Note: Cultivated for its edible fruits.

578. Maranta arundinacea L. (Plate 98 B)

Family: Marantaceae
Vernacular Name: San: Tavaksiri, Tugaksiri
Eng: Arrowroot, West Indian arrowroot
Kan: Koove
Mal: Koova, Kochikuva
Tulu: Koove

Habit: Tall herb.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Tall herb with branched stem and thick, fleshy rhizome. Leaves distichous, ovate-lanceolate; petiole sheathing, pulvinate. Flowers white, in pairs on long, branched peduncles. Sepals 3. Corolla tubular below, 3-lobed above. Staminodes 2, petaloid; fertile stamen petaloid, with lateral anther. Fruit dry and indehiscent.

Uses: *Rhizome powder is useful in gastritis. Rhizome powder is given for diarrhoea, dysentery, cough, bronchitis and as a baby food for small children. Rhizome powder or decoction is also recommended for leucorrhoea, dry cough and to increase urine flow. *Rhizome powder cooked with jaggery is given for dysentery. Rhizome decoction is recommended for rheumatism. *One year old arrowroot powder boiled in water is given as food by adding milk and sugar to children suffering from repeated digestive disorders. *Arrowroot and turmeric powder paste is heated and applied for bruises, swellings and pus in swellings. *Rhizome powder mixed with Caryota urens pith powder and sugar is used for one week in case of leucorrhoea.
Etymology: Tavaksi (manna of bamboo) arose as the starch extracted from the rhizome resembles bamboo manna.

Note: Rhizome powder is used as a binding agent. It is the best source of easily absorbable starch and nutritious food for young children.

579. Marrubium vulgaris L. (Plate 98 C)

Syn: Marrubium hamatum Kunth.

Family: Lamiaceae

Vernacular Name:  Eng: Horehound, Common horehound
                 Kan: Peppermint gida
                 Mal: Peppermint chedi
                 Tulu: Peppermint dai

Habit: Rambling herb.

Habitat: Cultivated in gardens.

Status: Occasional. Weed.

Description: Rambling herb, with quadrangular stem. Leaves simple, densely wrinkled, covered with white felted hairs. Flowers white, in axillary crowded whorls. Calyx tubular, 10-toothed. Corolla 2-lipped, white or greenish white. stamens didynamous. Fruit ovoid nutlets.

Uses: *Leaf or dried leaf powder boiled in water is used with jaggery or honey for asthma, breathing problems and recurrent cough. *Dried seed soaked in water for one hour is consumed with salt for blood dysentery, burning sensation, weakness and fever due to biliousness. Plant extract is used for indigestion, lung pain, dysentery, fever and headache. *Leaf juice is used for uterine problems. *Root decoction is used as gargle for toothache. *Leaf is used for preparing a digestive and sleep inducing tea. *Leaf paste is applied for rheumatism.

Etymology: Peppermint gida, Peppermint chedi and Peppermint dai (peppermint herb) are due to its aroma which resembles that of peppermint.

Note: Plant is used for preparing rasam* and chutney.
580. *Marsilea minuta* L. (Plate 98 D)

Family: Marsileaceae

Vernacular Name: San: Chatuspatri, Sunisannah  
Eng: Cat’s feet  
Kan: Neeruhuruli, Kaaduhuruli  
Mal: Niraral  
Tulu: Kattukudu

Habit: Aquatic herb.

Habitat: Marshy areas and paddy fields.

Status: Common. Weed.

Description: Small herb with subterranean densely hairy rhizome. Stipes scattered, terete, whitish. Leaves 4, arranged at the tip of the stipe in clover leaf mode, obovate, thin. Sporocarps borne at the nodes in clusters, 5 per cluster.

Uses: *Sporocarp decoction is recommended internally as a tonic, also for gastritis, indigestion and other digestive tract disorders.*

Etymology: Chatuspatri (four leaved), Neeruhuruli (water horse gram), Kaaduhuruli and Kattukudu (wild horse gram) are due to its characteristic leaves, aquatic habitat, wild nature and resemblance of sporocarps with the horse gram seeds.

Note: It is used in the preparation of *Dravavarti, Brhat varahyadi ghṛta* and *Abhram* (101) (Sivarajan & Balachandran, 1996).

581. *Melastoma malabathricum* L. (Plate 98 E)

Family: Melastomataceae

Vernacular Name: San: Tinisah  
Eng: Indian rhododendron  
Kan: Nekkare, Nekkarika, Dodda nekkare  
Mal: Athirani, Kalampotti, Thodukkara  
Tulu: Nekkare
Habit: Large shrub.

Habitat: Along banks of streams and forest borders.

Status: Common.


Uses: *Young shoot tip ground with cumin seeds or that cooked in steam and ground with milk is taken in empty stomach for gastritis. *Leaf paste is applied to remove marks of small pox attack. *Leaf tambuli* is recommended for dysentery. Shoot tip extract is given for digestive disorders. *Leaf juice mixed with rice cooked water is given for stomachache. *Rasam* prepared from its bark is used for indigestion. *Leaf extract is given for gastric ulcers, while tender shoot tips are chewed for mouth ulcers. Whole plant or shoot tip decoction is given for menstrual disorders, leucorrhoea and stomach ulcers (gastric). *Shoot tip, those of Osbeckia muralis, Hedyotis auricularia and Holigarna arnottiana are made into a tambuli* which is used for constipation. *Leaf boiled with buttermilk is given for digestive and liver disorders. *Bark ground in rice cooked water is boiled in coconut oil and applied for deep wounds in legs. Tender shoot extract is given for indigestion, skin diseases, digestive and menstrual problems. *Root (fibre removed) decoction is given to expel worms in children.

Etymology: Nekkare (one which made to lick), Dodda nekkare (large licking herb) arose as it is the largest among the plants whose tender shoot juice is given to lick (as bitter agent to young children).

Note: Tender shoot tip, leaf, flower and fruits are edible. It is one of the important ingredients of Ayaskrti (Sivarajan & Balachandran, 1996).

582. Melia azedarach L. (Plate 98 F)

Family: Meliaceae

Vernacular Name: San: Arista, Brihannimba, Mahanimba, Parvatanimba
Eng: Bead tree, Indian lilac, Persian lilac  
Kan: Arebevu, Kaadubevu, Hucchubevu  
Mal: Malaveppu, Kattuveppu  
Tulu: Kattubevu

Habit: Moderate-sized tree.

Habitat: Cultivated in gardens.

Status: Common.


Uses: *Bark decoction is given for mouth ulcers, eye diseases, piles, worms, kidney stones and leucorrhoea. *Leaf decoction is used for hysteria in ladies. Bark paste is applied for joint pain. *Root or leaf decoction expels worms. Leaf decoction is also used for digestive disorders.

Etymology: Brihannimba, Mahanimba (larger neem), Parvatanimba, Malaveppu (hill neem), Kaadubevu, Kattuveppu, Kattubevu (wild neem) and Arebevu (half neem) are due to its larger habit, restriction to higher altitudes, close affinity with neem and much use as a substitute for neem.

Note: Heart wood has the smell of sandal wood. It is used as a substitute for neem. It is used in the preparation of Durvadi taila, Jatyadi ghrta, Nimbadi taila, Tiktaka kashaya, Brhat manjisthadi kvatha, Brhat manjisthadi churna and Maha visagarbha taila (Sharma et al., 1998; Sivarajan & Balachandran, 1996). It has quercitrin, rutin, bakayanin, bakalactone and stigmasterol as active components (Kappor, 1990).

583. *Melia dubia* Cav. (Plate 99 A)

Syn: Melia composita Willd.; Melia superba Roxb.

Family: Meliaceae
Vernacular Name: San: Arangaka
    Eng: Malabar neem wood
    Kan: Bettabevu, Hebbevu, Kaadubevu
    Mal: Malaveppu, Valiyaveppu
    Tulu: Mallabevu

Habit: Large tree.

Habitat: Semi evergreen forests and hills.

Status: Frequent.


Uses: *Leaf paste is applied externally for poisonous bites. *Leaf juice or extract is used both externally and internally as a haemostatic agent.

Etymology: Bettabevu, Malaveppu (hill neem), Hebbevu, Valiyaveppu, Mallabevu (larger neem) and Kaadubevu (wild neem) are due to its close affinity with neem, larger habit, wild nature and restriction to the hills.

Note: Occasionally used as a substitute for neem.

584. *Melicope lunu-ankenda* (Gaertn.) Hartley (Plate 99 B)

Syn: *Euodia lunu-ankenda* (Gaertn.) Merr.

Family: Rutaceae

Vernacular Name: San: Vanashampaga
    Kan: Mugali, Benkipettige gida
    Mal: Theepettimaram, Kambili, Kaneli
    Tulu: Soothapettige maro

Habit: Small tree.
Habitat: In plains and along forest borders.

Status: Frequent.


Uses: *Leaf or bark paste is applied for burns. *Bark juice mixed with cumin seed decoction and jaggery is used for body pain.

Etymology: Benkipettige gida, Theepettimaram and Soothapettige maro (match box tree) arose as this tree is used for making match box and match sticks.

Note: Soft wooded tree. Much used by the plywood industry.

**585. *Memecylon angustifolium* Wight (Plate 99 C - 1, C - 2)**

Family: Melastomataceae

Vernacular Name: Kan: Kakajembu, Kavugida, Belavaka  
     Mal: Aattukanala  
     Tulu: Kakajembu

Habit: Shrub.

Habitat: Along banks of rivers and streams.

Status: Occasional.


Uses: *Leaf juice is recommended internally for diabetes, jaundice, liver and spleen diseases.
Etymology: Kavugida (handle plant) arose as its stem is widely used for making handles for knife.

Note: Much valued drug for diabetes.

586. *Memecylon grande* Retz. (Plate 99 D)

Family: Melastomataceae

Vernacular Name: Kan: Kayavu, Alamuru, Hulisoppu  
Mal: Palluvirisa  
Tulu: Kayavu, Kaje thappu

Habit: Small tree.

Habitat: Along streams and sacred groves.

Status: Occasional.


Uses: *Flower or tender shoot tip decoction is used for scabies. *Root paste is applied externally for scabies due to increased body heat.

Etymology: Kayavu (one with full of fruits), Alamaru (ornamental), Hulisoppu (sour leaf) and Kaje thappu (leaf with small scab-like projections) arose due to its beautiful flowers, sour taste of leaves, large number of fruits and presence of scab-like projections in leaves due to insect attack.

Note: It is often used as a substitute for *Memecylon umbellatum*.

587. *Memecylon randerianum* SM & MR Almeida (Plate 99 E)


Family: Melastomataceae
Vernacular Name: Kan: Ollekkodi, Gandukepula, Gandukusumale
Mal: Kaikkathetti, Koovachekki
Tulu: Ollekkodi

Habit: Shrub.

Habitat: Moist shady places in forests.

Status: Common


Uses: *Plant juice is given for four days in case of herpes. *Plant juice is given to small children for three days in a month as bitter agent. *Leaf cooked and ground in milk is applied externally and also taken internally for herpes. Young shoot tip paste is used for all types of skin diseases. *Leaf decoction is given to prevent habitual abortion in cattle. *Tender shoot paste with lime juice or tender coconut husk juice is applied for urticaria and rashes. *Shoot tip decoction is used as body wash during chickenpox. *Tender shoot tip paste with sandalwood is given internally for snake and other poisonous bites. *Tender shoot tip ground in water is recommended internally for burns. *Paste prepared from its tender shoot, roots of Rauvolfia serpentina, Indigofera tinctoria and Clerodendrum serratum is applied for burns. *Shoot tip paste with root of Salacia chinensis is applied for herpese. Leaf extract is given internally for jaundice and biliousness. *Tender shoot tip and one spoon cumin seeds ground in milk is taken three times a day for herpes. *Shoot tip juice and cumin seed decoction is used for herpese. Paste prepared by mixing soil of crab dwelling place with its shoot tip, which of Caesalpinia mimosoides, Ziziphus oenoplia, Careya arborea and Syzygium caryophyllatum fried in coconut oil or gingelly oil is applied for carbuncles (relief is within one hour). Leaf juice is given for jaundice. *Leaf, Aristolochia indica root, fresh turmeric and sandalwood paste in rice washed water is applied for rashes and urticaria. *Paste of tender shoot tip, Cynodon dactylon, Centella asiatica and Indigofera tinctoria cooked in milk is
applied for herpes. During treatment its extract with cumin in milk is given internally. *Shoot tip, which of Scleropyrum pentandrum, Breynia vitis-idaea, Plectranthus amboinicus, Sida cordata, Indigofera tinctoria, turmeric, cumin, Vernonia anthelmintica seeds, roots of Aristolochia indica, Rauvolfia serpentina, Ixora coccinea, Clerodendrum serratum and neem leaf are made into a paste for urticaria and rashes. *Shoot tip, which of Scleropyrum pentandrum, Ixora coccinea, Calycopteris floribunda, Briedelia scandens, Loeseneriella arnottiana and neem leaves decoction is used as bath in case of urticaria, erysipelas and rashes. *Shoot tip, which of Jasminum malabaricum and Psidium guajava extract is given for phlegm in small children. *Shoot tip, pepper and garlic extract is consumed in empty stomach for worm trouble in small children. *Tender shoot tip extract with fresh milk is given with a little cumin powder for herpes in children. *Leaves, turmeric and Loeseneriella arnottiana shoot tip paste is applied all over the body of new born baby for the first 10 days. *Shoot tip decoction with triphala is used internally for jaundice and giddiness due to biliousness.

Etymology: Ollekodi (good shoot tip), Gandukepula, Gandusumale (male Ixora) and Kaikkathetti (bitter Ixora) arose due to the diverse uses of its shoot tip, bitter taste and resemblance of plant with Ixora coccinea.

Note: Much valued drug for herpes and other skin diseases. Tender shoot is used as vegetable.

588. Memecylon umbellatum Burm. f. (Plate 100 A)

Syn: Memecylon edule Roxb.

Family: Melastomataceae

Vernacular Name: San: Anjani
    Eng: Iron wood tree
    Kan: Alamaru, Nemaru, Hulisoppu, Kayavu
    Mal: Kasavu, Kalayam, Kayambu
    Tulu: Kaje thappu, Alamaru
Habit: Small tree.

Habitat: Forests and dry slopes of hillocks.

Status: Common.

Description: Small tree or large shrub. Leaves simple, ovate-elliptic, yellow when dry. Flowers blue, numerous, in umbellate cymes from axils of fallen leaves on the old wood. Calyx campanulate; limb 4-toothed. Petals 4. Stamens 8. Fruit globose berry, black-purple when ripe.

Uses: *Leaf decoction is used as eye wash for eye pain and conjunctivitis. Leaf paste is applied for herpes, furuncles and inflammation on skin. *Leaf or root decoction is taken for leukorrhoea and dysmenorrhoea. *Leaves crushed with cumin seeds in milk are recommended for three days in case of infertility and stomachache during menses (continued for a period of three months). Leaf paste is applied externally for swellings. Root decoction is given for rheumatism. *Leaf paste is applied externally and decoction internally for burning pain of herpes. *Bark ground with coconut milk is applied after mixing Nigella sativa seed powder for contagious skin diseases.

Etymology: Anjani (one which is applied over eyelids), Alamaru (ornamental), Hulisoppu (sour leaf), Kayavu (one with full of fruits) and Kaje thappu (leaf with scab-like projections) arose as its leaf preparations are used for eye diseases, beautiful flowers, sour taste of leaves, large number of fruits and presence of scab-like projections in the leaves due to insect attack.

Note: Stem is much valued for making sticks of drums. Stem is best for handicrafts.

589. Mentha piperita L. (Plate 100 B)

Family: Lamiaceae

Vernacular Name: Eng: Peppermint
            Kan: Peppermint, Vilayathi pudina
            Mal: Peppermint, Karpooratulasi
            Tulu: Karpooratolasi
Habit: Herb.

Habitat: Cultivated in gardens.

Status: Occasional. Exotic.


Uses: Whole plant chutney or juice is highly recommended for gastritis, gastric ulcer, duodenal ulcer, to expel phlegm, biliousness and indigestion. It is also used as a tonic.

Etymology: Vilayathi pudina (foreign pudina), Karpooratulasi and Karpooratolasi (camphor basil) are due to its foreign origin and fragrance resembling that of camphor.

Note: It has menthol as major ingredient. It is used in the preparation of Amritadhara and Amritanjan (Dey, 1994). Leaf is used as condiment.

590. Mentha spicata L. (Plate 100 C)

Syn: Mentha viridis (L.) L.

Family: Lamiaceae

Vernacular Name: Eng: Spearmint, Garden mint, Pudina
            Kan: Pudina soppu, Pudina
            Mal: Pudina
            Tulu: Pudino

Habit: Herb.

Habitat: Cultivated.
Status: Occasional. Exotic.


Uses: Same as *Mentha piperita*.

Note: α-carvone, carene, d-sylvestrene, citrnellol, α-menthol, d-menthone, carvomenthone, limonine, β-phellandrene and pepritone are the active components (Dey, 1994; Kapoor, 1990). Leaf is used as condiment.

591. *Merremia turpethum* (L.) Shah & Bhat (Plate 100 D)

Syn: *Ipomoea turpethum* (L.) R. Br.; *Operculina turpethum* (L.) Manso

Family: Convolvulaceae

Vernacular Name: San: Trivrt, Rechani  
Eng: Indian jalap, Terpeth root  
Kan: Thigade, Bilithigade  
Mal: Thrikolpakonna, Thripuda  
Tulu: Thigade

Habit: Climbing shrub.

Habitat: Open sandy soils, also cultivated.

Status: Occasional.


Uses: Decoction prepared from this plant is used to normalize human excretory system, for digestive disorders, septic wounds, phlegm, worms and swellings. Plant
powder is a strong purgative and used for gas trouble, cold, biliousness, digestive disorders and fever. *Plant juice is the antidote for *Datura metel* poisoning. *Plant extract is recommended for loose motion and cough. *Root powder dissolved in *triphala* decoction is given half an hour after dinner of piles. *Leaf and turmeric powder paste is applied at night for same disease. *Root powder dissolved in water is given before sunrise for gas trouble, constipation and indigestion. Plant decoction is recommended for fever due to biliousness, rheumatism, blood disorders, nervous debility and worms. *Root decoction is used internally in case of food poisoning.

Etymology: Rechani (purging) arose as this plant is a strong purgative.

Note: Muck known for its purgative and laxative properties. It is used in the preparation of *Trivrt lehya*, *Avipatti churna*, *Aragvadharista*, *Hrdyavirecana lehya*, *Asvagandharista*, *Manibhadra guda* and *Kaisora guggulu vataka* (Sivarajan & Balachandran, 1996; Sharma *et al.*, 1998). α- & β-turpethein and turpethin are the active constituents (Kapoor, 1990).

592. *Merremia umbellata* (L.) Hall. f. (Plate 100 E)

Syn: *Ipomoea cymosa* Roem. & Schult.

Family: Convolvulaceae

Vernacular Name: Kan: Kulavina balli, Kulovu
Mal: Kolavaravalli, Vayara
Tulu: Kulovu, Kulovutha ballu

Habit: Climbing herb.

Habitat: Along hedges and thickets.

Status: Common. Weed.

Uses: *Oil prepared from plant juice is applied for rheumatic pain and other body pains. *Its paste or oil is applied for burns. *Plant paste is applied for skin diseases and fungal infection of hands as well as legs. *Plant paste is also applied as bandage for cuts and wounds for quick healing.

Etymology: Kulavina balli, Kulovutha ballu (cooling climber) and Kulovu (cooling) arose due to the cooling effect of the plant.

Note: Plant is much used as fodder.

593. *Merremia vitifolia* (Burm. f.) Hall. f. (Plate 100 F)

Syn: *Ipomoea vitifolia* (Burm. f.) Blume.

Family: Convolvulaceae

Vernacular Name: Eng: Yellow Merremia, Yellow wood rose
  Kan: Bacchalu balli
  Mal: Manja-vayaravalli
  Tulu: Bacchalu ballu

Habit: Twining herb.

Habitat: Along hedges and thickets.

Status: Common. Weed.


Uses: *Plant paste is applied externally for urticaria and rashes. *Plant paste or oil prepared from plant juice is applied for rheumatism. *Whole plant paste is applied over head for insanity. *Plant paste is applied for hardened breast and abscess.

Etymology: Bacchalu balli and Bacchalu ballu (tired or lean climber) arose as this plant is used as fodder especially for weak or lean cattle to make them strong.

Note: Much used as fodder.
594. *Mesua ferrea* L. var. *ferrea* (Plate 101 A)

Syn: *Mesua nagassarium* (Burm. f.) Kosterm.

Family: Clusiaceae

Vernacular Name: San: Ahikesara, Nagakesara, Nagapushpa, Naga champaka  
Eng: Indian rose chestnut, Ceylon ironwood, Inagas tree  
Kan: Nagasampige, Nagakesara  
Mal: Nagapoovu, Nangu, Nagachempakam  
Tulu: Nagasampai

Habit: Large tree.

Habitat: Evergreen forests, also cultivated.

Status: Occasional.

Description: Lofty tree. Leaves simple, elliptic-oblong, glaucous beneath. Flowers polygamous, large, solitary or in pairs, axillary or terminal. Sepals 4, orbicular. Petals 4, white. Stamens numerous, red; filaments filiform. Fruit ovoid, woody, subtended by the sepals.

Uses: *Oil extracted from the seeds is applied for skin diseases, ulcers, rheumatic pain and wounds. *Stamen paste and extract with milk are given internally for over menstrual bleeding. *Leaf decoction is given to expel phlegm and for cough. *Root paste is applied for snake bite. *Stamen juice is given for biliousness and as a tonic for ladies after delivery. *Flower or bark paste is applied for itches. *Leaf or flower juice is applied to get relief from pain and burning sensation of scorpion bite. *Stamen or flower ground with cumin seeds in milk is given to drink on the 4th day of menses to correct menstrual cycle and stomachache during menstruation.

Etymology: Nagakesara (serpent stamen), Nagapushpa, Nagapoovu (serpent flower), Naga champaka, Nagasampige and Nagachempakam (serpent champaka) are due to its filiform stamens and fragrant flowers.

Note: After spreading its leaves soil coating is given during ceiling construction to
prevent termite and other insect attacks. Wood is used as timber. Flowers are used for worship. It is one of the major ingredients of *Candanabalalaksadi taila*, *Kumaryasava*, *Nagakesaradi churna*, *Chyavanaprasha*, *Amritarista*, *Lavanabhaskara churna*, *Pippalyasava*, *Kanakasava* and *Khadirarista* (Sharma *et al.*, 1998; Sivarajan & Balachandran, 1996). Mesual, mesuol, mesuone, mammeeigin, mesauugin, mammeeisin, α-amyrin, β-amyrin, β-sitosterol, mesuaferrone A & B, mesuanic acid, mesuaxanthone A & B, euxanthone, ferruol A & B, guttiferol are the active components (Dey, 1994; Kapoor, 1990).

595. *Michelia champaca* L. (Plate 101 B)

Family: Magnoliaceae

Vernacular Name: San: Atigandhaka, Champaka, Hemapushpa, Svarnachampaka  
Eng: Champak  
Kan: Sampige, Kendasampige  
Mal: Chempakam, Champakam  
Tulu: Sampai

Habit: Large tree.

Habitat: Grown in gardens.

Status: Common.

Description: Large evergreen tree. Leaves simple, ovate-lanceolate, shining above, pubescent beneath when young. Flowers axillary, yellow, fragrant. Perianth segments 15 – 20; outer oblong; inner linear. Stamens many, inserted on the torus. Fruit an aggregate of follicles. Follicles thick, covered with white, raised dots.

Uses:  *Bark decoction is given to abort the foetus up to 45 days old.  *Flower extract is poured into nose as *nasya* for headache and migraine.  *Bark decoction is given internally and oil prepared from it is applied on the head to prevent hair fall due to increased body heat. Bark paste in water is used for blood disorders. Seed oil is applied for scabies and rheumatism.  *Bark decoction is recommended for viral fever.  *Root bark powder is taken internally to regulate menstruation.  *Leaf
decoction is given to drink in case of scorpion bite. *Flower powder is used as best face pack.

Etymology: Atigandhaka (highly fragrant), Hemapushpa (golden flower) and Svarnachampaka (golden champak) are due to its highly fragrant golden yellow flowers.

Note: It is used in the preparation of Candanabalalaksadi taila and Baladhatryadi taila (Sharma et al., 1998). It has lirodenine, macheline A, β-sitosterol, liriodenine, parthenolide, costunolide, parthenolide, micheliolide, champacene, pinacamphene and linalool as active components (Kapoor, 1990).

596. *Micrococcus mercurialis* (L.) Benth. (Plate 101 C)

Syn: *Tragia mercurialis* L.

Family: Euphorbiaceae

Vernacular Name: Kan: Kuppi gida  
Mal: Kunukku-thooki  
Tulu: Kuppi dai

Habit: Erect herb.

Habitat: Along wastelands and roadsides.

Status: Common. Weed.

Description: Erect annual herb. Leaves simple, ovate, membranous. Flowers minute, in fascicles on axillary racemes; male flowers 2 – 4 clustered together; female solitary. Perianth of male 3-lobed; of female 3 – 4-lobed. Stamens 3 – 5. Fruit loculicidal capsule.

Uses: *Whole plant paste is applied for skin diseases and fungus infections of feet.  
*Whole plant juice is used internally for chronic rhinitis, jaundice, bronchitis and bile disorders.
Etymology: Kuppi gida, Kuppi dai (Acalypha) Kunukku-thooki (hanging bells) arose as this plant is often used as a substitute for Acalypha indica and the hanging fruits give the appearance of hanging bells.

Note: It is often used as a substitute for Acalypha indica.

597. *Miliusa tomentosa* (Roxb.) Finet & Gagnep (Plate 101 D)

Syn: *Saccopetalum tomentosum* (Roxb.) Hook. f. & Thoms.

Family: Annonaceae

Vernacular Name: Kan: Anache, Hessare
Mal: Kanakaitha, Kaithamavu, Thavidi
Tulu: Anache

Habit: Tree.

Habitat: Semi evergreen forests and sacred groves.

Status: Occasional.


Uses: *Leaf decoction is used as bath for arthritis, body pain and rheumatism. *Fruit juice is taken internally for nervous disorders.

Etymology: Anache (depressing) arose as its fruit juice has CNS depressant activity.

Note: Fruit juice is CNS depressant (Jain et al., 1991).

598. *Millingtonia hortensis* L. f. (Plate 101 E)

Syn: *Bignonia suberosa* Roxb.

Family: Bignoniaceae

Vernacular Name: Eng: Indian cork tree, Tree jasmine
Kan: Akashamallige, Biratumara  
Mal: Akasaveppu, Maramalli  
Tulu: Akasamallige

Habit: Tall tree.

Habitat: Planted in gardens.

Status: Frequent. Exotic.

Description: Tall tree with drooping branches. Leaves 2 – 3-pinnate; leaflets elliptic-ovate. Flowers white, pendent, sweet-scented, in terminal corymbose panicles. Calyx campanulate; lobes 5. Corolla white, with funnel-shaped oblique mouth. Stamens 4, didynamous. Fruit linear, septicidal capsule.

Uses: *Bark decoction is recommended internally for fever, cold, indigestion and diarrhoea.

Etymology: Akashamallige, Akasamallige (sky jasmine) and Akasaveppu (sky neem) are due to its serrate leaflets resembling that of neem and sweet-scented, pendant white flowers.

Note: It is often used as a substitute for Stereospermum colais.

599. *Mimosa pudica* L. (Plate 101 F)

Family: Mimosaceae

Vernacular Name: San: Lajjalu  
Eng: Sensitive plant, Touch me not  
Kan: Naachike mullu, Muttidare muni  
Mal: Thottalvadi, Thottavadi  
Tulu: Thottambadi

Habit: Diffuse undershrub.

Habitat: Wastelands.
Status: Common. Exotic and weed.


Uses: *Whole plant decoction is used as gargle for toothache. *Oil prepared from whole plant is applied over hair for their natural colour. *Young twig oil application followed by hot water bath is recommended for sleeplessness. *Oil prepared by boiling whole plant in oil is applied for scabies and eczema. *Root decoction with honey is given to stop bleeding from any part of the body. Whole plant decoction is used for rectum prolapse and bleeding piles. *Leaf juice is used in dressings used for sinusitis. Plant decoction is recommended for uterine bleeding. Root decoction is given for kidney and bladder stones. *Oil prepared using root juice is massaged over the body of children to strengthen their body. *Whole plant decoction is used to test the presence of piles (if piles are there it appears out). *Whole plant decoction is recommended for problems during menopause, fever and kidney stones (8 glasses reduced to 1 glass). *Root decoction in milk is given to stop over menstrual bleeding. Whole plant paste is applied for elephantiasis and poisonous bites. *Whole plant lehyam* is used for chest pain. Leaf juice is applied for cuts and wounds. Plant juice with honey is used for over menstrual bleeding. Oil from plant juice is applied for rheumatism and scrotal swelling. *Thick paste of whole plant with turmeric is applied for three hours to expel glass pieces, thorns, spines from body, also to heal the wounds. *Paste prepared by grinding plant in rice cooked water is applied (after boiling) three times a day for 6 – 12 days in case of scrotal swelling, pain and lymph node enlargement. Plant paste is applied for urticaria and rashes. *Tender shoot tip decoction with milk is used for 40 days for alcohol detoxification and that of whole plant to stop bleeding after operation.

*Leaf juice is applied for rectum prolapse. *Tambuli* prepared from tender shoot tip is useful for vatapitta*, piles and liver problems (not recommended for pregnant ladies). *Root paste with rice cooked water is applied for gonorrhoea,
swellings and pain. The same is also used for scorpion bite, blood disorders, digestive problems, piles, hernia, cataract, backache, kidney stones and malabsorption in children. Plant extract is used to increase sexual vigour. Leaf juice is applied for septic wounds or ulcers. *Cooked plant is nutritious just like horse gram and is used as fodder. *Plant decoction with milk is used as ovarian or reproductive tract purifier. *Plant cooked with rice is recommended in case of premature delivery to purify the body. *Whole plant juice mixed with butter is taken daily morning with sugar for piles and bleeding piles. *Root crushed with copper sulphate is boiled in coconut oil and applied for whitlow. *Leaf and root paste with water is applied for pus release from ulcers and wounds. *Tender shoot tip ground with milk or seed powder dissolved in curd is given twice a day for dysentery. Root decoction is recommended once a day for scabies. *Leaf paste with water is tied for quick heal of cuts. *Root and cumin seed (2:1) decoction with water is used twice a day for nervous ache due to gas trouble. *Whole plant pieces mixed with rice bran is used as fodder to increase lactation in cattle. *Whole plant is given to eat, while stem and leaf paste with water is tied for uterus prolapse during delivery in cattle.

Etymology: Lajjalu (shy), Naachike mullu (shy spinous plant), Thottalvadi, Thottavadi and Thottambadi (feeble with touch) are due to its highly sensitive leaves and spinous plant body.

Note: Plant is rich in tannin. Root is used in purification of metals. Seed oil is used as polish or varnish. It is used in the preparation of Yuvatyadi taila, Rajatabhasma, Samangadi churna, Kutajavaleha, Pusyanuga churna and Brhat gangadharma churna (Sharma et al., 1998; Sivarajan & Balachandran, 1996).

600. Mimusops elengi L. (Plate 102 A)

Family: Sapotaceae

Vernacular Name: San: Bakula, Madhugandha, Surabhi
Eng: Bullet wood, Spanish cherry, Bakul tree
Kan: Bakula, Pagade mara, Renje
Mal: Bakulam, Elangi, Elanchi  
Tulu: Renje

Habit: Large tree.

Habitat: Semi evergreen forests.

Status: Common.

Description: Large evergreen tree. Leaves simple, broadly ovate, glabrous. Flowers white, sweet-scented, in axillary clusters. Sepal 8, in 2 series, ovate, tomentose. Corolla 8-lobed; lobes divided to the base into 3 segments. Stamens 8, alternating with fimbriate staminodes. Fruit 1-seeded, ovoid berry, orange-red when ripe.

Uses: *Bark decoction is used as gargle for toothache and over salivation. It is taken internally for fever. *Seed ash is used to brush teeth which strengthen teeth and prevent cavities. Bark decoction is used for mouth ulcers, swellings, also to increase appetite and digestive power. *Flower and fruit decoction is used to wash chronic ulcers. *Flower powder is snuffed for running nose. *Paste of seed fried in ghee is applied over anus in case of constipation. Bark extract has the property to increase fertility. *Fruit pulp is applied for snake bite and headache. *Ripe fruits are eaten for easy delivery. Bark decoction is given internally for menstrual disorders and rheumatism. It is also used for venereal diseases. *Seed paste is applied for toothache. *Twigs are used as toothbrush to prevent tooth decay. Bark and leaf paste is applied for skin diseases and leprosy. Crushed fruit is applied for toothache. *Crushed bark decoction is used as gargle for wounds in gum, loose teeth, gum swelling and bleeding. *6 drops of dried flower powder dissolved in water is poured into nose for repeated headache and running nose. Fruit extract is used for migraine, headache, running nose and mental debility. Bark decoction is used for biliousness, phlegm, dysentery, blood discharge in urine and menstrual problems. *Oil extracted from flowers is applied for mental disorders. Bark decoction is recommended for rheumatism and fever. Leaf paste is applied for furuncles and scabies. *Seed oil is applied for eye diseases and taken internally to expel worms.

Etymology: Madhugandha (sweet fragrance) and Surabhi (pleasant) are due to its sweet-scented flowers.
Note: Leaf is used in purificatory rituals of temples. It is a sacred plant. Ripe fruits and roasted seeds are edible. Corollas are made into garlands. \( \beta \)-sitosterol, \( \alpha \)-spinasterol, quercitol, dihydroquercetin, lupeol, ursolic acid, teraxerone and hentriacontane are the active constituents (Kapoor, 1990).

601. *Mirabilis jalapa* L. (Plate 102 B)

Family: Nyctaginaceae

Vernacular Name: San: Krishnakeli, Sandhyakeli, Sandhya-raga  
Eng: Four o’clock plant, Marvel of Peru  
Kan: Sanje mallige, Madhyanha mallige  
Mal: Nalu-manichi, Anthimalari  
Tulu: Bayyamallige

Habit: Herb.

Habitat: Grown in gardens.

Status: Common. Exotic.

Description: Erect glabrous herb with swollen nodes. Leaves simple, ovate, cordate at base. Flowers opening late in the afternoon, in 3 – 7-flowered corymbs; bracts calyx-like, 5-lobed. Perianth tube elongated; limb spreading, 5-lobed, red, pink, yellow or white. Stamens 3 – 6, exerted. Fruit globose, leathery, ribbed anthocarp.

Uses: *Rhizome or tuber paste with castor oil is applied around furuncles and carbuncles for release of pus and easy heals. *Rhizome extract with milk is taken for leucorrhoea, to increase fertility and conception (if used during pregnancy can cause abortion). *Rhizome paste is applied for boils and blisters. Rhizome extract is used as a purgative and decoction for venereal diseases. *Tuber paste is applied for swellings and its extract with milk is consumed for leucorrhoea. *The same is recommended for three days after menses to facilitate conception and to increase fertility. *Crushed leaf heated with coconut oil is applied for burns. *Root stock ground with milk is taken in empty stomach in the morning for five days from the 6th day of menses for conception. *Root stock and cumin seeds extract in rice washed
water is consumed for burning urination. *Root extract with boiled then cooled water is given thrice a day for allergic swellings. *Root stock paste with water is taken internally twice a day for stomachache (relief is through purgation). *Leaf after giving a coating with castor oil is heated over a lamp and pasted over furuncle or warts for quick heal.

Etymology: Sanje mallige (evening jasmine), Madhyanha mallige, Bayyanallige (afternoon jasmine) and Nalu-manichi (four o’clock plant) are due to its flowers which open late in the afternoon.

Note: Trigonelline, mirexanthins – I, II, III & IV, indicaxanthin, vulgaxanthin, β-sitosterol and tetracosanoic acid are the active constituents (Jain et al., 1991).

602. *Mitragyna parvifolia* (Roxb.) Korth. (Plate 102 C)

Syn: *Nauclea parvifolia* Roxb.

Family: Rubiaceae

Vernacular Name: San: Bhumi cadamba, Dhuli cadamba
    Eng: Kaim
    Kan: Kongu, Sanna cadamba, Naayi cadamba
    Mal: Kadambu, Poochakadambu
    Tulu: Naayi cadamba

Habit: Medium-sized tree.

Habitat: Deciduous forests.

Status: Occasional.

Description: Medium-sized deciduous tree. Leaves simple, variable in shape and size, ovate or orbicular; stipules large, caducous. Flowers in axillary or subumbellled pale yellow or white globose heads; flowers surrounded by paleaceous bracteoles. Calyx usually with a pair of large leafy bracts at the base. Corolla funnel-shaped, hairy within; lobes 5. Stamens 5. Fruit capsules in globose heads.

Uses: *Bark or fruit decoction is recommended internally for burning sensation,
poisonous bites, wounds, cough, bronchitis, oedema and reproductive tract disorders.

Etymology: Bhumi cadamba (ground cadamba), Sanna cadamba (smaller cadamba) and Naayi cadamba (dog or inferior cadamba) are due to its restriction to dry areas of forests, small leaves when compared with that of cadamba and use as a substitute for *Neolamarckia cadamba* (cadamba) in its absence.

Note: It is often used as a substitute for *Neolamarckia cadamba*.

**603. Molineria trichocarpa** (Wight) Balakr. (Plate 102 D)


Family: Hypoxidaceae

Vernacular Name: San: Bhutali, Musalikanda, Talamuli, Talamulika, Talaparni

   Eng: Black musale, Black musali, Indian musali

   Kan: Nelatali gadde, Neladale, Nelatali, Onikegadde

   Mal: Nelappana, Nilappana

   Tulu: Nilappane, Nelappane

Habit: Tuberous herb.

Habitat: Forest floors.

Status: Frequent.


Uses: Same as *Curculigo orchioides*.

Etymology: Bhutali, Nelatali, Neladale, Nilappana and Nelappane (ground palm) are due to its herbaceous nature and resemblance with palms. Talamuli, Talamulika (palm root) and Talaparni (palm leaved) clearly indicate their leaf pattern and habit.

Note: It is used in synonymous with *Curculigo orchioides*.
604. *Mollugo pentaphylla* L. (Plate 102 E)

Syn: *Mollugo stricta* sensu Clarke

Family: Molluginaceae

Vernacular Name: San: Parpataka, Grishmasundara
  Kan: Parpata, Parpataka
  Mal: Parpadaka pullu
  Tulu: Parpato

Habit: Erect herb.

Habitat: Laterite hills and sandy areas.

Status: Common.


Uses: *Oil prepared from whole plant juice is applied for septic wounds and ulcers.* *Tender shoot decoction is recommended for fever. *Plant paste is applied externally for measles.*

Etymology: Grishmasundara (summer beauty) arose as it blooms during summer.

Note: It is usually used in synonymous with *Hedyotis corymbosa.*

605. *Momordica charantia* L. var. *charantia* (Plate 102 F)

Family: Cucurbitaceae

Vernacular Name: San: Karavalli, Karavela, Karavelaka, Sushavi
  Eng: Bitter gourd, Bitter melon
  Kan: Haagalakaayi, Haagala
  Mal: Kaippakka, Paval, Pavakka
  Tulu: Kanchala, Kancholu
Habit: Climbing herb.

Habitat: Cultivated.

Status: Common.


Uses: *Fruit or leaf juice is given to destroy the intestinal worms both in human and cattle. *Leaf rasam* is also used for same purpose. Plant powder is dusted over cancerous ulcers. Leaf paste is applied for ringworm. *Leaf or fruit juice mixed with hot water expels pin worms. Dried plant powder is applied for septic wounds, ulcers and leprosy. Fruit juice or leaves as such are consumed for diabetes. *Leaf extract with salt is given to expel intestinal worms, especially pin worms. Leaf or fruit juice is useful for biliousness. It is a digestive and toxin remover. *Root paste with rice washed water is applied for uterus prolapse. *Tambuli* prepared from its leaves decreases fat, useful for infections, fever and worms (not recommended for people suffering from biliousness and urinary disorders). *Young fruit pieces ground with buttermilk is taken with salt for diabetes. *Leaf ground with lime juice and salt is applied for fungal skin diseases. *Leaf juice boiled with equal quantity of coconut milk is taken twice within 15 days for all types of intestinal worms. *Leaf juice is recommended for stomachache in children. *Leaf juice, fried raw rice seeds and coconut gratings are ground and taken for stomachache during menses (for three days). *Juice extracted by crushing its fruit, salt and onion is used as nasya* for pit viper bite. *Leaf juice with that of Leucas aspera and Ocimum tenuiflorum is also used as nasya* for poisonous bites. *Whole plant, Cinnamomum verum or Syzygium aromaticum bark, long pepper and raw rice seeds (in equal quantity) are powdered, mixed with Hydnocarpus pentandra oil and applied for tinea versicolor.

Etymology: Sushavi (very pleasing) and Kaippakka (bitter fruit) are due to its beautiful highly bitter fruits.

Note: It is used in the preparation of Kaccoradi taila and Maha visagarbha taila.
Momordicine is the major alkaloid (Sharma et al., 1998; Sivarajan & Balachandran, 1996). Fruit is much used as vegetable.

606. Momordica charantia L. var. muricata (Willd.) Chakrav. (Plate 103 A)

Syn: Momordica muricata Willd.

Family: Cucurbitaceae

Vernacular Name: San: Karavalli, Karavela, Karavelaka, Sushavi
   Eng: Bitter gourd, Bitter melon
   Kan: Haagalakaayi, Haagala
   Mal: Kaippakka, Paval, Pavakka
   Tulu: Kanchala, Kancholu

Habit: Climbing herb.

Habitat: Along roadsides and wastelands.

Status: Occasional.


Uses: Same as Momordica charantia var. charantia.

Etymology: Sushavi (very pleasing) and Kaippakka (bitter fruit) are due to its beautiful highly bitter fruits.

Note: It is used in the preparation of Kaccoradi taila and Maha visagarbha taila (Sivarajan & Balachandran, 1996). Fruits are used as vegetable.

607. Momordica dioica Roxb. ex Willd. (Plate 103 B)

Family: Cucurbitaceae

Vernacular Name: San: Karkota, Kandavalli, Sukanda, Vandhyakarkotaki, Vishakantakini
   Eng: Wild bitter gourd
Habit: Climbing herb.

Habitat: Along hedges.

Status: Occasional.

Description: Perennial dioecious climbing herb with tuberous roots. Leaves simple, ovate, 3 – 5-angled or lobed. Flowers yellow, solitary; male with a large spathaceous bract at apex. Calyx 5-lobed; lobes linear-lanceolate. Corolla rotate, 5-parted nearly to the base. Stamens 3. Fruit ovoid, muricate, orange-red when ripe.

Uses: *Tuber ground with water is given to drink in case of pit viper bite. *Fruit decoction is used for urinary tract infections. *Fruit juice is poured into nose as nasya* for mental disorders. *Whole plant or fruit powder (2 gm) is taken internally for bleeding piles. Tuber paste or extract is also used for piles. *Leaf juice is applied over forehead for headache. Whole plant paste is applied for poisonous bites. Root decoction is used for bladder stones, elephantiasis and jaundice. *Fried root is consumed for bleeding piles and stomachache. *Root juice is applied for boils caused by lizard urine. Leaf decoction is an aphrodisiac agent. *Tuber extract of male plant is given for menstrual disorders. *Stamen extract in milk is poured into nose in case of migraine. *Tuber of male plant ground with Solanum torvum root in lime juice is applied for honey bee sting. *Tuber of male plant ground in water is given with jaggery and pepper powder to expel intestinal worms and for tinea versicolor. *Fruit cooked with red gram dhal and condiments is eaten as a wormicidal agent. *Leaf extract with buttermilk is used twice a day for breathing difficulty, chest pain and nervine spasm. *Tuber paste with ghee is applied for ulcers caused by burn. *Tuber paste with water is applied externally and extract is taken twice a day for lizard bite. *Tuber extract with rice washed water is applied as fly or insect repellent in cattle. *Seed boiled in coconut oil is used as ear drop for earache.
Etymology: Kandavalli (climber with tubers), Sukanda (good tuber), Vishakantakini (enemy of poison), Kaaduhaagala, Kattukanchala (wild bitter gourd) and Undappavel (ovoid bitter gourd) are due to its tubers with diverse uses, much use for poisonous bites, ovoid fruits which are miniature of bitter gourd.

Note: Fruit is used as vegetable. It is nutritive and increases fat. If the plant is touched with any iron object then the plant fails to produce fruits. α-eleostearic acid and 2-acetyl-5-chloropyrrole are the active alkaloids. It is used in the preparation of Hiraka rasayana, Visanasaka yoga, Kakadani taila, Kalagnirudra rasa, Sannipata vidhvamsa rasa and Candrarudra rasa (Sharma et al., 1998).

608. *Monochoria vaginalis* (Burm. f.) Presl. (Plate 103 C)

Syn: *Pontederia vaginalis* Burm. f.

Family: Pontederiaceae

Vernacular Name: San: Indivarah

Eng: Marshy betelvine, Monochoria

Kan: Thamara, Neelotpala

Mal: Kakkapola, Kolachempu

Tulu: Neerchevu

Habit: Aquatic herb.

Habitat: Along margins of ponds and paddy fields.

Status: Common. Weed.

Description: Glabrous rooted fresh water herb. Leaves radical, ovate, base rounded or cordate. Flowers deep blue, in racemes. Perianth campanulate; segments 6, narrowly obovate. Stamens 6. Fruit oblong, loculicidally 3-valved capsule.

Uses: *Whole plant decoction is recommended for burning sensation, gastritis, asthma, bronchitis, indigestion, boils, piles and skin diseases.*
Etymology: Indivarah (moon’s gift), Kolachempu (pond taro) and Neerchevu (water taro) are due to its nocturnal flowers, aquatic habitat and plant body sharing resemblance with *Colocasia*.

Note: It is often used in synonymous with *Eichhornia crassipes*.

### 609. *Morinda citrifolia* L. (Plate 103 D)

Syn: *Morinda bracteata* Roxb.

Family: Rubiaceae

Vernacular Name: San: Achchhuka, Achuka, Ashyuka  
Eng: Great Morinda, Indian mulberry, Canary wood  
Kan: Rangina mara, Haladi pavate  
Mal: Manjanathi, Cherumanjanathi  
Tulu: Rangutha maro

Habit: Small tree.

Habitat: Along coastal areas, also cultivated.

Status: Common.

Description: Small tree or large shrub, with 4-angled branchlets. Leaves simple, broadly elliptic, shining. Flowers in leaf-opposed solitary heads. Calyx urceolate; limb 5-toothed. Corolla white; lobes 5, lanceolate. Stamens 5. Fruit large, ovoid syncarp, white when ripe.

Uses: *Bark or heart wood decoction is recommended for jaundice. *Fruit juice is taken to regulate or stimulate liver functions. *Bark decoction is used as gargle for throat infection. Fruit juice is given as a general health tonic to increase immunity. *Oil prepared from leaf juice is used for rheumatoid arthritis. *Fruit ashes are used for typhoid and indigestion. Leaf juice or paste is used as a wound healer. *Bark cooked with rice is eaten for jaundice. *Tender shoot tip cooked with rice is consumed for jaundice. Fruit juice is beneficial for rheumatism. It is a blood purifier. *Bark decoction is used internally and leaf paste is applied externally for over
perspiration with foul smell. *Gruel prepared by cooking rice with bark (crushed) tied in a cloth is recommended for jaundice. Root extract is a digestive. Leaf paste is applied for rheumatism and pain. *Bark decoction is used as gargle for tonsillitis, ulcers in gum and asthma. Its paste is applied externally for skin diseases. *Bark with that of Artocarpus gomezianus cooked with rice is used for jaundice.

Etymology: Rangina mara, Rangutha maro (colour tree) and Haladi pavate (yellow Pavetta) arose as this plant resembles Pavetta in habit and yields a reddish-yellow dye.

Note: Root when added to drinking water provides red colour to water. Fruit juice is much used to increase immunity. Fruit is edible.

610. *Morinda pubescens* J. E. Smith (Plate 103 E)

Syn: Morinda tinctoria Roxb.

Family: Rubiaceae

Vernacular Name: San: Paphah, Akshikiphala
                     Eng: Morinda tree
                     Kan: Peetapavate, Haladi pavate
                     Mal: Manjanathi, Manjapavitta
                     Tulu: Manjalu pavate

Habit: Small tree.

Habitat: Plains.

Status: Common.

Description: Small tree. Leaves simple, broadly or narrowly elliptic, pubescent, chartaceous. Flowers in leaf-opposed, axillary or terminal few-flowered cymes. Calyx tubular. Corolla white; lobes 5. Stamens 5. Fruit a syncarp of bony pyrenes.

Uses: *Leaf paste is applied for eczema, itches, ulcers and swellings. *Bark decoction is recommended internally for fever and digestive disorders.
Etymology: Peetapavate, Haladi pavaite, Manjalu pavaite and Manjapavittta (yellow Pavetta) are due to its resemblance with Pavetta and yellow heart wood.

Note: It is usually used as a substitute for Pavetta indica in preparations like Paphanadi taila and Paphanadi ghṛta (Sivarajan & Balachandran, 1996).

611. *Morinda umbellata* L. (Plate 103 F)

Family: Rubiaceae

Vernacular Name:  San: Kleeba, Kleeapushpa, Pitadaru  
Kan: Kakke kaayi, Poppili, Maddi chakke  
Mal: Kudalchurukki, Ney-valli  
Tulu: Kakke kaayi

Habit: Climbing shrub.

Habitat: Semi evergreen forests and sacred groves.

Status: Rare.


Uses: *Fruit juice is taken for dysentery, eye diseases and headache.

Etymology: Pitadaru (yellow wood) arose as a yellow dye is obtained from its wood.

Note: Ripe fruit juice is much used for digestive tract disorders.

612. *Moringa pterygosperma* Gaertn. (Plate 104 A)

Syn: *Moringa oleifera* Bedd.

Family: Moringaceae

Vernacular Name:  San: Chaksushya, Mochaka, Shigru, Sigru  
Eng: Ben oil tree, Bridal veil, Drumstick tree
Kan: Nugge, Nuggemara  
Mal: Muringa, Moringa  
Tulu: Nurge

Habit: Medium-sized tree.

Habitat: Cultivated.

Status: Common.


Uses: *Oil prepared by boiling its bark in coconut oil is applied over head of patients suffering from severe cold. *Bark decoction with honey is recommended for inducing periods (menstruation). *Bark decoction with asafoetida is used for joint pain and body pain. Leaf paste is applied or is tied for penis swelling. Bark decoction is given for rheumatism. Leaf is rich in iron and its preparations are consumed for spleen disorders, diarrhoea and raktapitta. Root decoction is used for paralytic stroke, epilepsy, swellings and indigestion. *Root juice mixed with sugar is recommended for sound fall. Seed oil is applied for rheumatism. *Leaf juice mixed with salt is taken for gas trouble. *Leaf juice is applied for pus release and quick heals of furuncles. *Decoction prepared by grinding its bark with cumin seeds in rice cooked water is used as gargle for mouth ulcers and toothache. *Latex or gum dissolved in milk is given to relieve headache, furuncles and eczema. *Paste of seed fried in ghee is applied for poor eye sight. *Bark juice is poured into ear to expel worms from ears. *Bark extract mixed with butter milk and salt is recommended for indigestion. *Bark and leaves extract in tender coconut water is consumed for three days in early morning for jaundice (food restriction is for 15 days). *Leaf juice mixed with honey is used as eye drop (2 drops) for marks in eye. *Leaves are used as fan in case of penis swelling in children. *Bark paste is applied externally, while leaf decoction internally for iron poisoning (bitter taste indicates
the removal of poison from body). *Cooked leaf is given internally to expel worms in children. Oil prepared from bark is applied for pain and scabies. Leaf paste is applied for scabies. *Root extract in cow milk is used for stomachache. Gum dissolved in water is applied for eczema. Plant preparations are blood purifiers, increases bone tissue and sperms.

*Root paste with milk is applied for piles. *Bark extract mixed with parched rice is taken for sexual vigour in men (used for men below the age of 40). *Tambuli prepared from shoot tip is used for rheumatism, diabetes, skin diseases and phlegm (not recommended for pregnant women). *3 – 4 drops of root juice are used as ear drop for sever earache. *Leaf cooked in steam with salt and jaggery is mixed with rice for overcoming the deficiency of haemoglobin. *Tender shoot tip paste with honey is applied for penis swelling, while its extract with Shilajitha is used internally. Tender shoot tip extract with honey is used as eye drop. *Root bark ground in water is applied for rat bite. *Bark and neem bark decoction is used for pancreatic calculi. *Oil prepared by heating crushed tender shoot tip and cumin in oil is applied for scabies. Bark powder is applied for dog bite. *Fried root powder is applied with ghee all over the body for pit viper bite. Bark extract with honey is used as eye drops for itching, burning and water release from eyes. *Leaf ground with that of Calotropis gigantea is applied for piles. *Leaf and gingelly seeds powder paste with ghee or leaf paste with sugarcandy is used as wound healer. *Bark ground with Cedrus deodara heart wood is heated and is applied for leprosy and lymph node swellings.

Etymology: Chaksushya (pleasing to eyes) and Mochaka (releasing) are due to its beautiful appearance and diverse therapeutic efficacy.

Note: Fruit is highly nutritious. Dried fruits are put into water to purify it. Oil extracted from seeds (Ben oil) is used in clocks. Sterols, moringine, α- & β-carotene, 4-hydroxymellein, vanillin, β-sitosterol, β-sitosterone, octacosanoic acid, moringinine, pterugospermin and terpenes are the active components. It is used in the preparation of Prabhanjana vimardana taila, Sarasvata ghṛta, Vastavamayanaka ghṛta, Ksara taila, Sudarsana churna, Sarpapadi pralepa, Sobhanjanadi lepa, Syamadi churna, Sobhanjanadi kvatha, Visatinduka taila, Ekangavira rasa,
Sarvajwarahara lehya and Karpasasthyadi taila (Dey, 1994; Kapoor, 1990; Sharma et al., 1998).

613. Morus alba L. (Plate 104 B)

Family: Moraceae

Vernacular Name: San: Tooda, Toola, Tula, Tutam
  Eng: Mulberry, White mulberry
  Kan: Uppunerale, Hippenerale
  Mal: Mulbari, Pattunoolpuzhuchedi
  Tulu: Ippenerale

Habit: Small tree.

Habitat: Cultivated.

Status: Occasional. Exotic.


Uses: Decoction prepared from its bark is given for tonsillitis, scabies, urinary disorders, lumbago, diarrhoea, gastric ulcers, liver and spleen disorders. It is also used as a brain tonic. *Leaf and onion ground, mixed with Vernonia anthelmintica seed powder and turmeric powder are boiled in coconut oil and is applied for bed sores and diaper rashes. *Leaf juice mixed with sugar and milk is used for dysentery due to increased body heat. Root extract is a digestive agent. Fruit extract is a sleep inducer, blood purifier, also used for rheumatism and biliousness. *Leaf paste is a wound healer. *Root bark decoction is used as gargle for oral health. Stem bark decoction is germicidal and laxative.

Etymology: Uppunerale (salt black plum) and Pattunoolpuzhuchedi (silk worm plant) arose due to its deep purple fruit resembling that of Syzygium cumini and much use of leaves to rear silkworms.

Note: Sanggenon is the active constituent (Chaudhri, 1996).
614. *Mucuna pruriens* (L.) DC. var. *pruriens* (Plate 104 C)

Syn: *Mucuna prurita* Hook.; *Dolichos pruriens* L.

Family: Papilionaceae

Vernacular Name: San: Atmagupta, Kapikacchu, Markati
                   Eng: Common cowitch, Cowhage, Velvet bean, Bengal bean
                   Kan: Nasugunni, Nayisonagu, Nayisonangu
                   Mal: Naikurana, Chorivalli
                   Tulu: Nayisonangu, Nayisodanku

Habit: Twining herb.

Habitat: Along hedges.

Status: Common. Weed.


Uses: *Coffee prepared from the seeds is used for biliousness. *Seeds cooked in cow milk are highly recommended for increasing sperm count and motility. *The stinging hairs of the fruit are mixed with curd and drunk to expel intestinal worms. *Fruit hairs mixed with jaggery are also taken to expel worms. Seed decoction is used as a general tonic for weakness. Seed is aphrodisiac and a general tonic. *Root decoction or extract with tender coconut water is used for urinary disorders. Root decoction has diuretic property and its paste is applied for elephantiasis. Leaf paste is applied for wounds and ulcers. *Root extract is taken internally for typhoid. *Root extract with tender coconut water is given internally while its paste with tender coconut husk juice is applied externally for urticaria, eczema, rashes and other skin diseases. Root or seed decoction is used internally for cough. It is also useful for leucorrhoea, raktavata* and diabetes. Seed extract is taken for Parkinson’s disease and to increase sperm count. *Extract of whole plant soaked in
water overnight is given on next morning for urticaria, rashes and allergies. *Root and seeds along with *Terminalia bellirica fruit and dried *Phyllanthus emblica fruit are crushed, added to liquor, mixed with sugarcandy and given for four days to increase sexual vigour. *Crushed root and dried grapes kept in tender coconut water overnight are consumed for urticaria and allergy. *Root decoction is given with milk and sugar at night for mental disorders, shivering of body, weak muscles and muscle pain. *Flower decoction is recommended for fever. Stem juice is applied for stomach disorders and wounds. Root extract is used for paralysis, nervous debility, rheumatism, menstrual, kidney problems, skin diseases, elephantiasis, septic ulcers and loss of appetite. *Fried seed powder is used as coffee powder for asthma. *Seed powder with honey and ghee is also used for asthma. *Seeds cooked in milk are ground in ghee and taken with honey for bronchitis. *Seeds soaked in raw rice washed water for three days are ground in tender coconut water and consumed for indigestion in children. *Dosa* prepared by grinding its pods and raw rice soaked in water for three days with half ripen coconut are eaten to expel intestinal worms in children. *The stinging hairs of pod soaked overnight in buttermilk taken with the same butter milk to expel intestinal worms. *Leaf ground with cumin seeds in water is applied for breast swelling in lactating mothers. *Tender coconut water in which crushed root is soaked for one hour is given to drink in the morning, in empty stomach for allergic rashes and urticaria.

Etymology: Atmagupta (guarded soul), Markati (monkey like), Chorivalli (itchy climber) are due to the morphology of its fruits. Fruit are covered with dense stinging hairs.

Note: Tying of *Helicteres isora* stem peel to the waist acts as preventive of *Mucuna pruriens* allergy. It is used in the preparation of *Asvagandhadi lehya, Brhat masa taila, Vanari gutika, Masaphaladi ghrita, Vidaryadi kashaya, Amrtaprasra ghrita, Stanyajanana rasayana and Atmagupta churna* (Sharma et al., 1998; Sivarajan & Balachandran, 1996). 3, 4-dihydroxy phenylalanine, muccinine, mucunadine, mucunine, prurienine, prurieninine, L-dopa and choline are the active constituents (Dey, 1994; Kapoor, 1990, Sharma et al., 1998). Seed powder is sued as beverage.
615. *Mukia maderaspatana* (L.) Roem. (Plate 104 D)

Syn: *Bryonia scabrella* L. f.; *Mukia scabrella* (L. f.) Arn.

Family: Cucurbitaceae

Vernacular Name: San: Trikosaki, Krtaranndhrah
    Kan: Manithonde, Mukkappira
    Mal: Mukkapperam, Kasappuchedi
    Tulu: Mukkappere

Habit: Climbing herb.

Habitat: Wastelands and along hedges.

Status: Common. Weed.


Uses: *Oil prepared from plant juice is used for biliousness in children. *Root is chewed for toothache. *Whole plant decoction is taken to increase urine flow and also to bring down blood glucose level. *Seed decoction is used for urine block and to induce sweating. Root decoction is recommended for gas trouble and toothache. *Whole plant paste is applied for corns. *Fruit extract is given internally for liver disorders.

Etymology: Manithonde (gem gherkins) arose as its fruits are highly medicinal and are miniature of gherkins.

Note: It is used in the preparation of *Manasamitra vataka* (Sivarajan & Balachandran, 1996).

616. *Muntingia calabura* L. (Plate 104 E)

Family: Elaeocarpaceae

Vernacular Name: Eng: Bird’s cherry, Calabura, Jam tree, Cotton candy tree
    Kan: Gasagase hanninamara
Mal: Pancharappazham  
Tulu: Cheepeparandu

Habit: Small tree.

Habitat: Grown in gardens.

Status: Frequent. Exotic.

Description: Small tree with densely pubescent branches. Leaves simple, lanceolate or oblong-lanceolate, glandular-hairy above, wooly beneath. Flowers white, axillary, solitary or paired. Sepals 5, lanceolate. Petals 5, obovate. Stamens numerous. Fruit red or yellow berry.

Uses: *Fruit juice is recommended internally for diarrhoea and digestive disorders. *Bark decoction is used for leucorrhoea and other gynaecological diseases.

Etymology: Pancharappazham (sugar fruit) and Cheepeparandu (sweet fruit) are due the sweet taste of its fruits.

Note: Bark is often used as an adulterant for Grewia glabra due to its mucilaginous nature. Ripe fruits are edible.

617. Murraya koenigii (L.) Spreng. (Plate 104 F)

Syn: Bergera koenigii L.

Family: Rutaceae

Vernacular Name: San: Kaidarya, Krishnanimbah, Surabhinimba, Varatikta  
Eng: Curry leaf tree, Curry bush  
Kan: Oggarane soppu, Karibevu, Gandhabevu  
Mal: Kariveppila, Kariveppu  
Tulu: Besappu

Habit: Small tree.

Habitat: Cultivated.
Status: Common.


Uses: *Pill (of the size of a Bengal gram) prepared by grinding its leaf is taken for seven days in cases of food poisoning. *Leaf paste with turmeric powder is applied externally and decoction is given to drink for scorpion bite. *Paste of leaf cooked in milk is applied as a mosquito repellent, also for itches, scabies and ringworm. Leaf decoction is taken to induce appetite. *Leaf daily chewed for reducing serum cholesterol, blood sugar and gastric irritation. Leaf paste is applied on the center of head for vertigo. *Fresh leaf is eaten for blood dysentery. *Root and bark decoction is consumed for vomiting during typhoid attack. *Tender leaf paste is applied for septic wounds and ulcers. *Oil prepared from leaf juice or leaf paste is applied over head for blackening the hair. *Crushed and boiled leaves are mixed with butter milk and salt, heated and are given for loose motion. Leaf paste is applied for skin diseases and its juice is taken internally given for stomachache. Leaf extract is a diuretic, used for urinary diseases, promotes menstruation and removes toxins from food. Regular use of leaf chutney helps to reduce fat. Leaf decoction is given for jaundice. *Hair oil prepared by mixing its leaf juice with *Eclipta prostrata* leaf juice, coconut oil and milk (1:1:1:1) is used for blackening the white hairs. Leaf extract is digestive, stimulant and is used for malnutrition in children. *Tambuli* prepared from leaves is digestive, poison remover from food, blood purifier, gives strength to bones, useful for skin diseases and urinary disorders. *Leaf extract with water is consumed at morning in empty stomach for three days in case of blood discharge through urine, burning during urination and urine block. *Leaf, gingelly seeds and cumin ground in butter milk are taken at morning in empty stomach for 24 days as a tonic. Plant decoction is a laxative, poison remover, useful for fever, *raktapitta*, skin diseases and jaundice. *Oil prepared by boiling leaf juice, coconut oil and milk (200 ml each) is applied for blackening the hairs. *Leaf and *Curcuma longa* rhizome (2:1) juice is given to drink and paste is applied externally for scorpion, honey bee, wasp and insect bites.
Etymology: Krishnanimbah, Karibevu, Kariveppu (black neem), Surabhinimba, Gandhabevu (fragrant neem), Oggarane soppu (seasoning leaf) and Kariveppila (black neem leaf) arose due to its blackish plant body, fragrant leaves which resemble that of neem and are used for seasoning the dishes.

Note: It is used in the preparation of Kalasakadi kashaya, Pamantaka taila, Jatyadi taila and Jatyadi ghrta (Sivarajan & Balachandran, 1996).

618. Musa paradisiaca L. (Plate 105 A)

Syn: Musa rosacea Jacq.; Musa sapientum L.

Family: Musaceae

Vernacular Name: San: Kadali, Rambha

Eng: Banana, Plantain

Kan: Baale, Baale gida

Mal: Kadalivazha, Vazha

Tulu: Baare

Habit: Large herb.

Habitat: Cultivated.

Status: Common.

Description: Large herb with thick pseudostems composed of convolute leaf-sheaths; stem subterranean corm. Leaves spirally arranged, very large, oblong, with a thick midrib and pinnately parallel nerves. Inflorescence a terminal spike with flowers grouped in clusters, each cluster subtended by a large brightly coloured spathaceous bract, lower clusters female and upper male. Sepals and 2 petals connate into a 3 – 5-lobed tube split down one side. Stamens 5. Fruit oblong, trigonous, curved berry, yellow when ripe.

Uses: Stem juice is given to patients suffering from kidney or bladder stones. Inflorescence juice is used for menstrual problems. Stem juice is consumed for burning during urination, shortage in urine, toxemia and menstrual disorders. *Stem
juice along with cumin, coriander, cardamom seeds and honey is used as a tonic, also useful for heart burn. Half to one litre stem juice is given to induce vomiting when one has swallowed poison. *Flower ground in curd is used for bleeding piles. For burns oil dhara* is performed after laying down the patient on banana leaf. 
*After smearing the head with paste of Ipomoea pes-caprae, banana leaf is tied for anxiety stress. Juice of inner stem is taken to prevent kidney stones. This juice decreases serum cholesterol and increases hemoglobin levels. *Oil prepared from rhizome juice is applied on the head for sleeplessness. Flower extract is consumed for blood dysentery, menorrhagia and to increase hemoglobin level. *Fruit of venneran* variety is burnt in fire and is given by powdering for three days to patients suffering from amoebic dysentery, bacillary dysentery, dysmenorrhoea, menstrual irregularities and heart burn. *Eating banana with milk increases gastritis while with curd decreases gastritis. Root ground in milk is recommended for giddiness. *Root juice is used to expel worms in calves. Dried inflorescence axis ash of kadali* variety mixed with ghee is applied for furuncles. *Green fruit of venneran* variety is cooked and given as arrowroot powder for proper growth and health of children. *Eating fruits of red variety and its preparations are recommended for piles. *Stem juice is used as first aid in snake bite (it dilutes poison and gives extra time for treatment). *Fruit paste with butter is applied for bone swelling. *Stem juice mixed with lime juice and jaggery is consumed to expel or remove the poisons from the body.

*Two cups of stem juice is given in empty stomach for wound and swelling. *Stem juice mixed with cardamom powder is taken for 3 – 6 days in case of urine block and burning during urination. *One cup stem juice mixed with Garcinia indica fruit juice and honey is consumed three times a day for 7 – 14 days in case of high blood pressure. *One cup stem juice is given with sugarcandy for over menstrual bleeding. *Juice of two bracts boiled with equal quantity of coconut oil is applied for dog bite and cuts caused by iron objects (believed to have anti tetanus property). *Fruit of nendran* variety ground with turmeric powder is heated, applied and tied with cloth for three days in case of corns. Two cups of stem juice is taken at early morning in empty stomach to remove poisons from body and for swellings. *Stem
juice is consumed after one hour of food for diarrhea due to indigestion. *Stem
juice mixed with milk and cumin powder is used for water in face and feet of
pregnant woman. *Stem juice mixed with coriander decoction is used for burning
sensation in stomach of pregnant women. *Rhizome juice mixed with honey is
recommended for vomiting. *Oil prepared from rhizome juice is used as ear drop
for earache. Rhizome juice (one litre) is given to drink in case of poison
consumption. *Rhizome juice mixed with milk is given at bed time for expelling
intestinal worms. *Inflorescence juice mixed with curd is taken at morning in empty
stomach for irregular menses and over bleeding. *Juice of bract cooked in charcoal
mixed with honey and ghee is recommended at morning in empty stomach for blood
dysentery. *Young leaf is used as a cover and tied for ulcers caused by burn. *Bract
cooked in steam is eaten for tuberculosis and weakness. *Extract of fruit rind
ground with *Hyoscyamus niger seeds in rice washed water is consumed at morning
in empty stomach for hyperacidity. *Banana fruit rind which has become black in
colour ground in rice cooked water is applied for furuncles and skin diseases. *Fruit
of *rasabale variety mixed with ghee is eaten in empty stomach at early morning for
gastritis. *Fully ripe fruit ground with a little camphor is applied over head, then
covered with *Ricinus communis leaf and tied for insomnia. Stem juice is given for
liver problems and pancreatic calculi. *1 – 2 drops of *Datura metel flower juice are
kept inside *rasabale banana and eaten for leucorrhoea. Fruit of *venneran variety
is kept inside rice for 2 – 3 days and then eaten for dysentery. Flower chutney is
recommended for urinary disorders. *Rhizome juice of *puvan variety ground in
fresh milk is recommended for stomachache during menses in teenage girls. *Fruit
extract with gingelly oil is used for leucorrhoea.

*Leaf ash mixed with borax in gingelly oil is kept for three days in an airtight
container and applied for tinea versicolor. *Fruit coated with a little sulphur is taken
with milk or butter milk for scabies. *After washing the wound with hot water and
smearing with gingelly oil, one inch thick coating with *puvan variety fruit paste is
given. Then the leg is kept inside the mound of paddy seeds of second crop for a
period of 1½ hrs. This gives promising results for ringworm. *Neikadali variety
stem juice ground with a little musk is used in the starting stage of measles and
chickenpox. Stem juice of *puvan* variety is given internally for burning sensation. Fruit of *Puvan* fruit paste is applied and followed by *Croton tiglium* seed paste for septic ulcers. Cooked fruit paste is recommended for constipation in children. *One glass of kadali* stem juice mixed with lime juice is given thrice a day for three days in case of kidney and bladder stones. *About 50 ml stem juice mixed with about 10 gm sugarcandy is taken twice a day in case of burning urination and urinary stones. *Stem peel extract with butter milk (puvan variety) is given internally after immersing a hot white stone in it for nervine weakness in calves.

Note: Fruit is rich in iron content. It is anti fungal and is used to clean nuclear wastes. 4 a-methyl sterol ketone, saponins, sterols, triterpenes are the active components. It is used in the preparation of Abhraka bhasma, Ksara taila and Hemanatha rasa (Sharma et al., 1998). Fruit is used as vegetable and nutritious food.

619. *Mussaenda belilla* Buch.-Ham. (Plate 105 B)

Syn: *Mussaenda frondosa* L.; *Mussaenda laxa* (Hook. f.) Hutch ex Gamble

Family: Rubiaceae

Vernacular Name: San: Nagavalli. Rajatarih, Sriparnah

Eng: Schizomussaenda

Kan: Dasapatre, Bellante

Mal: Vellila, Vellilam, Vellilathaali

Tulu: Bollethappu

Habit: Climbing shrub.

Habitat: Forests and hedges.

Status: Common.

Description: Climbing shrub with tomentose branchlets. Leaves simple, broadly ovate, pubescent beneath. Flowers in terminal, densely hirsute lax cymes. Calyx 5-lobed; lobes lanceolate; one lobe transformed into a large creamy-white, leaf-like,
persistent, ovate structure. Corolla orange, tubular below, funnel-shaped above, throat villous; lobes 5. Fruit ovoid berry, black when ripe.

Uses: *Mucilage from stem and white sepal is applied over the head before bath in cases of malnutrition. Stem bark peel decoction is used internally for same disease. *Leaf mucilage is applied over head for insomnia. Root bark decoction is taken for genito urinary diseases and leucorrhoea. *Young shoot tip paste is applied for herpes. *The water oozing out from the cut stem is used for conjunctives and other eye diseases. *Leaf mucilage in water is used as shampoo. It is a cooling agent and has similar properties to that of Acacia sinuata. *Root extract in water is used for eye diseases. Stem decoction is used for cough, while leaf paste for urticaria and rashes. *Root paste with water is also used for conjunctives. *Leaf and fruit juice is recommended for poor eye sight. Stem decoction is recommended for cough. *White sepal juice is taken internally for leucorrhoea. Bark decoction is used internally for rheumatism. *The white sepal extract is given internally for jaundice while its paste is applied for rashes. *Root extract in milk is consumed for leucorrhoea and other menstrual disorders. *White sepal (25 gm) ground with two spoon cumin seeds and ½ cup fresh milk is given in empty stomach for one week in case of jaundice, while decoction with milk is given for bile and liver disorders. *White sepal extract with rice washed water is used for menstrual disorders. *White sepal ground with fresh milk is taken at early morning in empty stomach for jaundice. *Mucilage of leaves heated in fire is used as shampoo after smearing ghee over the head for sleeplessness. Plant extract is cooling, used in colouring industry and for biliousness. *Extract of inner portion of stem crushed with cumin seeds are poured into eyes in case of glaucoma in eyes. Root decoction with milk is used for leucorrhoea. *White sepal juice mixed with milk is consumed thrice a week for three weeks in case of rabid dog bite. *This plant and Grewia glabra bark paste is applied over the head for biliousness.

Etymology: Sriparnah (prosperous leaf), Vellila, Bollethappu (white leaf) and Vellilathaali (white leaf shampoo) are due to its leaf-like, creamy-white sepal with diverse uses. These are also used as shampoo.
Note: White sepal, flower, young twig and fruits are used as vegetable.

620. *Myristica beddomei* King ssp. *beddomei* (Plate 105 C)

Syn: *Myristica daebyloides* auct. non Gaertn.

Family: Myristicaceae

Vernacular Name:  
San: Jatiphala  
Eng: Wild nutmeg  
Kan: Pindikaayi, Kaadu jaayikaayi  
Mal: Kattu jathi, Adakkapayin, Kothappayin  
Tulu: Pundikaayi

Habit: Large tree.

Habitat: Evergreen forests.

Status: Common.

Description: Large tree with grey bark. Leaves simple, oblong-lanceate or elliptic-lanceate, glaucous beneath, coriaceous. Flowers small, ovoid, monoecious, in short umbels on axillary shoots. Perianth greenish-yellow; lobes 3. Stamens adnate to form a fleshy staminal column. Fruit broadly ovoid or ellipsoid drupe; aril reddish.

Uses: *Aril extract with honey is used for cough. *Aril decoction heated with oil is applied for rheumatism. *Dried aril powder is used as tooth powder. *Raw fruit extract boiled with oil is used for earache.

Etymology: Pindikaayi (mass fruit), Kaadu jaayikaayi and Kattu jathi (wild nutmeg) arose as its fruits are produced in masses and share resemblance with nutmeg.

Note: It is usually used as a substitute for *Gymnacranthera farquhariana*.

621. *Myristica fragrans* Houtt. (Plate 105 D)

Family: Myristicaceae

Vernacular Name:  
San: Jatiphala, Jatipatra, Patri
Eng: Nutmeg tree, Mace tree
Kan: Jakkayi, Jaayi kaayi, Jaapatre
Mal: Jathikka, Jathi
Tulu: Jaayi kaayi

Habit: Small tree.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Small tree. Leaves simple, elliptic-lanceolate, glabrous. Flowers small, monoecious or dioecious, in axillary few-flowered drooping cymes. Perianth urceolate, villous, 3-lobed. Stamens adnate to form a fleshy staminal column. Fruit pyriform to globular hanging drupe, yellowish when ripe; aril red, much laciniate.

Uses: *Aril ground with garlic in milk is used for diarrhoea or dysentery due to indigestion. *Seed or fruit pulp extract in butter milk is given for dysentery, stomachache, vomiting and gas trouble in children. Oil extracted from fruit juice is applied for chronic wounds, ulcers and rheumatism. *Fruit ground with honey is given for indigestion in children. *Fruit rind extract with milk is given to stop vomiting while that with buttermilk to stop diarrhoea. *Fruit rind powder in milk is given for premature ejaculation. *Fruit rind chutney is recommended to reduce high blood pressure. Aril extract is given to expel phlegm. *Oil extracted from seed or fruit juice is applied for scabies and pain. *Fruit extract with milk mixed with sugarcandy is used as a health tonic. Aril and fruit extract is aphrodisiac, tonic and digestive. *Fruit paste with coconut or cow milk is applied for pimples. *Seed paste with butter milk is applied for decreased blood supply to body parts, giddiness and heavy body feeling. *Seed ground in milk is given with milk for sleeplessness in children (antidote for over dose is milk and sugar mixture). *Fruit, cinnamon and Acacia catechu heart wood powder dissolved in butter milk is recommended for diarrhoea. *Fruit and cumin seeds ground in milk are taken for several days to expel intestinal worms in children. Fruit ground with milk is applied for pimples.

Etymology: Patri (winged leaf) arose due to its much laciniate aril.
Note: It is used in the preparation of *Jatiphaladi churna*, *Jatiphaladi vati*, *Jatipatradi kvatha*, *Sudarsana churna* and *Khadirarista* (Dey, 1994; Sharma et al., 1998). Macene, pinene, camphene, isoeugenol, epicatechin and cyanidin are the active components (Kapoor, 1990). Aril and seed are used as condiment.

**622. Myristica malabarica** Lam. (Plate 105 E)

Family: Myristicaceae

Vernacular Name: San: Vanyajati, Jatiphala, Kamuka, Pasupasi  
Eng: Malabar nutmeg, Bombay mace, False nutmeg  
Kan: Kaanagina mara, Kaanaje, Ramapatre  
Mal: Chorapali, Ponnampayin, Pasupasi  
Tulu: Kaanaje, Ramapatre

Habit: Large tree.

Habitat: Myristica swamps and sacred groves.

Status: Occasional.

Description: Large tree. Leaves simple, elliptic-oblong, glabrous. Flowers small, monoecious; male in dichasioid cymes; female in short subumbellate cymes. Perianth urceolate, rusty-puberulous, 3-lobed. Stamens adnate to form a fleshy staminal column. Fruit oblong, rusty-tomentose drupe; aril yellow.

Uses: *Aril decoction is used to arrest bleeding from any part of the body. Bark paste is applied for skin diseases. *Oil extracted from seeds is applied for rheumatic pain and indolent ulcers. *Fruit rind chutney is recommended to reduce high blood pressure. Fruit decoction is used as a blood purifier and also for rheumatism. *Aril extract is consumed to expel phlegm. *Bark and that of *Tabernaemontana heyneana* ground in *Citrus aurantium* fruit juice is applied for carbuncles. *Leaf paste with lime juice is applied externally and extract is used internally for all types of carbuncles.

Etymology: Vanyajati (wild nutmeg) is due to its wild nature close resemblance of fruits with that of nutmeg.
Note: Aril gives edible colour. Aril is used as spice. It is usually used as a substitute for *Myristica fragrans*.

623. *Myxopyrum smilacifolium* (Wall.) Blume (Plate 105 F)

Syn: *Myxopyrum serratulum* Hill.

Family: Oleaceae.

Vernacular Name: San: Caturdharalata, Hemamalati
   Kan: Chaduramallige
   Mal: Chathuramulla, Chathuravalli
   Tulu: Chaduramallige

Habit: Climbing shrub.

Habitat: Evergreen forests.

Status: Occasional.


Uses: *Plant paste with salt is used as an anti inflammatory agent in cattle. *Whole plant paste is applied for bruises, ankle twist and sprains.

Etymology: Caturdharalata, Chathuravalli (4-angled climber), Chaduramallige and Chathuramulla (4-angled jasmine) are due to its yellowish-white flowers and 4-angled branches.

Note: Much used for bruises.

624. *Naravelia zeylanica* (L.) DC. (Plate 106 A)

Syn: *Atragene zeylanica* L.

Family: Ranunculaceae
Vernacular Name: San: Dhanavalli
Kan: Charachara balli, Agni balli, Thalevadathada balli
Mal: Pozhuthalachi, Soothravalli, Thalavedana valli, Vathamkodi
Tulu: Tharekutthutha ballu

Habit: Climbing shrub.

Habitat: Along hedges.

Status: Common.


Uses: *Leaf is smoked just like beedi for nasal block due to cold. *Leaf paste is applied over forehead for headache. *Crushed leaf or full grown stem is snuffed to get relief from headache and migraine. *Tender shoot tip tambuli is recommended once in a week to increase digestive power. *Its twining stem is tied around head for headache. Plant paste is applied for skin diseases, itches and joint pain. *Plant extract is used internally for expelling worms. Leaf juice is used as nasya for migraine. *Leaf tambuli is the best for indigestion. *Crushed root, stem or leaf is snuffed and 3 – 4 drops of plant juice are used as nasya for rhinitis and migraine. *Rasam prepared from six tender shoot tips is used with rice for loss of appetite (over dose may cause burning sensation in stomach, diarrhoea, mouth ulcers and over salivation). *Stem is used as tooth brush for toothache, ulcers in gum, bleeding, throat pain and phlegm. *Whole plant juice mixed with buffalo milk is applied to the opposite side of body for migraine. *Root along with that of Rauvolfia serpentina ground with rice washed water is applied for quick heal of swellings. *Root and that of Senna tora ground with lime juice is taken internally (2 spoon) for dog bite. *Leaf, Allophylus cobbe leaf, Urginea indica bulb and pepper seeds extract with water is used as nasya to opposite side nose for hind leg joint
dislocation. *Rasam* prepared from its leaf and *Acacia sinuata* leaf is used for cold. *Whole plant paste is massaged for nervine weakness in cattle.

Etymology: Dhanavalli (valuable climber), Agni balli (fire climber), Thalevadathada balli, Thalavedana valli, Tharekutthutha ballu (headache climber) and Vathamkodi (twig for rheumatism) are due to its diverse uses and carminative action. It is much used for headache and rheumatism.

Note: Much used for digestive disorders and headache. It is used in the preparation of *Kaccoradi taila* and *Kaccoradi churna* (Sivarajan & Balachandran, 1996). Tender shoot is used as vegetable.

**625. Naregamia alata** L. (Plate 106 B)

Family: Meliaceae

Vernacular Name:  San: Amlavalli, Kandalu, Triparnika
          Eng: Goanese ipecacuanh
          Kan: Nelakanchi, Nelakkanchi, Pittamari
          Mal: Nilanaragam
          Tulu: Nelakkanchi

Habit: Small undershrub.

Habitat: Waste places and forest floors.

Status: Common. Weed.

Description: Small undershrub. Leaves 3-foliolate; leaflets cuneate-ovate, glabrous; petiole winged. Flowers solitary or in pairs. Calyx 5-lobed; lobes oblong-lanceolate. Petals 5, white. Staminal tube cylindric below, inflated near the top; anthers 10. Fruit 3-lobed loculicidal capsule.

Uses: *Plant tambuli* is used to improve gastrointestinal system. Whole plant decoction is recommended for rheumatoid arthritis and indigestion. *Leaf paste is applied on center of the head for vertigo. *Plant extract in coconut milk is taken for biliousness. *Plant extract is given in large doses to induce vomiting to remove
poison from stomach. *10 ml of plant juice is given for first four days and on the fifth day one glass full is given to drink in case of food poisoning (removal of poison is by vomiting). This is also beneficial for gastric irritation and gastric ulcers. Root and leaf decoction is used for biliousness, rheumatism, indigestion and scabies. *Whole plant decoction in milk is consumed internally and its paste is applied over head for insanity. *Whole plant crushed with bark of *Pterocarpus marsupium* is boiled with coconut oil and is applied for all types of wounds and cuts. *Leaf extract with jaggery is recommended for biliousness. Whole plant decoction is consumed for swelling in stomach. *Plant, tender shoot tips of *Mangifera indica* and *Syzygium cumini* are boiled in coconut oil, applied over chest and abdomen while small quantity is used internally for asthma and bronchitis. *Shoot tip extract is used as bitter agent for small children. One handful whole plant ground in butter milk, boiled and is taken one hour before breakfast for three days in case of biliousness, gastritis, vomiting sensation after food, less urine production and sleeplessness (in case of chronic biliousness, vomiting can occur). *Plant extract in butter milk is taken for giddiness due to biliousness. *Leaf and tender shoot tip rasam* mixed with rice is eaten for loss of appetite. *Flower tambuli* is tasty and digestive. Oil prepared from leaf juice is applied for skin diseases, ulcers, boils and scabies. Root decoction is used for flue, vomiting, diarrhoea, rheumatism and chronic asthma. *Leaf ground with coconut milk is given to drink for biliousness (relief is through vomiting).

Etymology: Triparnika (three leaved), Nelakanchi, Nelakkanchi (ground bitter), Nilanaragam (ground lemon) and Pittamari (biliousness killer) are due to its 3-foliolate leaves, bitter taste, undershrub nature, flowers resembling that of lemon and much use for biliousness.

Note: Much used plant for biliousness.

**626. Naringi crenulata** (Roxb.) Nicolson (Plate 106 C)

Syn: *Limonia crenulata* Roxb.

Family: Rutaceae
Vernacular Name: San: Surasi, Vilvaparni
   Eng: Wild lemon, Elephant apple
   Kan: Aranemullu, Nayinimbe, Kaadulimbe, Nayibela
   Mal: Kattunarakam, Malanarakam
   Tulu: Kattulimbe

Habit: Small tree.

Habitat: Semi evergreen forests and rocky areas.

Status: Occasional.

Description: Small glabrous spinous tree. Leaves imparipinnate; leaflets elliptic to
elliptic-lanceolate; rachis and petiole broadly winged, jointed. Flowers small, in
Fruit globose hesperidium, black when ripe.

Uses: *Root cooked with rice is taken for biliousness, gastric ulcer and gastritis.
*Root extract in coconut milk is also used for same purpose. *Leaf or root paste in
rice cooked water is applied for giddiness due to biliousness. *Leaf, Aegle
marmelos leaf and Strychnos nux-vomica young leaves are boiled in oil and the
resulting oil is applied over head for running nose. *Root extract is used as a
purgative for colic and chest pain. *Dried fruit extract is recommended as a tonic
for intermittent fever. Root powder is consumed for stomachache and leaf extract
for epilepsy. Plant or root decoction is taken for stomach swelling. *Leaf extract is
used with jaggery for biliousness. It is antipyretic. *Root extract in milk is
recommended for jaundice. *The milk is which its leaves are cooked is given to
drink and its paste is applied over the head for three days in case of giddiness.
*Root paste with salt water is applied for septic ulcers and wounds. *Bark, leaf of
Dendrophthoe falcata growing on Vitex negundo are ground and applied to expel
thorns and spines from body. *Leaf juice mixed with salt is consumed for loss of
appetite in cattle.

Etymology: Vilvaparni (leaves resembling Aegle marmelos), Nayinimbe (dog
lemon), Kaadulimbe, Kattunarakam, Kattulimbe, Nayibela (dog Limonia) and
Malanarakam (hill lemon) are due to its pinnately compound leaves, fruits which are miniature of lemon or *Limonia*, wild nature and restriction to the hills.

Note: Fruits are often pickled.

627. *Nelumbo nucifera* Gaertn. (Plate 106 D)

Syn: *Nelumbium speciosum* Willd.

Family: Nelumbonaceae

Vernacular Name: San: Ambuja, Aravinda, Kamala, Padma, Pankaja, Sarasija
Eng: Sacred lotus, Indian lotus
Kan: Thavare, Kamala
Mal: Thamara, Chenthamara
Tulu: Thavare

Habit: Aquatic herb.

Habitat: Fresh water pools and still waters.

Status: Occasional.

Description: Aquatic herb with creeping rhizomatous stem. Leaves raised above the water, peltate, orbicular, upturned; veins prominent below. Flowers large, long-pedicelled. Sepals 4 – 5, caducous. Petals numerous, pinkish-red or white, caducous. Stamens numerous. Carpels many. Fruits embedded in the broad truncate torus.

Uses: *Stamens ground in milk is used for chronic menstrual problems, urinary disorders and is cooling agent. *Oil prepared from leaf juice is used as hair oil for malabsorption in children. *Flower extract is taken as a blood purifier and its paste is applied for skin diseases. *Stamen ground in water is applied below navel for immediate urine release (in urine block). *Stamen ground in milk or rhizome decoction is used internally for burning sensation during urination. Rhizome decoction has cooling effect, used for biliousness, ovarian, menstrual and bleeding diseases. *Rhizome juice or leaf juice or leaf decoction is given to drink in case of snake bite. *Crushed leaf petiole is kept in hot water for one hour, the settled down
residue is applied externally and the supernatant liquid is used as wash once in two weeks in case of scanty scalp. *Stamen decoction is consumed with honey for dysentery.

Etymology: Ambuja (water born) clearly indicates its habitat.

Note: Flower is used for worship. Nelumbine, arnepavine, nuciferine, roemerine, isoliensinine, liensinine, lotusine, neferine, pronuciferine, quercetin, luteolin, isoquercitrin and leukodelphinidin are the active components. It is used in the preparation of Aravindasava, Catura kavala ghṛta, Guducyadi modaka and Sudarsana churna (Dey, 1994; Kapoor, 1990; Sharma et al., 1998). Rhizome is edible.

**628. Neolamarckia cadamba** (Roxb.) Bosser (Plate 106 E)


Family: Rubiaceae

Vernacular Name: San: Kadamba, Kadambah  
Eng: Cadam, Kadam  
Kan: Kadamba vriksha, Kadamba  
Mal: Kadambu, Kattuchakka, Vellakadambu  
Tulu: Kadambo

Habit: Large tree.

Habitat: Along wet places.

Status: Rare.

Description: Large deciduous tree with horizontal branches. Leaves simple, broadly ovate, coriaceous. Flowers in large globular orange heads. Calyx 5-lobed; lobes linear, erect. Corolla funnel-shaped; lobes 5, lanceolate. Stamens 5. Fruit a fleshy, globose mass of many, few-seeded pyrenes.
Uses: *Bark cooked with rice is taken for osteoarthritis. Bark decoction is recommended for increasing lactation, urine flow and also for biliousness, gastritis, cough, diarrhoea and gastric ulcers. *Eating ripe fruit is beneficial for gastric ulcers. *Bath with leaf decoction is recommended for skin diseases. *Bark decoction is used thrice a day for seven days in case of chicken and small pox. *Bark paste with very tender coconut is applied to remove marks of chicken pox. Bark decoction is used internally for stomachache. *Bark ground with rice washed water is given for weakness of legs in cattle. Bark decoction is used for rheumatism.

Etymology: Kattuchakka (wild jack) and Vellakadambu (white cadamba) arose as its fruit resembles jackfruit and whitish plant body.

Note: Soft-wooded tree and is sacred. It is used in synonymous with *Haldina cordifolia*, *Ochreinauclea missionis* and *Mitragyna parvifolia*.

629. *Nerium oleander* L. (Plate 106 F)

Syn: *Nerium indicum* Mill.; *Nerium odorum* Soland.

Family: Apocynaceae

Vernacular Name: San: Karavirah, Ashwamara
Eng: Oleander, Indian oleander, Rose bay
Kan: Ashwamarakka, Karaveera, Kanagili, Kanigalu
Mal: Arali, Chuvanna arali
Tulu: Karaveero

Habit: Large shrub.

Habitat: Cultivated.

Status: Common. Poisonous.

Description: Large shrub. Leaves simple, in whorls of 3, linear-lanceolate, tapering at the ends, glabrous. Flowers pink or white, ‘single’ or ‘double’ in terminal cymes. Calyx 5-lobed; lobes with fleshy glands at the base inside. Corolla funnel-shaped;
lobes 5; throat with a corona of 5 laciniate scales. Stamens 5. Fruit cylindrical follicles.

Uses: *Root bark paste is applied for scabies with itching sensation and eczema. *Purified root extract is recommended for leprosy and septic carbuncles. Latex is applied for piles and tumourous growths. *Root paste with water or butter milk is applied for bleeding piles. *A small quantity of its root extract heated with gingelly oil is given for easy delivery. *100 flower buds and 100 pepper seeds boiled in two litres of gingelly oil are applied for scabies and blisters. *Root, Luffa acutangula seeds, turmeric, seed coat of cashewnut and seed pulp of Ricinus communis are ground with gingelly oil and applied externally for warts and ringworm. *Root (800 gm), gingelly oil (400 ml), cow urine (800 ml), Plumbago zeylanica root and coriander seeds (50 gm each) are boiled together and resulting oil is applied for eczema, impetigo and other skin diseases. Root paste with water is applied for chronic ulcers.

Etymology: Ashwamara and Ashwamaraka (horse killer) are clear indicators of its potency. Its infusion can even kill the horses.

Note: It is highly toxic. It is used in the preparation of Malatyadi taila, Mustamrtadi churna, Kasisadi taila, Brhat maricadya taila, Laghu visagarva taila and Karaviradya taila. It has oleandrin, neriodorin, nerioderin, neriodorein, plumericin, α-amyrrin, β-sitosterol, kaempferol, neriodin and karabin as active components (Dey, 1994; Kapoor, 1990; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

630. *Nervilia aragoana* Gaud. (Plate 107 A)

Syn: Nervilia carinata (Lindl.) Schltr.

Family: Orchidaceae

Vernacular Name: San: Padmacarini
   Kan: Ondele thavare
   Mal: Nilathamara, Orilathamara
   Tulu: Onjire thavare
Habit: Herb.

Habitat: Shady places among the thickets.

Status: Occasional.

Description: Terrestrial herb with subglobose tubers. Leaves solitary, appearing after the flowers, erect, broadly ovate to almost orbicular. Scape few to many-flowered. Flowers drooping. Sepals and petals 3 each, greenish with purple veins; lip white with purple veins, tinged with yellow near the base. Pollinia 2.

Uses: *Tuber decoction or extract is used as a tonic for urinary disorders, uropathy, epilepsy, diarrhoea and dry cough. *Tuber decoction is recommended for stomachache due to gas trouble. *Whole plant paste is applied for infections in the breast.

Etymology: Ondele thavare, Orilathamara, Onjire thavare (single leaved lotus) and Nilathamara (ground lotus) are due to its terrestrial habit and solitary, orbicular leaves.

Note: Rhizome is believed to have similar properties as that of lotus rhizome. It is used in the preparation of Vastyamayantaka ghrta and Satavari ghrta (Sivarajan & Balachandran, 1996).

931. *Nervilia crociformis* (Zoll. & Mor.) Seidenf. (Plate 107 B)

Syn: *Nervilia prainiana* (King. & Pantl.) Seidenf.

Family: Orchidaceae

Vernacular Name: San: Padmacarini

    Kan: Ondele thavare

    Mal: Nilathamara, Orilathamara

    Tulu: Onjire thavare

Habit: Herb.

Habitat: Forest floors.
Status: Frequent.

Description: Terrestrial herb with globose tubers. Leaves solitary, appearing after the flowers, lying more or less flat on the ground, broadly ovate to suborbicular, dark-green mottled with purplish-brown, hirsute. Scape 1 – 2-flowered. Sepals and petals 3 each, yellowish; lip purple, 3-lobed. Pollinia 2.

Uses: *Same as Nervilia aragoana.

Etymology: Ondele thavare, Orilathamara, Onjire thavare (single leaved lotus) and Nilathamara (ground lotus) are due to its terrestrial habit and solitary, orbicular leaves.

Note: Rhizome is believed to have similar properties as that of lotus rhizome. It is used in the preparation of Vastyamayantaka ghṛta and Satavari ghṛta (Sivarajan & Balachandran, 1996).

932. Nicotiana tabacum L. (Plate 107 C)

Family: Solanaceae

Vernacular Name: San: Dhumapatram, Dhumrapatrika, Krimighni, Tamakhu
Eng: Tobacco, American tobacco, Virginia tobacco
Kan: Tambaku, Hogesoppu
Mal: Pukayila
Tulu: Pugare

Habit: Erect herb.

Habitat: Cultivated.

Status: Common. Exotic and poisonous.

Uses: *Oil extracted from the leaves is applied over the head to kill lice (if side effects of tobacco are seen then the buttermilk or coconut oil is used as antidote). Leaf juice or paste is applied for swelling and rheumatism as a pain killer. *Oil prepared by boiling leaf in coconut oil is poured into ear for earache. *Leaf paste is applied externally for stubborn abscesses. *Bath with dried leaf petiole decoction is recommended for body pain after fever attack. *Oil prepared using leaf juice is applied for ticks in the body of cattle and dogs. Leaf paste is applied for piles.

Etymology: Dhumapatram, Dhumrapatrika, Hogesoppu, Pukayila (smoke leaf) and Krimighni (germ killer) arose as its dried leaves are used for smoking and is known for its germicidal activities.

Note: It is much used as pain killer and germicidal agent.

933. *Nothapodytes nimmoniana* (Graham) Mabb. *(Plate 107 D)*


Family: Icacinaceae

Vernacular Name: Kan: Durvasane mara, Peenari
Mal: Peenari, Pulippacha
Tulu: Peenari

Habit: Small tree.

Habitat: Evergreen forests and sacred groves.

Status: Occasional.

Description: Small tree or large shrub. Leaves simple, ovate-oblong, hairy beneath. Flowers yellowish, with foetid smell, in terminal corymbose cymes; pedicels hairy. Calyx 5-toothed. Petals 5, yellow-tomentose within. Stamens 5. Fruit oblong drupe, purple when ripe.

Uses: *Heart wood decoction is recommended internally for ulcers, wound and cuts.

Etymology: Durvasane mara (foetid tree) and Peenari (stool smell) arose due to its foetid flowers. Burning of wood also emits foul smell.

Note: It is used in synonymous with *Sterculia foetida* and *Celtis timorensis*. 
934. *Nyctanthes arbor-tristis* L. (Plate 107 E)

Family: Oleaceae

Vernacular Name: San: Kharapatrika, Paarijaatha, Sephalika  
Eng: Coral jasmine, Night jasmine  
Kan: Paarijaatha  
Mal: Paarijatham, Pavizhamalli, Pavizhamulla  
Tulu: Paarijaatho

Habit: Small tree.

Habitat: Cultivated in gardens.

Status: Common. Exotic.


Uses: *Bark decoction with pepper seeds is used for disc prolapse and backache. Bark paste is applied for mouth ulcers. *Flower ground in water is used for eye diseases. Leaf paste is applied for itching scabies and other skin diseases. *Distillate of flower is applied for eye diseases. *Leaf paste with butter is applied for scabies, itchess, ringworm and other skin diseases. Leaf extract is given as a digestive, diuretic, for inflammations, worms, leucorrhoea, phlegm, rheumatism and grey hair. *Leaf powder mixed with honey is consumed for whooping cough. Flower extract is carminative and paste is applied for inflammations. *Seed paste is applied for baldness. *Leaves, *Azadirachta indica* leaf, garlic bulblets, *Cynodon dactylon, Erythrina variegata* tender shoot tip, leaves of *Ocimum tenuiflorum* and *Ocimum basilicum* are ground with lime juice and is applied for ringworm. *Bark and leaf decoction or bark cooked with rice is recommended for increasing lactation. Bark decoction is recommended for diabetes, urinary diseases and rheumatism. *Leaf
juice mixed with honey is used for sciatica (12 days). Bark decoction is also recommended for malaria.

Etymology: Kharapatrika (rough leaved) is due to its scabrous leaves.

Note: Flowers are used for worship. It has nyctanthin, α-pinene, ρ-cymene, l-hexanol, l-decanol, α-crocetin, β-sitosterol, nicotiflorin and astragelin are the active components (Kapoor, 1990).

935. *Nymphaea nouchali* Burm. f. (Plate 107 F)

Syn: *Nymphaea stellata* Willd.

Family: Nymphaeaceae

Vernacular Name: San: Kumuda, Utpala
Eng: Indian water lily
Kan: Naidile, Komale
Mal: Ambel, Neerambel, Vellambel
Tulu: Komale

Habit: Aquatic herb.

Habitat: Fresh water tanks and pools.

Status: Common.

Description: Perennial aquatic herb, with creeping stolon. Leaves simple, orbicular, floating on long petiole, purple or glabrous beneath. Flowers white, rose or purple, floating on long peduncles. Sepals 4, oblong-lanceolate, streaked with purple lines. Petals numerous, gradually passing into stamens. Stamens numerous, laminate. Ovaries many. Fruit a spongy berry.

Uses: *Rhizome, roots of Protasparagus racemosus, Hemidesmus indicus, Vetiveria zizanioides, Plectranthus vettiveroides, Amaranthus viridis, Mimosa pudica, sandalwood, dried grapes and Glycyrrhiza glabra rhizome decoction is taken with sugar and honey for severe bleeding and DUB. *Cooked rhizome is eaten for
burning urination and piles. *Rhizome or stamen decoction is used internally for menstrual problems.

Etymology: Utpala (opening wide), Komale (delicate) and Vellambel (white water lily) are due to its delicate flowers which open wide and are mostly white in colour.

Note: Rhizome is cooked and used for preparing *upperi*. It is used in the preparation of *Asokarista*, *Aravindasava*, *Usirasava*, *Candanasava*, *Kalyanaka ghrta*, *Kanaka taila*, *Jatyadi taila*, *Manjisthadi taila*, *Candanadi lehya* and *Triphala ghrta* (Sharma *et al.*, 1998).

936. *Nymphaea pubescens* Willd. (Plate 108 A)


Family: Nymphaeaceae

Vernacular Name: San: Kumuda, Utpala
Eng: Indian water lily
Kan: Naidile, Komale, Kennaidile
Mal: Ambel, Neerambel, Periambel
Tulu: Komale

Habit: Aquatic herb.

Habitat: Fresh water tanks and pools.

Status: Common.

Description: Perennial aquatic herb, with creeping stolon. Leaves simple, orbicular or reniform, floating on long petiole, densely pubescent beneath. Flowers red or pink, floating on long peduncles. Sepals 4, oblong. Petals numerous, gradually passing into stamens, oblong. Stamens numerous, laminate. Ovaries many. Fruit a spongy berry.

Uses: *Rhizome extract in milk is used for menstrual irregularities. *Rhizome or stamen decoction is consumed for burning urination.*
Etymology: Utpala (opening wide), Komale (delicate), Periambel (larger water lily) and Kennaidile (red water lily) are due to its large, delicate flowers which open wide and are mostly red in colour.

Note: Seeds and rhizome are eaten after cooking. It is used in the preparation of Triphaladi taila and Balasvagandhalaksadi taila (Sharma et al., 1998).

637. *Ochlandra travancorica* (Bedd.) Benth ex Gamble (Plate 108 B)

Syn: *Ochlandra sivagiriana* (Gamble) Camus

Family: Poaceae

Vernacular Name: Eng: Reed
Kan: Ote, Vate
Mal: Eeta, Eetta, Kareetta, Oda
Tulu: Ote

Habit: Shrub.

Habitat: Along forest floors, especially in destructed forests.

Status: Frequent.

Description: Reed-like shrub, with woody culms and persistent sheaths. Leaves oblong, flat, margin cartilaginous; sheaths striate, fringed. Inflorescence subverticillate spicate-panicle. Spikelets 1-flowered; glumes 2 – 5, mucronate. Lemmas similar to uppermost glume; paleas membranous; lodicules many. Stamens 6 to many. Fruit ovoid, long-beaked caryopsis.

Uses: *Root decoction is used internally for urinary disorders. It increases urine flow. *Leaf decoction is abortive.

Etymology: Ote, Vate (hollow stem) and Kareetta (black reed) are due to its hollow internodes and blackish plant body.

Note: Culms are much used for mat, basket and paper making.
638. *Ochna obtusata* DC. (Plate 108 C)

Syn: *Ochna squarrosa* Bennett

Family: Ochnaceae

Vernacular Name: Eng: Golden champak

   Kan: Mudali, Naroli, Kanakachampaka

   Tulu: Naroli, Kanakachampa

Habit: Large shrub.

Habitat: Moist deciduous forests.

Status: Occasional.

Description: Large shrub. Leaves simple, elliptic or obovate, shining. Flowers large, fragrant, in short lateral racemes on the old wood. Sepals 5, ovate. Petals 5 – 10, yellow, deciduous, obovate. Stamens numerous. Fruit ovoid druplets, black when ripe.

Uses: *Root decoction is recommended for asthma, constipation, gas trouble and menstrual disorders. *Bark decoction is used as a digestive agent.

Etymology: Kanakachampaka and Kanakachampa (golden champak) are due to its fragrant golden yellow flowers.

Note: Much used for digestive disorders. Tender shoot is used as vegetable.

639. *Ochreinauclea missionis* (Wall. ex G. Don.) Ridsd. (Plate 108 D)

Syn: *Nauclea missionis* Wall ex G. Don.

Family: Rubiaceae

Vernacular Name: San: Jalakadamba, Nadeekadamba

   Kan: Jalakadamba, Nadeekadamba

   Mal: Aattuvanchi, Neervanchi

   Tulu: Sudekadambo
Habit: Medium-sized tree.

Habitat: Along banks of rivers.

Status: Frequent.


Uses: Same as that of Neolamarckia cadamba.

Etymology: Jalakadamba (water cadamba), Nadeekadamba and Sudekadambo (river cadamba) are due to its riparian habitat.

Note: It is used in synonymous with Neolamarckia cadamba, Mitragyna parvifolia and Haldina cordifolia.

640. Ocimum americanum L. (Plate 108 E)

Syn: Ocimum canum Sims.

Family: Lamiaceae

Vernacular Name: San: Aranyatulasi, Vanabarbarika
Eng: Hoary basil, Common basil, Sweet basil
Kan: Nayithulasi, Hola thulasi, Kaadu thulasi
Mal: Kattu ramatulasi, Kattuthrithavu, Kattuthulasi
Tulu: Kattutholasi

Habit: Erect herb.

Habitat: Along roadsides and wastelands.

Status: Common. Weed.

Description: Erect branched, pubescent herb. Leaves simple, elliptic-lanceolate to ovate, pubescent. Flowers in whorls of 6 – 10, in terminal racemes. Calyx

Uses: *The water in which its seeds were soaked is used as a cooling agent and is useful for urinary diseases. Leaf decoction is poured over body for rheumatism. *Leaf paste is applied for septic ulcers, swellings, allergy and bruises. *Oil prepared from leaf juice is applied for burns. *Plant decoction is taken for rheumatism, fever and to wash septic ulcers with foul smell. Whole plant paste is applied externally for rheumatism. Leaf juice is taken internally to expel phlegm. Plant extract is used for biliousness, to expel phlegm and for rheumatism. *One handful leaf decoction is recommended for asthma without phlegm. *Seed extract in water is taken for increased body heat. *Leaf juice ground with Picrorrhiza kurroa, Embelia ribes and pepper seeds is poured into ear for pus release from ear.

Etymology: Aranyatulasi (forest basil) Nayithulasi (dog basil), Hola thulasi (field basil), Kaadu thulasi, Kattuthulasi and Kattutholasi (wild basil) are due to its wild nature and restriction to waste places.

Note: It is used as a substitute for Ocimum basilicum.

641. Ocimum basilicum L. var. basilicum (Plate 108 F)

Syn: Ocimum basilicum L. var. purpurascens Benth. in Wall.

Family: Lamiaceae

Vernacular Name: San: Ajagandhika, Barbari, Gandhapatra, Surabhi Eng: Sweet basil, Common basil Kan: Kaamakasthuri Mal: Kattuthrithavu, Ramathulasi Tulu: Kaamakasthuri

Habit: Stout herb.

Habitat: Cultivated in gardens.

Status: Frequent. Exotic.
Description: Stout herb. Leaves simple, ovate or lanceolate, pubescent or glabrous. Flowers in terminal branched racemes; floral leaves and calyces usually dark purple. Calyx campanulate, 2-lipped. Corolla 2-lipped, white or pale purple. Stamens didynamous. Fruit obovoid nutlets, mucilaginous when wetted.

Uses: *Seed decoction is used as a sexual stimulant. *The water in which its seeds are soaked is taken for gonorrhoea, dysentery and diarrhoea. Leaf juice mixed with honey is recommended for cough and intermittent fever. *Seed decoction is used for jaundice and urinary disorders. *Oil prepared from plant juice is applied for cough in children. *Leaf juice mixed with those of Ocimum teniflorum, Plectranthus amboinicus, Pogostemon heyneanus and Piper betle is consumed for cough in children. Seed decoction is used as a cooling agent, also taken for indigestion and diarrhoea. *Leaf juice is applied for earache, poisonous bites, ankle twist and bodyache. *Crushed leaf is applied on the head for headache, cold and rhinitis. Plant paste is applied externally for allergies. Leaf juice is taken internally to expel phlegm. Oil extracted from plant is applied for swellings and as pain reliever. Plant decoction is recommended for bronchitis and rheumatism. *One glass plant juice is consumed for three days to induce abortion. Seed extract is used for diarrhoea and gonorrhoea. *Leaf juice is used as nasya for rhinitis. *Leaf juice mixed with a little pacche karpura is used as nasya for chronic rhinitis and foul smell from nose. *Leaf juice is applied over forehead for cold and running nose.

Etymology: Ajagandhika (smell of goat), Gandhapatra (fragrant leaf), Kattuthrithavu (wild basil) and Kaamakasthuri (sexual mace) arose due to its characteristic aroma, wild nature and sexual stimulant property.

Note: It is used in the preparation of Surasadi taila (Sivarajan & Balachandran, 1996).

642. Ocimum gratissimum L. (Plate 109 A)

Family: Lamiaceae

Vernacular Name: San: Ramatulasi, Sugandhi, Sumukha, Vridhatulasi, Vanatulasi
Eng: Shrubby basil, Lemon basil, Tea bush
Kan: Kaadu thulasi, Nimbe thulasi  
Mal: Attuthulasi, Kattuthrithavu, Ramathulasi  
Tulu: Kattu tholasi

Habit: Shrub.

Habitat: Cultivated in gardens, also in wastelands.

Status: Common.


Uses: Leaf juice is a diuretic, digestive and is used for gonorrhoea, cough, urine block, swelling in feet, skin diseases and stomachache. *Seed ground with honey is used for vomiting in small children. *Seed soaked water is taken with sugarcandy for urine block. *Dried leaf soaked in hot water for one hour is consumed with a little nutmeg powder for dysentery. *Seeds soaked overnight in water are drunk on next morning for disorders after delivery. *Seeds are chewed and milk is consumed for increasing body strength. *Leaf paste is applied for scorpion bite. *Dried leaf powder is dusted to expel maggots from wounds. *Leaf juice is recommended with ginger and pepper powder for cold and fever. *Seed powder is consumed and hot water is drunk to arrest diarrhoea in children. *Seed powder is taken with pomegranate juice for diarrhoea in children. Seed paste with water is applied for cuts and wounds. *Seeds soaked in water are used with sugar for over urination and seminal problems.

Etymology: Sugandhi (sweet scented), Vriddha tulasi (old basil), Vanatulasi (forest basil), Kaadu thulasi, Kattuthrithavu, Kattu tholasi (wild basil) and Nimbe thulasi (lemon basil) are due to its wild nature, leaf fragrance resembling that of lemon and larger size.

Note: It is often used as a substitute for Ocimum tenuiflorum.
643. *Ocimum kilimandscharicum* Baker ex Gurke (Plate 109 B)

Family: Lamiaceae

Vernacular Name: San: Karpoorathulasi  
Eng: Camphor basil, Hoary basil, Kilimanjaro basil  
Kan: Karpoorathulasi  
Mal: Karpoorathulasi  
Tulu: Karpooratholasi

Habit: Shrub.

Habitat: Grown in gardens.

Status: Occasional. Exotic.


Uses: *Leaf juice is used internally to expel phlegm and for rheumatism. *Leaf juice mixed with neem oil is taken internally for leprosy and other chronic ulcerations. Leaf juice is used for indigestion, loss of appetite and stomachache. *Leaf juice is also applied externally for leprosy, skin diseases and poisonous bites.

Etymology: Karpoorathulasi and Karpooratholasi (camphor basil) are due to its characteristic aroma.

Note: Much used for digestive problems and skin diseases.

644. *Ocimum tenuiflorum* L. (Plate 109 C)

Syn: *Ocimum sanctum* L.

Family: Lamiaceae

Vernacular Name: San: Surasah, Thulasi  
Eng: Sacred basil, Holy basil
Kan: Thulasi, Shree thulasi, Krishnathulasi  
Mal: Krishnathulasi, Thulasi, Thrithavu  
Tulu: Tholasi

Habit: Undershrub.

Habitat: Cultivated.

Status: Common.


Uses: Leaf extract mixed with old ghee is boiled and applied for skin diseases like *agnivisarpa* (a kind of erysipelas). *Seed extract or juice is given to sages to bring down their sexual vigour. Leaf juice is used for cold, cough, bronchitis and earache, while decoction for malaria and hepatitis. *Root decoction is used for fever. *Leaf juice mixed with lime juice is applied for septic wounds and ulcers. *Leaf powder is snuffed as *nasya* for irritation in nose. *Plant juice or leaf juice is poured into nose for bleeding from nose. Plant juice is applied for ringworm and itches. Leaf is chewed and eaten for cold and rhinitis. *Plant juice is consumed for cancerous wounds. *Oil extracted from this plant mixed with *Eclipta prostrata* leaf juice is used to clean wound and for STD. *An oil prepared by mixing its leaf juice with those of *Jasminum grandiflorum, Aloe vera*, milk and gingelly oil (1:1:1:1:1) is used as hair oil for sleeplessness and burning sensation in eyes. *Root decoction in milk is used for acidity and blood purification. *Leaf juice mixed with lemon juice and onion juice is applied for skin infections. Plant juice is taken internally for phlegm and rheumatism. *Plant extract mixed with cow urine is poured in the as *dhara* for cancerous ulcers. *Tambuli* prepared from the leaves is useful for phlegm and gas trouble (not recommended for those with weak body). *Leaf juice mixed with cardamom powder is consumed for continuous vomiting and blood vomiting (not for pregnant ladies). *Six drops of heated leaf juice are poured into ear for earache (if
there is pus release from ear, it is mixed with gingelly oil). *Leaf garland is worn to regulate blood pressure. Leaf extract with honey is used for stammering. *Leaf, those of *Ocimum basilicum*, *Nyctanthes arbor-tristis*, neem, *Cynodon dactylon*, *Centella asiatica*, garlic, turmeric, *Salacia chinensis*, *Rauwolfia serpentina*, *Ixora coccinea* and red sandalwood paste with tender coconut husk juice is applied for urticaria. Leaf juice is applied for insect bite and itches. *Leaf juice mixed with honey, ginger, lime juice and pepper powder is recommended for cold and fever. Leaf juice is used internally for diarrhoea in children. *Leaf juice mixed with clove oil is massaged for rheumatism. *Leaf crushed with clove and camphor is used for toothache. *Dried leaf powder is used as *nasya* for rhinitis. Leaf juice with honey is used for phlegm. Leaf juice is taken with salt for stomachache. *Leaf, ginger, cardamom, clove and sugar candy powder is eaten for cold. *Leaf juice mixed with salt is kept in copper vessel for some time and applied for ring worm. Leaf juice is applied to arrest bleeding. *Leaf juice, ghee and *Calotropis gigantea* latex (1:2:1) are taken on 4th, 15th and 17th day of menstrual cycle to purify uterus or ovary. *Leaf juice mixed with cow dung extract and ghee is taken internally for pit viper bite. Leaf juice is used to clean diabetic ulcers. Leaf and pepper decoction is used for flu. *Leaf juice, chilly powder and honey mixture is taken for 3 – 4 days in case of fever. *Leaf juice mixed with honey (1:1) is consumed four times a day for three days in case of flu. *10 leaves and three pepper seeds powder is given in hot water two times a day for 3 – 4 days in case of chronic fever. Leaf juice mixed with pepper powder is also recommended twice in a day of same disease. *Leaf is chewed or leaf decoction with garlic is recommended for foul breath. 7 – 8 leaves are daily eaten for repeated mouth ulcers. Leaf juice with clove is swallowed for two days to get rid of cough. *Leaf juice mixed with equal quantity of lime juice is taken for 4 – 5 days in case of urinary disorders. *Leaf juice and cardamom seed paste is applied over forehead for headache. *4 tsp leaf juice is daily used for two weeks to overcome jaundice. *One handful leaf ground with jaggery is eaten for fever. Leaf juice is applied daily for pimples. One tsp leaf juice mixed with 7 – 8 drops of honey is recommended for fever and cough in children. Leaf ground with fresh ginger is used with honey two times a day for cough with irritation in throat.
Dried whole plant powder mixed with neem oil is applied for leprosy, diabetic ulcers and fungal infections of the skin. Leaf juice mixed with equal quantity of lime juice is taken for stomachache. Leaf, onion and pepper (in equal quantity) are ground and taken twice a day for bleeding piles. 4 tsp leaf juice mixed with butter milk (in equal quantity) is consumed in the morning in empty stomach for blood purification. Leaf juice mixed with lime juice and onion juice (in equal quantity) is applied for scabies. Leaf juice mixed with honey is used for rheumatic and bodily pain. Leaf juice mixed with salt or root paste is applied for scorpion and other poisonous bites. Leaf juice is applied over stomach for gas trouble. Leaf juice mixed with garlic juice is applied for eye pain and peeling of skin over eye lid in small children. Leaf juice fried with Butea frondosa seed powder is used as anjana for cataract. Leaf juice is used as ear drop for ulcers in ear. Leaf juice mixed with pepper powder is taken for fever with cough, useful for malarial fever, is preventive and curative of tuberculosis. One handful leaves ground with 5 – 6 pepper seeds is consumed with one spoon ghee in the morning for 20 days to overcome rheumatism. 4 tsp leaf juice mixed with ½ tsp pepper powder and one tsp honey is used for 3 – 4 days to get rid of fever. Two tsp leaf juice mixed with equal quantity of honey is used for flue. Leaf ground with jaggery is eaten twice a day for three days in case of fever. 7 – 8 leaves and two pepper seeds ground and drunk with hot water for fever with shivering (for 3 days). 4 tsp leaf juice is applied daily all over the body for two months in case of insanity. Leaf juice mixed with honey is applied for eye disorders. Leaf juice (2 drops) used as eye drop for night blindness and vision problems. Leaf juice mixed with lime juice and gingelly oil (in equal quantity) is boiled and 5 – 6 drops of this oil is used twice a day as ear drop for earache. Powder of dried mature leaf is used as nasya for foul smell from nose, irritation and allergy in nose. Leaf and pepper paste is applied for toothache and gum ache. Dried leaf powder ground in water is applied as a cosmetic on the face. Ground leaf, ginger and jaggery are given thrice a day for indigestion. Leaf paste with cleaned red soil is applied for warts. Immediately after snake bite, two handful leaves are eaten; one handful leaf and one tsp pepper seed powder dissolved in water is drunk and main root paste is applied over the bitten spot. When the paste
becomes black, it is applied again and this is repeated. *Main root ground with butter is applied for snake or rabid dog bite. *Seed extract with rice washed water is used for urinary disorders. *The water in which its seeds are soaked overnight is taken with sugar in the next morning for blood dysentery. *Dried plant and leaf smoke is used as a mosquito and fly repellent. Stem ash in water is recommended for indigestion, cough, asthma and bronchitis. Leaf paste with salt is applied for warts and ringworm. Leaf juice mixed with pepper powder is taken internally and cool water bath externally for four days in case of flue. *Powder of dried root, leaf, flower and stem mixed with lime juice is applied for warts, fungal infections and diabetic ulcers. *Leaf boiled in water is taken with milk and sugar for weakness and to make a person active. Root paste with water is applied for ulcers due to worm infestation. *Leaf juice is consumed with cardamom powder to arrest vomiting. *Five leaves, one betel leaf, one clove and a little pacche karpura* are eaten 2 – 3 times a day inorder to expel phlegm, for cough and breathing problems. *Powder of shade dried leaf mixed with cardamom, cinnamon, clove, Glycyrrhiza glabra rhizome are boiled in water and given with milk and sugar for malaria, cough, fever, vomiting and thirst. Leaf juice mixed with water (12:8) is heated and consumed by adding sugar for cough and cold in children. *½ – 1 ounce of hot water in which its dried leaf is soaked for 1 hr is given for influenza. *30 – 60 drops of leaf juice (4 gm) mixed with honey, ginger juice, Hyoscyamus niger seed extract (one ounce each) is consumed for indigestion, stomach swelling, gas trouble, diarrhoea, fever and cough in children. Leaf juice mixed with ginger powder is used for stomachache in children. Leaf ground in water is used for gas trouble and to increase digestive power. *Leaf ground with pepper is taken with ghee for rheumatism. Leaf paste is applied for swellings. *Pills prepared by mixing its seed powder with is used in the morning and night with fresh milk for increasing sexual power and quality of semen (it is believed to have effect equal to that with Copper bhasmam*). *Leaf ground with equal quantity of Acorus calamus rhizome is used with honey for malnutrition in children. *Leaf is eaten with Citrus medica fruit powder for skin diseases. *Seed powder is eaten with betel leaves to prevent ejaculation as it acts as spermicidal agent. Leaf ground with ginger is recommended
with honey for cough. Leaf is eaten with black salt for indigestion. *Leaf juice mixed with rock salt is used as nasya* for unconsciousness due to fits or epilepsy. Heated leaf juice is taken for constipation in children. *The water in which its dried leaf is soaked in an earthen pot for two hrs is consumed for liver disorders in children. *Leaf juice mixed with equal quantity of onion juice is given by adding a little pepper powder at every 30 minutes for cholera. *Leaf juice, ginger juice, *Hyoscyamus niger* seeds, *Nelumbium speciosum* rhizome are ground, boiled and applied for backache. *The coconut oil in which its flower and seeds are boiled is used as hair oil for hair fall. *Leaf juice mixed with equal quantity of gingelly oil is heated by adding a little dhup powder. 1 – 2 drops of this oil is used as nasya* for chronic rhinitis. Seed ground with milk is boiled and taken twice a day as a tonic. *Leaf decoction with pepper and cumin seeds is recommended for running nose. *Dried plant and dried *Ocimum basilicum* are smoked to repel mosquitoes. Leaf paste with salt or leaf paste with honey is applied externally for scabies and itches. *Leaf decoction mixed with that of *Plectranthus amboinicus*, *Aegle marmelos* and fresh *Zingiber officinale* rhizome, *Woodfordia fruticosa* stamens, *Glycyrrhiza glabra* rhizome, *Nelumbium speciosum* stamens, *Saussurea lappa* seeds, ginger, clove, mace and nutmeg powder and sugar are boiled. After 22 days, this decoction is sieved, then preserved beneath the soil for 48 days and used as cough syrup.

Etymology: Surasah (well flavoured), Shree thulasi (prosperous basil) and Krishnathulasi (black basil) are due to its diverse uses, characteristic aroma and blackish plant body.

Note: Milk should not be taken after eating tulsi leaves (consumption of its leaves and milk together may cause skin diseases). Leaf extract is not recommended for ladies during menses. Tulsi leaf should not be used with betel leaf. Its use is not recommended during the month of Karthika*. Leaf and inflorescence should not be collected together and are not used in rituals. Leaves are not used to worship lord Ganapathi. Much used to worship lord Krishna. It is used in the preparation of *Tulasyadi taila*, *Manasamitra vataka*, *Sitajvarahari kashaya*, *Vilvadi gutika*, *Bala taila*, *Tribhuvanakirti rasa*, *Muktadi mahanjana* and *Mahajvarankusa rasa* (Sharma
et al., 1998; Sivarajan & Balachandran, 1996). It has carvacrol, caryophyllene, nerol, camphene, eugenol, γ-selinene, α & β-pinene, luteolin and orientin as the active constituents (Dey, 1994; Kapoor, 1990).

645. *Olea dioica* Roxb. (Plate 109 D)

Syn: *Olea laevis* Stokes.

Family: Oleaceae

Vernacular Name: Kan: Arimara, Akki varalu
Mal: Edana, Vayala, Vayana
Tulu: Arimaro

Habit: Medium-sized tree.

Habitat: Forests and laterite hills.

Status: Common.

Description: Medium-sized tree, Leaves simple, elliptic-lanceolate. Flowers small, polygamo-dioecious, in axillary or extra-axillary panicles. Calyx minute, 4-lobed. Corolla tubular-campanulate, creamy white; lobes 4. Stamens 2. Fruit ellipsoid drupe, black when ripe.

Uses: *Root decoction is used for rheumatism and that of bark has febrifuge action. *Bark paste is applied for carbuncle, swellings and whitlow. *Leaf juice is recommended for malabsorption in children. *Bark powder boiled with rice cooked water is ground with salt into a paste and applied for carbuncles.

Etymology: Arimara and Arimaro (rice seed tree) arose as its flower buds and ellipsoid fruits resemble rice seeds.

Note: Leaves are used as fodder.

646. *Ophiorrhiza mungos* L. (Plate 109 E)

Family: Rubiaceae

Vernacular Name: San: Nakuli, Patalagaruda, Sarpakshi
Eng: Mongoose plant, Indian snake root
Kan: Mungusi gida, Patalagaruda, Garudapatala  
Mal: Avilpori, Chembajarinjil  
Tulu: Garudapatalo

Habit: Herb.

Habitat: Moist forest undergrowths.

Status: Common. Weed.


Uses: *Plant juice mixed with honey is used for cough and bronchitis. *Root paste is applied externally and extract with lime juice is taken internally for pit viper bite. Root decoction or extract is recommended for snake bite, infection after delivery, poisonous bites, leprosy, rabies, and to expel worms. Plant paste is applied for poisonous bites, wounds, ulcers and septic ulcers. *Whole plant, Breynia vitis-idaea leaf and Caesalpinia crista leaf are ground in Citrus aurantium fruit juice and is applied over head for one week (until sour taste is felt in mouth) in case of biliousness.

Etymology: Nakuli (mongoose), Mungusi gida (mongoose plant), Patalagaruda (ground eagle), Sarpakshi (snake eye), Garudapatala and Garudapatalo (eagle of ground) are due to its much use in the treatment of snake bites.

Note: Much used drug for poisonous bites. It is often used in synonymous with Rauvolfia serpentina.

647. Ophiorrhiza rugosa Wall. var. prostrata (D. Don.) Deb. & Mondal (Plate 109 F)

Syn: Ophiorrhiza prostrata D. Don.

Family: Rubiaceae

Vernacular Name: San: Nakuli, Patalagaruda, Sarpakshi
Eng: Mongoose plant, Indian snake root  
Kan: Mungusi gida, Patalagaruda, Garudapatala  
Mal: Avilpori, Chembajarinjil  
Tulu: Garudapatalo

Habit: Herb.

Habitat: Along banks of streams in shady places.

Status: Common. Weed.


Uses: Same as *Ophiorrhiza mungos*.

Etymology: Same as *Ophiorrhiza mungos*.

Note: It is used in synonymous with *Ophiorrhiza mungos*.

648. *Opuntia striata* var. *dillenii* (Ker.-Gawl.) L. (Plate 110 A)

Syn: *Opuntia dillenii* (Ker.-Gawl.) Haw.

Family: Cactaceae

Vernacular Name: San: Bahushala, Snuhi, Vajradruma, Vajrakantaka  
Eng: Prickly pear  
Kan: Paapasukalli, Chappatekalli, Dabbugalli  
Mal: Nagamullu, Palakakkalli, Rakthakalli  
Tulu: Paapasukalli, Mullukalli

Habit: Shrub.

Habitat: Along hedges and wastelands.

Status: Occasional. Exotic and poisonous.

Description: Erect branching shrub; joints flat, obovate, areoles with 3 – 7 yellowish spines. Leaves very small, caducous. Flowers lateral yellow, showy. Calyx-tube
bearing small outer lobes adnate to the ovary, inner lobes at its mouth. Petals many, spreading, connate below. Stamens numerous. Fruit globose, fleshy, areolar berry.

Uses: *Crushed stem juice is used in the preparation of oil used for rheumatism, arthritis and various skin diseases. Stem juice is both emetic and purgative. *Latex is applied for toothache, rheumatism and scabies. *Oil prepared for plant juice is used externally for lymphoedema and wounds. Root bark decoction is a drastic purgative. *Root paste with asafoetida is applied over the abdomen to expel worms. *Fried stem powder is used for septic wounds and ulcers. *Plant ash mixed with castor oil is applied for leprosy and chronic skin diseases.

Etymology: Vajradruma (impenetrable tree), Vajrakantaka (impenetrable spines), Chappatekalli (flat cactus) and Mullukalli (spiny cactus) are due to its sharp spines forming impenetrable barrier and flat stem.

Note: It is believed that keeping this plant over the house prevents thunder fall. Much used for rheumatic complaints.

649. *Ormocarpum cochinchinense* (Lour.) Merr. (Plate 110 B)

Syn: *Ormocarpum sennoides* (Willd.) DC.; *Hedysarum sennoides* Willd.

Family: Papilionaceae

Vernacular Name: San: Kananashigru

Eng: Wild drumstick

Kan: Kadunugge

Mal: Kattumuringa

Tulu: Kattunurge

Habit: Shrub.

Habitat: Moist deciduous forests.

Status: Occasional.

Description: Scandent shrubs. Leaves imparipinnate; leaflets oblong or obovate.
Flowers in few-flowered axillary lax racemes; rachis and pedicels tomentose. Calyx glabrescent, 5-lobed. Petals 5, clawed, yellow, streaked with grey. Stamens 5 + 5. Fruit 1 – 3 jointed, prickly-warted pods.

Uses: *Bark decoction is used for fever and to strengthen body. *Root bark boiled in gingelly oil is applied for rheumatism.

Etymology: Kananashigru, Kadunugge, Kattumuringa and Kattunurge (wild or forest drumstick) are due to its wild nature, restriction to the forest, leaves and fruits sharing resemblance with that of drumstick.

Note: Leaves are used as vegetable.

650. Oroxylum indicum (L.) Benth. (Plate 110 C)

Syn: Bignonia indica L.

Family: Bignoniaceae

Vernacular Name: San: Aralu, Mandukaparna, Shyonaka, Tintukah
    Eng: Indian trumpet flower, Tree of Damocles, Midnight horror
    Kan: Aanemungu, aanengi, Thigade mara
    Mal: Palakapayyani, Valpathiri, Vellapathiri
    Tulu: Aanengi, Aanemoonku

Habit: Small tree.

Habitat: Disturbed forests.

Status: Frequent.

Description: Small deciduous tree. Leaves 2 – 3-pinnate; leaflets ovate or elliptic. Flowers large, foetid, in erect terminal racemes. Calyx campanulate, truncate, leathery, persistent. Corolla campanulate, opening in the evening, maroon to reddish-purple, fleshy; lobes 5, with crisped margins. Stamens 5. Disc cushion like. Fruit large, broadly linear, flat capsule.

Uses: *Bark decoction is taken for one day after delivery. *Bark, those of Pajanelia longifolia and Pongamia pinnata decoction is used for fever. *Bark cooked with rice is eaten as a tonic to ladies after abortion. *Bark tambuli* is recommended for
diarrhoea, dysentery and to induce appetite. *Tambuli prepared from its fruit is used as a digestive and to arrest excretion of stool 4 or 5 times a day. Leaf paste is applied for wounds, ulcers and swellings. *Leaf decoction is taken for lung diseases and fever in small children. *Tender fruit pickle is eaten during the month of Aati to remove poisons from the body. *Bark cooked with rice and coconut milk is eaten for food poisoning. Bark decoction is beneficial for rheumatism and biliousness. Root extract with butter milk is used for indigestion, diarrhoea and its decoction for spleen swelling. *A small piece of bark boiled in butter milk or that cooked with rice is consumed (for three days) for water in legs of old people. *Tambuli prepared from its fruit or bark is used for infection and indigestion in ladies after delivery. *Root chutney is given to ladies after delivery. *Bark paste with curd is applied for ulcers caused by burn. Bark decoction is used for repeated attack of mouth ulcers. Root bark decoction is a digestive tonic and is useful for rheumatism. Bath with this decoction is recommended for rheumatism, fever and typhoid. *Leaf juice or decoction is a wound healer, used for skin diseases, vaginal infections and lung problems. *Root bark fried in ghee with pepper and garlic is made into tambuli with coconut gratings and butter milk. This is used for diarrhoea due to indigestion.

Etymology: Aanemungu and Aanemoonku (elephant tusk) are due to its characteristic fruits.

Note: It is a rich source of iron. It is one of the major ingredients of Dasamularista, Dhanvantara kashaya, Dhanvantara kulambu, Chyavanaprasha, Amrtarista, Dantyadyarista, Narayana taila, Dhanvantara ghrta, Dasamula kvatha and Dasamula churna (Sharma et al., 1998; Sivarajan & Balachandran, 1996). Oroxylin, baicalein, scutellarein, emodin, chrysin and β-sitosterol are the active constituents (Dey, 1994; Kapoor, 1990). Tender fruits are used as vegetable.

651. *Orthosiphon aristatus* (Blume) Miq. (Plate 110 D)

Syn: Orthosiphon stamineus Benth. in Wall.

Family: Lamiaceae

Vernacular Name: San: Arjaka, Pratanika
Eng: Java tea
Kan: Meese thulasi
Mal: Poochameesa
Tulu: Meesetholasi

Habit: Diffuse herb.

Habitat: Moist deciduous forests, also cultivated.

Status: Occasional.


Uses: *Leaf juice mixed with turmeric powder is taken in empty stomach at morning for 1 – 2 weeks in case of decreased urine production. *Tender leaf ground in rice washed water is mixed with sandalwood and applied around navel (for 3 – 6 days) for foul smell of urine in children. *This is also used to bring down the blood glucose level.

Etymology: Meese thulasi, Meesetholasi (moustache basil) and Poochameesa (cat’s moustache) are due to its much exerted stamens and characteristic aroma.

Note: Much used for urinary disorders.

652. Oryza sativa L. (Plate 110 E)

Family: Poaceae

Vernacular Name: San: Dhanya
Eng: Rice, Paddy
Kan: Bhatta, Akki
Mal: Nellu
Tulu: Baaru, Ari
Habit: Annual grass.

Habitat: Cultivated.

Status: Common.

Description: Annual grass. Leaves linear-lanceolate, striate, scaberulous; sheaths glabrous; ligule membranous, 2-partite. Panicle varying from close and compact to loose and spreading. Spikelets numerous, 1-flowered, oblong. Glumes 2. Lemmas 3; empty lemmas minute; fertile oblong, hispidulous, punctuate, dorsally spinescently ciliate, awned or awnless. Lodicules 2. Stamens 6. Fruit narrowly oblong caryopsis.

Uses: *Paste prepared from rice seeds, white stone, *Dalbergia horrida* plant, very tender coconut, *Vernonia anthelmintica* seeds and turmeric is applied for chronic sores. Rice cooked water is a nutritious tonic and is useful for gastric ulcers. *Seeds of navara* variety are heated and pressed over the body for rheumatism and arthritis. *Roties* prepared from rice bran is eaten daily in case of diabetic neuropathy as it is rich in riboflavin. Root decoction is taken to increase urine flow. Husk ash is used to brush teeth to overcome toxemia. *Paste prepared by grinding seeds of Jathisuggi* with water is applied all over the body of the child for proper growth and development (especially for those who borne before 9 month of pregnancy). *Boiled and fried seeds thrown over the floor are eaten by licking for whooping cough. *Washing the body with rice washed water is useful for prickly heat. *Paste prepared by grinding Atikaya* seed ash with burnt and crushed *Euphorbia nivulia* stem juice is applied for diphtheria. *Payasam* prepared by grinding and boiling fresh raw seeds soaked overnight in water with milk, ghee and sugar is used as a tonic for body weakness. *Hot paste prepared by mixing seed powder with turmeric powder is applied and tied for swelling in sole, furuncle, warts and bruises. *Seeds of Atikaya* variety (500 gm), mustard seeds (100 gm) and leaf of *Dendrophthoe falcata* seen on coconut tree are burnt into ashes. This ash mixed with *Euphorbia nivulia* stem juice (extracted by crushing burnt three inch long stem coated with soil) in cow urine is applied for a week in case of skin diseases. *Rice seeds ground in milk is applied and tied for furuncles over the stomach. *Raw seeds ground and kept in copper vessel for some time are applied at bed time for cracks in
Milk extracted from ground seeds is dried, powdered and is given after cooking as a nourishing food for children. Cooked navadhanya powder is also used for same purpose. One spoon each of seed flour and turmeric powder mixed in water is heated and tied overnight to expel sand, spines, thorns and pus from body.

Note: It is used in the preparation of Lasunadi ghṛta, Dadhika ghṛta and Tandulodaka (Sharma et al., 1998).

653. *Osbeckia brachystemon* Naud. (Plate 110 F)

Syn: Osbeckia cupularis D. Don. ex Wight & Arn.

Family: Melastomataceae

Vernacular Name: San: Tinisah
   Kan: Balli nekkare, Balli nekkarika
   Mal: Valli athirani
   Tulu: Ballu nekkare

Habit: Diffuse herb.

Habitat: Moist deciduous forests, also grown in gardens.

Status: Occasional.


Uses: *Plant decoction is used as eye wash in case of eye disorders. *Plant decoction or juice is taken internally for hyperacidity.

Etymology: Balli nekkare, Balli nekkarika, Valli athirani and Ballu nekkare (climbing Melastoma) arose due to its resemblance with Melastoma and diffuse trailing stem.

Note: Plant is usually used as a substitute for Osbeckia muralis.
654. *Osbeckia muralis* Naud. (Plate 111 A)

Syn: *Osbeckia truncata* D. Don. ex Wight & Arn.

Family: Melastomataceae

Vernacular Name: San: Tinisah  
Kan: Gida nekkare, Gida nekkarika  
Mal: Cherukulathi  
Tulu: Dai nekkare

Habit: Erect herb.

Habitat: On walls and sides of paddy fields.

Status: Common. Weed.

Description: Erect annual herb with hispid stem. Leaves simple, ovate or elliptic, hirsute, 3 – 5-nerved. Flowers in terminal capitate cymes, often with 2 or 4 leaves close under the head. Calyx shortly 4-lobed, bristly. Petals 4, purple. Stamens 8. Fruit ovoid-oblong, 8-ribbed capsule.

Uses: *Plant decoction is highly used for gastro intestinal disorders, gastric ulcers and amoebiasis. *Tender shoot tip tambuli* is a digestive. *Root cooked with rice is eaten for leucorrhoea, gastric ulcers and indigestion. *Tender twig, Hyoscyamus niger and cumin seeds rasam* is taken with meals for bleeding after delivery, anaemia and blood disorders. *Paste of tender plant fried in ghee is applied over centre of the head for bleeding from nose. *Tender leaf extract is recommended for pregnant ladies and also after delivery. *Root oil is applied over the body for proper development of legs and hands in children. Whole plant extract is used for wounds, urticaria, toothache, ENT and skin diseases.

Etymology: Gida nekkare, Gida nekkarika and Dai nekkare (herbaceous *Melastoma*) are due to its close affinity with *Melastoma* and herbaceous nature.

Note: It is used as a substitute for *Melastoma malabathricum.*
655. *Otacanthus caeruleus* Lindl. *(Plate 111 B)*

Family: Scrophulariaceae

Vernacular Name:  Eng: Brazilian snapdragon, Amazon blue  
Kan: Mint thulasi  
Mal: Mint tulsi

Habit: Subshrub.

Habitat: Grown in gardens.

Status: Frequent. Exotic.

Description: Spreading subshrub with brownish stem. Leaves simple, elliptic to lanceolate, fragrant. Flowers bluish mauve, in terminal racemes. Calyx 5-lobed. Corolla 2-lipped; upper lip fan-shaped; lower with a white eye. Stamens didynamous. Fruit ovoid capsule.

Uses: *Leaf juice mixed with turmeric powder is used for urinary disorders. *Tender leaf ground in rice washed water is applied around navel for foul smell of urine in children and to bring down blood glucose level.

Etymology: Mint thulasi and Mint tulsi (mint basil) are due to its characteristic aroma.

Note: Used for urinary disorders.

656. *Oxalis corniculata* L. *(Plate 111 C)*

Family: Oxalidaceae

Vernacular Name:  San: Ambashta, Amlapatrika, Amlika, Cangeri  
Eng: Creeping oxalis, Indian sorrel  
Kan: Pullampurache, Hulisappu, Majjige soppu  
Mal: Puliyarila, Pulichappadi  
Tulu: Puliyarile, Pulichappu
Habit: Trailing herb.

Habitat: Wet places and widely grown in gardens.

Status: Frequent.


Uses: *Tambuli* prepared from whole plant is used for dysentery, jaundice and gastric irritation. *Leaf petiole or flower extract is used as cooling agent for indigestion and weakness. Whole plant extract is used for dysentery. Plant juice is taken internally for biliousness and piles. *Whole plant paste is applied for swellings. *Plant extract in buttermilk or lehyam prepared from it is used for malnutrition in children. *Leaf and twig ground in sweet buttermilk are mixed with dried gooseberry fruit rind powder and used for anal prolapse and blood dysentery. *Twig ground in onion juice is applied over centre of the head for giddiness (overdose causes biliousness and antidote is milk). *Plant juice is used as antidote for Datura poisoning. *Leaf ground with Tamarindus indica leaf juice is consumed for diarrhoea and malnutrition in children. Whole plant ground in milk is used for menstrual disorders. *Whole plant juice is heated and taken with honey twice a day for breathing difficulty in children. *Whole plant ground with cumin, coriander and green chillies is eaten with rice for burning sensation in stomach. *Whole plant ground with rice washed water is applied for herpes.

Etymology: Amlapatrika, Hulisappu, Pulichappu (acidic leaves), Amlika (acidic plant) and Majjige soppu (buttermilk leaf) are due to its acidic leaves which are usually boiled in buttermilk and used as a curry.

Note: Plant is used for preparing rasam. It is used in the preparation of Cangeryadi ghrta, Pathadi gutika and Suranadi ghrta. It has tartaric, citric and malic acid as active components (Sivarajan & Balachandran, 1996; Sharma et al., 1998).
**657. *Paederia foetida* L. (Plate 111 D)**

Syn: *Paederia chinensis* Hance.; *Paederia tomentosa* Blume

Family: Rubiaceae

Vernacular Name: San: Kutumbhare, Gandhaprasarani  
Kan: Gandhaprasarani  
Mal: Gandhaprasarani  
Tulu: Nathotha ballu

Habit: Climbing vine.

Habitat: Grown in gardens, also runs as garden escape.

Status: Occasional. Weed.

Description: Spreading or climbing vine with hirtellous, puberulent stem. Leaves simple, ovate or ovate-oblong, densely pilose. Flowers in axillary lax dichotomous congested cymes. Calyx puberulent, deeply 5-lobed; lobes triangular. Corolla pale purple or greyish pink, funnel-shaped; lobes 5, broadly triangular. Stamens 5. Fruit globose drupe.

Uses: *Oil prepared from its leaf juice is applied externally for rheumatism and body pain. *Plant paste is applied externally for poisonous bites. *Plant is hanged in the room of new born baby and mother to repel mosquitoes and flies.

Etymology: Gandhaprasarani (foetid spreading plant) and Nathotha ballu (foetid vine) are due to its spreading nature and foetid smell.

Note: It is used in the preparation of *Prasarini taila*, *Dasamularista* and *Prasarini lehya*. It has α & β-paederine, friedelin, sitosterol, paederoside, hentriacontane, campesterol and stigmasterol as active components (Dey, 1994; Kapoor, 1990; Sharma et al., 1998). It is usually used as a substitute for *Xenostegia tridentata*.


Syn: *Pajanelia rheedei* Wight.

Family: Bignoniaceae
Vernacular Name: Kan: Aalangi, Bondubaale  
   Mal: Azhantha, Payani, Payyazhantha  
   Tulu: Bondubaare

Habit: Medium-sized tree.

Habitat: Forests and plains.

Status: Frequent.

Description: Medium-sized deciduous tree. Leaves imparipinnate; leaflets very obliquely ovate. Flowers large, in terminal thyrsoid bracteate panicles. Calyx large, 5-lobed. Corolla large, tubular-ventricose, white in the tube, crimson-purple on the lobes; lobes 5, crisped. Stamens 4. Fruit large, broadly linear, compressed, brown capsule.

Uses: *Bark cooked with rice is used for furuncles and carbuncles. *Bark, *Ixora coccinea* root and *Aristolochia indica* root paste is applied for snake bite. *Regular use of its bark decoction helps to reduce obesity. Oil prepared from bark juice is applied for varicose in legs, pain and swellings. *Oil prepared by boiling its bark juice with coconut oil is applied for leg pain and burning sensation in legs of pregnant ladies. *Bark decoction is recommended for water in legs and hands of pregnant ladies. Bark juice is taken for viper bite. *Bark cooked with rice is given for conception in cattle. Bark paste is applied for skin diseases and to heal surgery wounds. *Bark cooked with rice or its decoction is used for snake bite and gangrene. Bark decoction is consumed for stomachache, malaria and rheumatism. *Bark decoction is used internally for one week in case of gangrene (poisonous bite and diabetes). Bark paste is applied externally for septic wound and ulcers. *Bark decoction with milk is consumed internally and extract mixed with honey is applied externally for septic wounds or ulcers in legs. *Bark cooked with rice or its decoction is used for indigestion and diarrhoea in cattle. *Bark decoction is consumed for 21 days in case of leucorrhoea. Bark decoction is recommended for diarrhoea and abdominal disorders in children.
Etymology: Bondubaale and Bondubaare (soft pith plantain) arose as the wood of this tree is very soft.

Note: Occasionally it is used as a substitute for *Oroxyllum indicum*.

**659. *Pancratium triflorum* Roxb. (Plate 111 F)**

Syn: *Pancratium verecundum* Wight.

Family: Amaryllidaceae

Vernacular Name: San: Vanapalandu

Kan: Kaadu neerulli

Mal: Kaattulli

Tulu: Kattu neerulli

Habit: Bulbous herb.

Habitat: Along coastal areas.

Status: Occasional.

Description: Herbs with globose bulbs. Leaves radical, thin, lanceolate or linear-lanceolate. Flowers fragrant, 3 – 8 in umbel on slender scape. Perianth funnel-shaped, white; lobes 6, linear. Stamens 6. Fruit ovoid, 3-angled capsule.

Uses: *Bulb decoction is used as a cardiac tonic, also for urinary tract infections, cough, bronchitis and breathing problems.*

Etymology: Vanapalandu, Kaadu neerulli, Kaattulli and Kattu neerulli (wild onion) are due to its wild nature and characteristic bulbs.

Note: It is often used as a substitute for *Urginea indica*.

**660. *Pandanus canaranus* Warb. in Engl. (Plate 112 A)**

Family: Pandanaceae

Vernacular Name: San: Ketaki

Eng: Screw pine, Umbrella tree

Kan: Munduga, Mundangi

Tulu: Mundangi, Mundevu
Habit: Large shrub.

Habitat: Along banks of streams, canals and marshes.

Status: Common.

Description: Large shrub; stem branching above, with few prop roots at the base. Leaves linear-ensiform, margins with sharp, curved prickles, midrib prickly. Male inflorescence terminal, bracteate; bracts yellowish, linear-lanceolate, lower ones flagelliferous; spikes dense; stamens many on stemonophores. Female inflorescence terminal, bracteate, pedunculate; cephalia solitary; carpels simple. Fruit rounded-trigonal, pendulous syncarp, orange-yellow when ripe.

Uses: *Tender shoot tip cooked with rice is taken for jaundice. *Bud ground in rice cooked water is applied over the head for giddiness. *Oil prepared from prop root juice is applied over the head for sleeplessness. *Tender shoot tip cooked with rice cooked water is made into a paste and applied over the head for jaundice. *Powder of old mat prepared from its leaf mixed with jaggery and parched rice is given to eat for spider bite. *Tender shoot tip cooked with rice or its decoction is recommended for malnutrition in children. *Shoot tip paste with rice washed water is applied for breast swelling and mastitis.

Etymology: Mundangi (close shaven) arose due to its rounded-trigonal fruits.

Note: *Ripe fruit slices are kept near the shelters of cockroaches (get killed within 3 – 4 days). Leaves are used for preparing mats.

**661. Pandanus odorifer** (Forssk.) Kuntze (Plate 112 B)

Syn: *Pandanus odoratissimus* L. f.; *Pandanus fascicularis* Lam.

Family: Pandanaceae

Vernacular Name: San: Dhumipusika, Ketaki

Eng: Fragrant screw pine, Screw pine, Umbrella tree

Kan: Kedige, Kedage

Mal: Pookaitha, Kaitha

Tulu: Kedage, Kedige
Habit: Large shrub.

Habitat: Sandy places near the sea-coast, also grown as a hedge plant.

Status: Frequent.

Description: Much branched large shrub; stem decumbent with numerous thick prop roots. Leaves ensiform, margins with white, very sharp, slightly curved prickles, midrib prickly. Male inflorescence pedunculate, fragrant, bracteate; bracts yellowish or cream-coloured, young bracts white, linear-lanceolate, lower ones flagelliferous; spikes 5, 7, 9 or 11; stamens 19 – 23 on stemonophores. Female inflorescence terminal, pedunculate, bracteate, lower leaf-like, upper whitish-yellow; cephalia solitary, globose to ellipsoid; carpels in phalanges of 5 – 15. Fruit turbinate, pentagonal or hexagonal syncarp, orange or reddish when ripe.

Uses: Root and stem juice is used for muscular cramps, rheumatism, jaundice and shortage of urine. *Oil prepared from prop root juice is applied on head for giddiness and burning sensation in eyes. *Tender shoot tip extract or that cooked with rice is taken for jaundice. *Paste prepared by grinding tender shoot tip cooked with rice cooked water is applied over the head for jaundice. Plant paste is applied for warts. *Fruit cooked with rice is recommended for malnutrition in children. *Prop root decoction is used for urticaria.

Etymology: Dhulipuspika (dusty flower) and Pookaitha (flower screw pine) arose due to the presence of powdery coating over the fragrant bracts which are much used for worship.

Note: Bracts are kept in between clothes to repel insects and other pests. Bracts are used for worship. It is used in the preparation of Tenginpuspadi taila, Laghu candanadi taila, Kaccoradi taila, Maharajaprasarini taila, Abhram (101) and Triphaladi taila. It has benzyl salicylate, geraniol, linalool, bromostyrene, d-linalool and steroptene as active constituents (Kapoor, 1990; Sharma et al., 1998; Sivarajan & Balachandran, 1996).
662. Parahemionitis cordata (Hook. & Grev.) Fraser-Jenk. (Plate 112 C)

Syn: Parahemionitis arifolia (Burm. f.) Panigrahi.; Hemionitis arifolia (Burm. f.) T. Moore

Family: Hemionitidaceae

Vernacular Name: San: Akhukarni
Kan: Ilikivi, Elikivi
Mal: Eliccevi
Tulu: Elikebi

Habit: Small fern.

Habitat: Along rocky walls and crevices.

Status: Frequent. Weed.

Description: Small, terrestrial, rhizomatous herb; rhizome suberect, covered with persistent leaf bases; scales lanceolate-acuminate. Leaves dimorphic; sterile ones deeply cordate; fertile ones sagittate, stiped, shining green, coriaceous, reticulately veined; sori covering the entire lower surface.

Uses: Whole plant decoction is recommended internally for urinary disorders, fever and gastric disorders. Leaf juice is applied for headache and poisonous bites.

Etymology: Akhukarni, Ilikivi, Elikivi, Eliccevi and Elikebi (rat ear) are due to its characteristic leaves.

Note: It is used in the preparation of Surasadi taila (Sivarajan & Balachandran, 1996).

663. Paramignya monophylla Wight (Plate 112 D)

Family: Rutaceae

Vernacular Name: Kan: Kaadu kithale, Kaadukanchi, Kaadu limbe
Mal: Kattunaragam
Tulu: Kattukanachi
Habit: Straggling shrub.

Habitat: Semi evergreen forest.

Status: Occasional.


Uses: Same as *Atalantia monophylla*.

Etymology: Kaadu kithale (wild orange), Kaadukanchi, Kattukanchi (wild bitter fruit), Kaadu limbe and Kattunaragam (wild lemon) are due to its wild nature and bitter fruits resembling those of *Citrus*.

Note: It is used in synonymous with *Atalantia monophylla*. Fruits are pickled.

664. *Passiflora foetida* L. var. *foetida* (Plate 112 E)

Family: Passifloraceae

Vernacular Name: San: Mukkopeera
Eng: Pop vine, Love-in-a-mist, Fetid passion flower
Kan: Kukke balli, Jedara balli
Mal: Poochapazham, Poodappazham, Akashamutta
Tulu: Jedara ballu

Habit: Climbing herb.

Habitat: Wastelands and along hedges.

Status: Common. Exotic.

Description: Climbing herb with viscous, densely hirsute stem. Leaves simple, 3-lobed, silky-hairy, with glandular hairs on margins; stipules divided into filiform segments. Flowers solitary, axillary; bracts filiform-pectinate. Calyx deeply 5-lobed.
Petals 5, white. Corona violet or purple and white, with several rows of filiform segments. Stamens 5, from an androgynophore. Fruit globose berry, orange when ripe.

Uses: *Whole plant decoction is used internally and its paste is applied externally for tiger spider bite, urticaria and other skin diseases. Fruit is emetic and its extract is recommended for asthma and gas trouble. *Tender shoot tip paste is applied on the head for giddiness. *Leaf juice or oil prepared from leaf juice is applied for scabies in children. Plant paste is applied externally for rheumatism. *Leaf juice is applied externally and also taken internally for tiger spider bite. *Leaf ground in coconut milk is heated in coconut oil and applied for ring worm.

Etymology: Kukke balli (basket vine), Jedara balli and Jedara ballu (spider vine) are due to its characteristic flowers with filiform bracts and much use for spider bite.

Note: Ripe fruit is edible.

665. *Pavetta indica* L. var. *indica* (Plate 112 F)

Syn: *Pavetta indica* L.

Family: Rubiaceae

Vernacular Name: San: Carnicara, Papata, Paphanah, Tiryakphala
   Eng: Indian sorrel
   Kan: Pavate, Papate
   Mal: Kamatta, Nochi, Pavetta
   Tulu: Pavate

Habit: Shrub.

Habitat: Disturbed forests, among bushes.

Status: Common.

Description: Glabrous shrub with obtusely quadrangular or terete branchlets. Leaves simple, elliptic-lanceolate or obovate, narrowed at base. Flowers white, in many-

Uses: *Root decoction is used for liver disorders, piles, dropsy and indigestion. *Root ground with ginger in rice cooked water is recommended for dysentery and swellings. *Leaf is pressed over anus for getting relief from piles.

Etymology: Tiryakphala (transversely lying fruit) is due to its characteristic fruit with 2 transversely arranged pyrenes.

Note: It is sued in the preparation of Paphanadi taila and Paphanadi ghṛta. It is known for its diuretic activity (Jain et al., 1991; Sivarajan & Balachandran, 1996).

666. *Pavetta indica* L. var. *tomentosa* (Roxb. ex J. E. Smith) Hook. f. (Plate 113 A)

Syn: *Pavetta tomentosa* Roxb.

Family: Rubiaceae

Vernacular Name: San: Carnicara, Papata, Paphanah, Tiryakphala
Eng: Indian sorrel
Kan: Pavate, Papate
Mal: Kamatta, Nochi, Pavetta
Tulu: Pavate, Pudelu gamate

Habit: Large shrub.

Habitat: Semi evergreen forests and sacred groves.

Status: Occasional.

Description: Large shrub, with tomentose young parts. Leaves simple, lanceolate or oblanceolate, densely tomentose beneath. Flowers white, in terminal tomentose corymbose cymes. Calyx minutely 4-toothed. Corolla-tube narrow; lobes 4, pilose within. Stamens 4. Fruit subglobose drupe.

Uses: *Fruit pickle is eaten to improve digestion. *Oil prepared from leaf juice is applied for burns and running nose. *Tender shoot tip tambuli* is consumed for
gastroenteritis and indigestion in pregnant ladies (it increases appetite for food). *Leaf paste with rice washed water is applied for swellings and septic ulcers. *Root paste with lime juice is applied externally and also used internally for pit viper bite. Leaf paste is applied for swellings, mumps and skin diseases, while its extract is a blood purifier. *Leaf paste with salt is applied for boil or ulcers in children. *Leaf juice ground in copper vessel is used as *dhara* for venereal diseases.

Etymology: Tiryakphala (transversely lying fruit) is due to its characteristic fruit with 2 transversely arranged pyrenes.

Note: It is sued in the preparation of *Paphanadi taila* and *Paphanadi ghrita*. It is known for its diuretic activity (Jain *et al.*, 1991; Sivarajan & Balachandran, 1996).

Fruit is edible.

667. *Pavonia odorata* Willd. (Plate 113 B)

Syn: *Hibiscusodoratus* (Willd.) Roxb.

Family: Malvaceae

Vernacular Name: San: Bala, Hribera, Hrivera, Valakah
Kan: Balarakkasi gida
Mal: Iruveli
Tulu: Balarakkasi dai

Habit: Undershrub.

Habitat: Weed in wastelands of drier areas.

Status: Occasional. Weed.


Uses: *Root decoction is recommended for fever.*

Etymology: Bala (*Sida*), Hribera and Hrivera (*Cymbopogon*) are due to its affinity with *Sida* in its therapeutic efficacy and with *Cymbopogon* in aroma.

Note: It is usually used as an adulterant for *Sida* complex.
668. *Pavonia zeylanica* (L.) Cav. (Plate 113 C)

Syn: *Hibiscus zeylanicus* L.

Family: Malvaceae

Vernacular Name: San: Bala
   Kan: Antu thogari, Balarakkasi gida
   Tulu: Balarakkasi dai

Habit: Undershrub.

Habitat: Weed in farm fields and wastelands.

Status: Occasional. Weed.


Uses: *Same as Pavonia odorata.*

Etymology: Bala (*Sida*) is due to its affinity with *Sida* in its therapeutic efficacy. Antu thogari (sticky pigeon pea) is due to its sticky fruits.

Note: It is usually used as an adulterant for *Sida* complex.

669. *Pedalium murex* L. (Plate 113 D)

Family: Pedaliaceae

Vernacular Name: San: Brhat gokshura, Tikta gokshura
   Kan: Aane neggilu, Dodda neggilu
   Mal: Aananjerinjil, Kokkamullu, Kattunjerinjil
   Tulu: Aaneneggil

Habit: Annual herb.

Habitat: Along coastal areas.
Status: Occasional.

Description: Fleshy annual herb. Leaves simple, broadly ovate-oblong, fleshy, pale green, glaucous. Flowers solitary, axillary. Calyx 5-partite; lobes lanceolate-oblong. Corolla yellow, glandular-pubescent within; lobes 5, broad. Stamens didynamous. Fruit indehiscent, ovoid obtuse above, tetragonous below with sharp conical spines at the angles.

Uses: Plant extract or seed decoction is used for fever, swellings, burning urination and protein discharge through urine. Whole plant decoction is used for rheumatism.* Whole plant, Cucumis melo seeds and coriander decoction is consumed for thirst and urinary tract problems.

Etymology: Brhat gokshura, Dodda neggilu (larger Tribulus), Tikta gokshura (bitter Tribulus), Aane neggilu, Aanjerinjil (elephant Tribulus) and Kattunjerinjil (wild Tribulus) are due to its characteristic spiny fruits which resemble that of Tribulus terrestris. Its fruits are larger in size and bitter in taste.

Note: It is used in the preparation of Dasamularista, Brhatyadi kashaya, Himasagara taila and Vastyamayantaka ghṛta (Sivarajan & Balachandran, 1996).

670. *Peperomia pellucida* (L.) Kunth. (Plate 113 E)

Syn: *Peperomia exigua* (Blume) Miq.

Family: Piperaceae

Vernacular Name: Kan: Neeru kaddi

Mal: Mashipatcha, Mashithandu, Slettipacha

Tulu: Neerkaddi

Habit: Succulent herb.

Habitat: Wet places.

Status: Common. Weed.

Description: Slender succulent herb. Leaves simple, ovate-deltoid, thin, membranous when dry. Flowers sunk in rachis, subtended by peltate bract, in
terminal or leaf-opposed spikes. Perianth absent. Stamens 2. Fruit ribbed, minute, dry.

Uses: *Acrid juice of the stem is applied for boils on the sides of the eye. *Plant juice is poured into nose as nasya* for cough, sinusitis, nasal block, headache and rhinitis. *Whole plant soup is consumed for digestive disorders and to increase digestive power. *Plant paste is applied for burns. *Whole plant extract is given to ladies after delivery as a digestive agent. Plant juice is used for cold, phlegm, eye pain, ENT problems and diseases of children.

Etymology: Neeru kaddi, Neerkaddi (water stick) and Slettipacha (slate herb) arose from its succulent stem and use of stem juice to erase the words written on the slate.

Note: Occasionally it is used as a substitute for *Phyla nodiflora*.

671. *Pergularia daemia* (Forssk.) Chiov. (Plate 113 F)

Syn: *Daemia extensa* (Jacq.) R. Br.; *Pergularia extensa* (Jacq.) N. E. Br.

Family: Asclepiadaceae

Vernacular Name:  San: Kakajankha, Uttamarani, Visanika  
  Kan: Ugurusutthina balli, Beli hatthi, Haalu kuratige  
  Mal: Velipparuthi  
  Tulu: Ugurubooru

Habit: Perennial climber.

Habitat: Along hedges in dry areas.

Status: Occasional.

Uses: *Plant extract is taken internally to expel phlegm (over dose results in vomiting). Leaf juice is applied for swellings. *Plant cooked with rice is consumed for food poisoning. *Plant decoction is used as a health tonic during 8th month of pregnancy. *Plant extract with milk is taken internally for pit viper bite. *Root extract in milk helps for conception.

Etymology: Ugurusutthina balli (whitlow plant), Beli hatthi, Velipparuthi (hedge cotton) and Ugurubooru (nail climber) are due to its restriction to the hedges, presence of silky coma over the seeds and much use of its latex for whitlow.

Note: It is used in the preparation of Virataradi kashaya and Virataradi ghrta (Sivarajan & Balachandran, 1996).

672. *Persea macrantha* (Nees) Kosterm. (Plate 114 A)

Syn: *Machilus macrantha* Nees in Wall.

Family: Lauraceae

Vernacular Name: Eng: Ladder wood
Kan: Kulamavu, Gulamavu
Mal: Kulamavu, Kulirmavu, Malamavu
Tulu: Kulmavu

Habit: Evergreen tree.

Habitat: Semi evergreen and moist deciduous forests.

Status: Frequent.

Description: Evergreen tree. Leaves simple, coriaceous, elliptic to oblong, shining above, glaucous beneath. Flowers greenish-white, in terminal or axillary panicles. Perianth-lobes 6 in two whorls. Fertile stamens 9; filaments pubescent; staminodes 3, stalked, arrow-shaped. Fruit globose berry, with a basal persistent rim of perianth.

Uses: *Mucilage of the bark is used as a shampoo due to its cooling effect. It is useful for mental upset. Bark decoction is recommended for rheumatism and asthma. *Bark or leaf paste is applied for all types of pains. *Bark extract or decoction is
poured as *dhara* for swellings. Bark is an antifungal agent. *Bark paste with mustard seeds is applied externally for bruises.*

Etymology: Kulirmavu, Kulmavu, Kulamavu (cooling mango) and Malamavu (hill mango) are due to its use as cooling shampoo, restriction to the hills and characteristic mango like aroma.

Note: Crushed bark extract is mixed with paint or cement for better binding. *Leaves are placed above pickles or other food stuffs during storage to prevent fungal attack. *Bark mucilage is smeared over earthen pot to harden it.

**673. Persicaria chinensis** (L.) Gross. (Plate 114 B)

Syn: *Polygonum chinense* L.

Family: Polygonaceae

Vernacular Name: Kan: Bilikonde, Bili cheeni kanagilu, Sural soppu

Mal: Mudanthi, Mukkala, Poovallikodi, Thondi

Tulu: Sural chappu

Habit: Straggling herb.

Habitat: Along forest floors in hills.

Status: Common. Weed.


Uses: *Rhizome cooked in milk is eaten for tuberculosis, liver diseases and weakness. Stem decoction is used for colic pain. *Tuber extract is taken for jaundice and tuberculosis. *Tender shoot tip tambuli* is useful for mouth ulcers. *Plant decoction is used for dysentery and as gargle for gum bleeding. *Tender shoot tip and stem juice mixed with cumin powder and jaggery is consumed in
empty stomach for bleeding from teeth. *Tender leaf (vein removed), black cumin and cumin seeds ground in buttermilk is heated and taken for stomach spasm, diarrhoea and stomach ache.

Etymology: Bilikonde (white tassel) is due to its characteristic inflorescence.

Note: Tender twig and leaves are used as vegetable. Fruit is edible.

674. Phoenix sylvestris (L.) Roxb. (Plate 114 C)

Syn: Elate sylvestris L.

Family: Arecaceae

Vernacular Name: San: Kharju, Kharjura, Kharjuri, Svadumastaka
Eng: Date sugar palm, Wild date palm, Silvester palm
Kan: Eechalu mara, Hendada eechalu
Mal: Kattinta
Tulu: Eechalu

Habit: Tall tree.

Habitat: Plains and open wastelands.

Status: Occasional.

Description: Dioecious tall tree with large hemispherical crown; stem covered with persistent bases of the petioles. Leaves pinnatisect, greyish-green; leaflets numerous, linear, apex sharply spiny, glaucous, rigid; lower leaflets spiny. Flowers unisexual, small, in spikes, in interfoliar spadices. Male flowers white, scented; calyx cup-shaped, 3-toothed; petals 3; stamens 6. Female flowers distant, roundish; calyx cup-shaped, 3-toothed; petals 3; staminodes 3. Fruit oblong-ellipsoid drupe, orange yellow when ripe.

Uses: *Fruit paste is applied for venereal diseases. *Bark decoction is of hot nature, used for biliousness, cardiac debility and general debility. Bark or root decoction is
taken for rheumatism. *Fruit extract is used as a diuretic agent. *Paste of bark fried in oil is applied for burn.

Etymology: Svadumastaka (sweet head), Hendada eechalu (toddy date palm) and Kattinta (wild date palm) are due to its tasty fruits, wild nature, close affinity with date palm and use for toddy extraction.

Note: Jaggery is prepared from the toddy extracted from its inflorescence. Ripe fruits are edible.

675. *Pholidota imbricata* Hook. (Plate 114 D)

Syn: *Pholidota pallida* sensu Abraham & Vatsala

Family: Orchidaceae

Vernacular Name: Kan: Dodda polekaayi  
Mal: Pannamaravazha  
Tulu: Malla polekaayi

Habit: Epiphytic orchid.

Habitat: On trees in forests.

Status: Common.


Uses: *Pseudobulbs ground with raw rice after covering with banana leaf are cooked in burning charcoal and made into roties*. These are eaten with honey at night for three days for swelling in the body due to anaemia. *Pseudobulb juice mixed with rice flour is cooked by covering with Careya arborea leaf, made into roties* and are eaten in empty stomach in the morning for boils. *Crushed pseudobulb and Cassia fistula bark mixed with milk are taken in empty stomach once in the morning and its
paste is applied externally for swellings. *Ground 10 – 15 pseudobulbs mixed with water is given by adding jaggery or sugar to increase lactation in cattle. *Pseudobulb, Antidesma acidum bark, gratings of half a coconut is ground and mixed with ghee. This mixture covered with banana leaf is given to eat (for three days) for bruised leg in cattle.

Etymology: Dodda polekaayi and Malla polekaayi (larger Bulbophyllum) are due to its resemblance with Bulbophyllum sterile in habit and larger pseudobulbs.

Note: Usually used as a substitute for Bulbophyllum sterile.

676. *Phragmites karka* (Retz.) Trin ex Steud. (Plate 114 E)

Syn: Arundo karka Retz.

Family: Poaceae

Vernacular Name: San: Nala, Nalah, Nata, Vibhisanah
Eng: Nal grass, Common reed
Kan: Jeevalada kaddi, Hulugila hullu, Hulugilu
Mal: Vezhamkole
Tulu: Amedarbe

Habit: Shrub.

Habitat: Moist areas near water source in forests.

Status: Occasional.

Description: Perennial, rhizomatous shrub; culms stout, woody below, creeping. Leaves linear-lanceolate, stiff, glabrous; ligule a ciliate rim. Panicle lax, decompounds; branches filiform, scabrid. Spikelets 4-flowered, laterally compressed. Lower glume oblong, 3-nerved; upper linear-lanceolate. Lemma linear; palea oblong, 2-nerved. Stamens 3. Fruit oblong, terete caryopsis.

Uses: *Rhizome crushed with milk or rice washed water is taken twice a day for urine block and burning urination. *Ground rhizome, white Hedychium coronarium
rhizome, white *Mirabilis jalapa* rhizome are boiled in water and kept for one day. Next day this mixture is given by mixing with equal quantity of milk and a little cumin powder once a day for protein discharges through urine. *Rhizome extract with lime juice is recommended for constipation. *Rhizome extract with rice washed water is taken twice a day for a week in case of scrotal swelling.

Etymology: Nalah (tubular) and Jeevalada kaddi (full of life stick) are due to its hollow internodes and gregarious growth.

Note: Much used for urinary disorders.

**677. *Phyla nodiflora* (L.) Greene (Plate 114 F)**

Syn: *Lippia nodiflora* (L.) A. Rich.

Family: Verbenaceae

Vernacular Name:  San: Bahushikha, Jalapippali
Eng: Purple Lippia, Turkey tangle frog fruit
Kan: Neeru hippali, Jala hippali
Mal: Neer thippali, Kattuthippali
Tulu: Neerpippali

Habit: Prostrate herb.

Habitat: Wet areas in plains and coastal regions.

Status: Common. Weed.


Uses: *Tender leaf extract is consumed for indigestion, dysentery and as a digestive after delivery.

Etymology: Bahushikha (many branched), Jalapippali, Neeru hippali, Jala hippali, Neer thippali, Neerpippali (water long pepper) and Kattuthippali (wild long pepper)
are due to its much branched stem, aquatic habitat and resemblance of spike with that of long pepper.

Note: Nodiflorin A & B, nodifloretin, lippiflorins A & B are the active components. It is used in the preparation of *Akika pisti* and *Akika bhasma* (Sharma *et al*., 1998).

**678. Phyllanthus acidus** (L.) Skeels (Plate 115 A)

Syn: *Phyllanthus distichus* (L.) Muell.-Arg.; *Cicca acida* (L.) Merr.; *Cicca disticha* L.

Family: Euphorbiaceae

Vernacular Name: San: Komalavalkala, Lavani, Rayamalaka  
Eng: Star gooseberry, Grosella  
Kan: Rayanelli, Kirunelli  
Mal: Nakshatranelli, Pulinelli, Seemanelli  
Tulu: Rayanelli

Habit: Small tree.

Habitat: Cultivated in gardens.

Status: Frequent. Exotic.


Uses: *Root decoction has purgative property.  
*Leaf and root decoction is used as an antidote for viper bite. Seed decoction is used for gas trouble.  
*Leaf decoction intake causes perspiration.  
Bark decoction acts as a pain reliever and fruit juice a blood purifier.

Etymology: Komalavalkala (soft barked), Rayamalaka, Rayanelli (king gooseberry), Kirunelli (smaller gooseberry), Nakshatranelli (star gooseberry) and Pulinelli (sour gooseberry) are due to its soft wood, angled sour fruits, close resemblance with gooseberry and habit which is much smaller than the gooseberry tree.
Note: Fruit is edible. β-amyrin, phyllanthol and gallic acid are the active constituents. It is one of the important ingredients of *Draksasava* (Sharma et al., 1998).


*Phyllanthus debilis* Klein ex Willd.

Family: Euphorbiaceae

Vernacular Name: San: Bhumyamalaki, Tamalaki

Eng: Ground Phyllanthus

Kan: Nelanelli

Mal: Keezharnelli

Tulu: Nelanelli

Habit: Erect herb.

Habitat: Plains and in paddy fields after harvest.

Status: Common. Weed.


Uses: *Whole plant is boiled and ground with cow milk is consumed for six days in case of jaundice. *Plant *tambuli* is also effective (white variety is more effective) for jaundice. *Whole plant paste is applied over the head and a small quantity is taken internally for jaundice in children (below the age of 10). *Two spoon whole plant juice mixed with cumin and cardamom seeds is consumed with two spoon milk for jaundice. *Tambuli* prepared from whole plant is used for biliousness, leucoderma, children’s diseases and is a digestive. *Whole plant juice mixed with milk is used for all types of bleedings.*

Etymology: Bhumyamalaki, Nelanelli and Keezharnelli (ground gooseberry) are due to the herbaceous nature and close affinity with gooseberry plant.
Note: It is used in the preparation of *Cemparutyadi taila*, *Madhuyastyadi taila*, *Amrtaprasa ghṛta* and *Chyavanaprasha* (Sivarajan & Balachandran, 1996).

**680. *Phyllanthus amarus* Schum. & Thonn. (Plate 115 C)**

Syn: *Phyllanthus fraternus* auct. non Webster.; *Phyllanthus niruri* sensu Hook. f.

Family: Euphorbiaceae

Vernacular Name: San: Bhumyamalaki, Tamalaki  
Eng: Ground Phyllanthus  
Kan: Nelanelli  
Mal: Keezharnelli  
Tulu: Nelanelli

Habit: Erect herb.

Habitat: Wastelands.

Status: Common. Weed.


Uses: Whole plant juice or its decoction with cumin seeds is used for jaundice. *Plant extract in milk is given for malnutrition in children. *Root extract in milk or buttermilk is taken for jaundice. *Plant juice mixed with coconut oil is applied for eye pain. *Root and leaf extract is applied for thrush in tongue and ulcers. Bud decoction is used for blood dysentery, while that of root, leaf and bud for urinary tract infections and diarrhoea. *Whole plant and cumin seeds extract is consumed with milk for blood discharges. Plant paste is applied externally and its extract is used internally for liver problems. *Whole plant ground with milk is taken by adding cumin, pepper powder and honey at morning in empty stomach for 14 days to correct digestive system of children. *Tender shoot tip ground with rock salt in water is kept for one day in an earthen pot. Next day it is heated in copper vessel
and is applied over eyebrows for all kinds of eye diseases. *Plant paste with rice washed water is applied for skin diseases. Tender shoot tip decoction is used for blood dysentery. Root decoction is a sleep inducer. *Oil prepared from plant juice is used for eye diseases. Plant juice is taken internally for asthma.

Etymology: Bhumyamalaki, Nelaneli and Keezharnelli (ground gooseberry) are due to the herbaceous nature and close affinity with gooseberry plant.

Note: It is used in synonymous with *Phyllanthus airy-shawii*.

681. *Phyllanthus emblica* L. (Plate 115 D)

Syn: *Emblica officinalis* Gaertn.

Family: Euphorbiaceae

Vernacular Name: San: Amalaki, Amlika, Amritaphala, Dhatri
   Eng: Embelic myrobalan, Indian gooseberry
   Kan: Nellikaayi, Bettada nelli
   Mal: Amalakam, Nelli
   Tulu: Nelli

Habit: Medium-sized tree.

Habitat: Forests and dry plains.

Status: Frequent.


Uses: *Small piece of preserved fruit dissolved in butter milk is given for stomachache and indigestion. Fruit powder is used for biliousness. Fruit powder in butter milk is taken for jaundice, diarrhoea, indigestion and bleeding piles. *Leaf ground in curd or butter milk is consumed for diarrhoea, dysentery, indigestion and
stomachache. *Bark decoction is used as a gargle for mouth ulcers. *Root bark ground with fenugreek is recommended for chronic dysentery. Leaf decoction is used to wash eyes in case of eye diseases. Raw fruit tambuli* is used for liver and gastrointestinal troubles. Preserved fruit powder is used as a cooling agent for fever, biliousness and over urination. *Leaf extract is used for burning sensation in eyes. Stem bark decoction is given to arrest diarrhoea. *Preserved fruit powder mixed with butter milk is applied over the head and bath with cool water is recommended for sleeplessness. Fruit decoction is used for biliousness, nervous debility, piles, leucorrhoea and raktava∗. Fruit, those of Terminalia chebula and Terminalia bellirica are used for preparing triphala* oil which is applied over the head and eyes for vision problems. *Fruit, those of Terminalia chebula and Terminalia bellirica, leaves of Eclipta prostrata, Vernonia cinerea, Alternanthera sessilis and Hibiscus rosa-sinensis boiled in gingelly oil is applied over the head for mental problems. *Tender shoot tip is chewed for mouth and tongue ulcers. *Fruit refuse juice mixed with butter milk is taken for constipation and stomachache. *One ounce of fruit juice mixed with turmeric juice and honey stored inside paddy seeds for one month is consumed for gangrene. *Six drops of fresh fruit juice or aqueous extract of dried fruit rind or leaf is used as eye drop for all types of eye diseases. *Dried fruit rind ground with rice washed water is applied (thickly) over stomach, on the sides of stomach and lower back in case of urine block. Fruit decoction with turmeric is used for diabetes. *Paste of the tumours (due to insect attack) seen on its branches is applied for alopecia totalis. *Fruit (slightly fried), butter milk, coconut gratings and garlic are made into a tambuli* which is useful for diarrhoea. *Seed powder ground with cumin seeds in milk is used for leucorrhoea. *Fruit juice is consumed with sugarcandy and banana (slightly boiled) for dysmenorrhoea. *For the same disease, dried gooseberry powder, Terminalia chebula fruit rind powder, Ficus racemosa fruit (in equal quantity) ground with banana stem juice or gooseberry seed ground with sugar and honey are also used. Fruit juice mixed with turmeric powder is used for diabetes. *Dried fruit and sandalwood ground in milk is applied over the head for insanity. Leaf powder decoction is used to wash gangrene wounds. *Seed
powder mixed with salt is used as tooth powder. *Dried gooseberry, cumin, *Nigella sativa* seeds, dried ginger, long pepper, nutmeg, clove, mace, *Plectranthus vettiveroides* leaf, *Piper cubeba* fruit, *Glycyrrhiza glabra* rhizome, *Saussurea lappa* seeds, turmeric, *Coscinium fenestratum* root, *Kaempferia galanga* rhizome, cardamom, cinnamon bark, *Pogostemon heymenaeus* leaf, *Mesua ferrea* flower (in equal quantity) are ground (for 12 days) with sandalwood powder and tobacco leaf powder dissolved in lime juice. This mixture then ground with camphor, *pacche karpura*, and *Plectranthus amboinicus* leaf extract, dried and is used with rose water as *nasya* for headache and chronic rhinitis. *Fruit decoction with *Vetiveria zizanioides* and cardamom is used for loss of appetite due to biliousness. *Fruit, *Terminalia chebula* fruit and *Glycyrrhiza glabra* rhizome powder are taken with milk and sugarcandy for cough due to *pitta*. *Fruit powder dissolved in milk is consumed for bleeds from nose, blood discharge through urine and vomiting. Fruit juice mixed with ghee is recommended for leucoderma due to *pitta*. *Dried fruit powder is taken with honey twice a day for 5 – 7 days in case of over menstrual bleeding.

Etymology: Amlika (acidic), Dhatri (earth or mother) and Bettada nelli (hill gooseberry) are due to its habitat, acidic fruit and diverse use of each and every part.

Note: Generally its fruits ground with salt are dried and preserved for future use. Dried fruit powder tambuli is recommended during the winter. It is used in the preparation of *Chyavanaprasha, Dhatryadi ghṛta, Triphaladi taila, Mahatiktaka ghṛta, Brahma rasayana, Sudarsana churna, Sarvajvarahara lehya, Pippalyasava, Karanjadi yoga, Kayyanyadi taila, Triphala churna and Dhatri lehya* (Dey, 1994; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

682. *Phyllanthus kozhikodianus* Sivar. & Manilal (Plate 115 E)

Family: Euphorbiaceae

Vernacular Name: San: Bhumyamalaki, Tamalaki
Eng: Ground Phyllanthus
Kan: Dodda nelanelli
Mal: Keezharnelli  
Tulu: Nelanelli

Habit: Erect herb.

Habitat: Moist deciduous forests and plains.

Status: Common. Weed.


Uses: *Whole plant, *Withania somnifera* root, *Trianthema portulacastrum* root and *Salacia chinensis* root ground with milk is taken twice a day for jaundice. *Whole plant, cumin seeds and sugarcandy ground with milk is consumed twice a day for protein discharge through urine. *Root ground with milk is used once in the morning for dysmenorrhoea.

Etymology: Bhumyamalaki and Keezharnelli (ground gooseberry) are due to the herbaceous nature and close affinity with gooseberry plant. Dodda nelanelli (larger ground gooseberry) is due to its larger size.

Note: It is used in synonymous with *Phyllanthus airy-shawii*.

683. *Phyllanthus maderaspatensis* L. (Plate 115 F)

Family: Euphorbiaceae

Vernacular Name: San: Bhumyamalaki, Tamalaki  
Eng: Ground Phyllanthus  
Kan: Kari nelanelli  
Mal: Keezharnelli  
Tulu: Kari nelanelli

Habit: Erect herb.

Habitat: Weed in cultivated fields.

Status: Occasional. Weed.

Uses: *Plant extract in milk is used for jaundice and other liver disorders. *Whole plant decoction is taken for headache.

Etymology: Bhumyamalaki and Keezharnelli (ground gooseberry) are due to the herbaceous nature and close affinity with gooseberry plant. Kari nelanelli (black ground gooseberry) is due to its blackish stem.

Note: It is used in synonymous with *Phyllanthus airy-shawii.*

684. *Phyllanthus reticulatus* Poir. in Lam. (Plate 116 A)

Syn: *Kirganelia reticulata* (Poir.) Baill.

Family: Euphorbiaceae

Vernacular Name: San: Bahupraja, Bahupushpa, Kamboji, Krishnakamboji
  - Kan: Kakesoppu, Karisuli, Karihuli
  - Mal: Neeroli, Nirmelli, Kattuniruri
  - Tulu: Kakechappu

Habit: Straggling shrub.

Habitat: Along hedges.

Status: Common. Weed.


Uses: *Root decoction is used for cough and rhinitis in children. *Leaf juice is applied all over the body for malabsorption in children and DUB. *Leaf boiled in water is used as gargle for softening of gum and gum bleeding. *Leaf ground in
coconut milk is applied and bath with leaf decoction is taken for increased body heat, septic wounds, chicken pox, measles and urticaria.

Etymology: Bahupraja (many offsprings), Bahupushpa (many flowered) and Kakesoppu (crow leaf) arose as it produces large number of black fruits. The plant body itself blackish in colour.

Note: Fruit is edible. It is used as a substitute for leaves of neem and Breynia vitis-idaea for the treatment of skin diseases.

685. *Phyllanthus tenellus* Roxb. (Plate 116 B)

Syn: Phyllanthus minor Fawcett & Rendle.; Phyllanthus corcovadensis Muell.-Arg.

Family: Euphorbiaceae

Vernacular Name: San: Bhumyamalaki, Tamalaki
   Eng: Ground Phyllanthus
   Kan: Kari nelanelli
   Mal: Keezharnelli, Melarnelli
   Tulu: Kari nelanelli

Habit: Erect annual herb.

Habitat: Grown in gardens, also naturalized.

Status: Occasional. Exotic.

Description: Erect herb. Leaves simple, broadly elliptic to obovate, dark green above, paler beneath. Flowers small, in axillary fascicles, seen above the leaves. Perianth-lobes 5, white, obovate in male, triangular-ovate in female. Stamens 5. Fruit depressed-globose capsule.

Uses: *Plant extract in milk is used for jaundice, genito-urinary disorders and to increase immunity. *Plant paste is applied externally for scabies and allergy.

Etymology: Bhumyamalaki and Keezharnelli (ground gooseberry) are due to the herbaceous nature and close affinity with gooseberry plant. Kari nelanelli (black ground gooseberry) is due to its blackish stem.

Note: It is used in synonymous with *Phyllanthus airy-shawii.*
686. **Phyllanthus urinaria** L. (Plate 116 C)

Syn: *Phyllanthus leprocarpus* Wight.

Family: Euphorbiaceae

Vernacular Name: San: Bahupushpa, Bhumyamalaka, Tamalaki  
Eng: Ground gooseberry  
Kan: Kempu nelanelli  
Mal: Chuvanna kizharnelli  
Tulu: Kempu nelanelli

Habit: Erect annual herb.

Habitat: Wastelands and as weed in gardens.

Status: Common. Weed.

Description: Erect herb. Leaves simple, closely packed and often overlapping, oblong or obovate. Flowers small; male pedicellate, in axillary fascicles; female solitary, axillary. Perianth-lobes 6, elliptic-oblong, greenish-yellow. Stamens 3. Fruit verrucose capsule.

Uses: *Whole plant extract (concentrated) is used for gonorrhoea and urinary diseases. *Leaf juice mixed with coconut milk is given for indigestion in children. *Whole plant decoction is recommended for bleeding piles and menstrual problems. Whole plant extract in milk is used for jaundice.

Etymology: Bahupushpa (many flowered), Bhumyamalaka (ground gooseberry), Kempu nelanelli and Chuvanna kizharnelli (red ground gooseberry) are due to its small size, resemblance with gooseberry plant, large number of flowers and reddish stem.

Note: It is often used in the absence of *Phyllanthus airy-shawii.*
687. *Phyllocephalum scabridum* (DC.) Kirkman (Plate 116 D)

Syn: *Centratherum molle* (DC.) Benth.; *Centratherum courtallense* (Wight) Benth. ex Hook. f.

Family: Asteraceae

Vernacular Name: Kan: Kaadu henu shyavanthige  
                  Tulu: Kattu penu sevanthige

Habit: Erect herb.

Habitat: Laterite hills, in shady places.

Status: Occasional. Weed.

Description: Erect herb. Leaves simple, elliptic-ovate or lanceolate, hairy above, white tomentose beneath. Florets in solitary, terminal, homogamous, discoid heads; involucral bracts many-seriate, outer white tomentose, inner scabrous. Corolla tubular, purple; limb campanulate, 5-lobed. Stamens 5. Fruit linear-oblong achene.

Uses: *Same as Centratherum punctatum.*

Etymology: Kaadu henu shyavanthige and Kattu penu sevanthige (wild *Centratherum punctatum*) are due to its close affinity with *Centratherum punctatum.*

Note: It is used as a substitute for *Centratherum punctatum.*

688. *Physalis angulata* L. (Plate 116 E)

Syn: *Physalis minima* L.

Family: Solanaceae

Vernacular Name: San: Cirapotha, Chirapotha, Mrdukunchika  
                  Eng: Sunberry, Country gooseberry  
                  Kan: Bondula gida, Sanna guppate gida  
                  Mal: Njodinjotta, Njottanjodian, Pottichedi  
                  Tulu: Ajja parkate, Ajjapotthelu, Ajjipottla
Habit: Erect herb.

Habitat: Weed in waste places and along roadsides.

Status: Common.

Description: Erect annual herb, with angular stem. Leaves simple, ovate, oblique at base. Flowers solitary, axillary. Calyx campanulate, 5-lobed. Corolla greenish-yellow, with purple spots near the base within, plicate, 5-lobed. Stamens 5; anthers bluish. Fruit globose berry, enclosed in the prominently veined ovoid calyx.

Uses: *Three tender shoot tips ground with three shoot tips of Solanum nigrum in milk is given from the 4th day of menses in case of menstrual headache and giddiness. *Fruits are eaten to overcome mouth sores. Leaf juice is taken to expel worms and for upset stomach in children. *One spoon fruit or plant juice is given for constipation in children. Plant paste is applied externally for urticaria, rheumatism and rashes, also over head for insanity. *2 or 3 drops of its fruit juice boiled with gingelly oil are poured into opposite side ear in case of toothache. Fruit extract is digestive, useful for colic and gastric ulcers. *Plant juice mixed with honey is consumed at morning in empty stomach for liver and bile disorders. *Chutney prepared from young leaves is used as a health tonic towards the end of rainy season. Whole plant juice or decoction is used for fever and indigestion. It is wormicidal, tonic and diuretic (overdose may result in diarrhoea).

Etymology: Mrdukunchika (soft contracted covering), Ajjapotthelu (grandpa’s testicle) arose due its characteristic soft persistent calyx which gets contracted after fruit ripening.

Note: Ripe fruits are edible.

689. *Physalis peruviana* L. (Plate 116 F)

Syn: Physalis edulis Sims.; Physalis latifolia Lam.

Family: Solanaceae

Vernacular Name: San: Kuntali, Tankari, Tankasi
Eng: Cape gooseberry, Peruvian ground cherry
Kan: Dodda guppate gida, Dodda bondula gida
Mal: Karimpotti, Pottapalachedi
Tulu: Ajja parkate, Ajjapotthelu, Ajjipottla

Habit: Erect herb.

Habitat: Weed in waste lands and along roadsides.

Status: Common. Exotic.

Description: Erect annual herb. Leaves simple, ovate, entire or shallowly toothed.
Stamens 5; anthers yellowish. Fruit globose berry, enclosed in the enlarged ovoid or
subglobose calyx.

Uses: Same as Physalis angulata.

Etymology: Mrdukunchika (soft contracted covering), Ajjapotthelu (grandpa’s
testicle) arose due its characteristic soft persistent calyx which gets contracted after
fruit ripening.

Note: Ripe fruits are edible.

690. Piper betle L. (Plate 117 A)

Family: Piperaceae

Vernacular Name: San: Nagavalli, Parnalata, Tambula, Tambulah
    Eng: Betel pepper, Betel leaf vine
    Kan: Veelyadele, Tambula
    Mal: Vettila, Vettilakkodi
    Tulu: Bacchire

Habit: Climber.

Habitat: Cultivated.
Status: Common.

Description: Stout climber. Leaves simple, ovate, rounded or cordate at base, glabrous. Flowers small, dioecious, crowded on axillary pendulous spikes; bracts peltate, orbicular to obcordate. Stamens 2. Stigmas 5 – 6. Fruits not produced.

Uses: Leaf juice is taken to increase appetite and digestion. *Leaf is eaten along with salt to improve digestion. *Heated leaf is pressed to get relief from body pain. Leaf juice along with honey is used for fever, cough, bronchitis, stomachache, tuberculosis and to expel worms in children. Leaf is chewed for toothache. *Betel morsel is recommended for strengthening teeth, cough and to overcome premature ejaculation. *Three leaves are chewed with a little salt and the juice is swallowed for stomachache. Oil prepared from leaf juice is applied for rheumatism, body pain and also applied over the head for mental problems. *Leaf juice (panchavalli) variety mixed with bark juice of *Erythrina variegata is recommended for four months for infertility and stomachache during menses. *Leaf juice mixed with lime juice is applied externally for ringworm. Leaf extract is used as a wound healer, pain reliever, phlegm expeller and foul breath remover. *Its leaf, 4 – 5 leaves of *Piper nigrum, bud of *Syzygium aromaticum and a little pacche karpura are eaten for asthma, bronchitis, phlegm and cough. *One spoon leaf juice is given to children for vitamin-A and calcium deficiency. Leaf paste is applied for muscle spasm. *Paste of leaf fried in ghee is applied externally and its extract is used internally for finger swelling. Leaf paste with gingelly oil is applied for pain and muscle spasm. Ripe leaf juice is a digestive agent. Oil extracted from the leaf is an insect repellant and nervine stimulant. Leaf juice mixed with lime is applied for ringworm and worms. Leaf decoction mixed with salt is used as a gargle for toothache. *Leaf is eaten with salt and decoction of *Hyoscyamus niger seed and garlic drunk to expel intestinal worms in children. *Leaf, *Nigella sativa seeds and *Clerodendrum viscosum shoot tip ground in gingelly oil is used as dhara for carbuncles. *Shoot tip, egg white, toddy jaggery and onion are ground and taken internally for all types of bone pain due to bruises.

Etymology: Parnalata (leafy climber) arose as the leaves are the officinal part.
Note: The vine growing with *Sesbania grandiflora* is usually recommended for mastication while that with *Strychnos* for medicine. It is sued in the preparation of *Tambula lehya*, *Aranyatulasyadi kera*, *Rasasindura*, *Akararkerahadi gutika*, *Lokanatha rasa*, *Brhat sarvajvarahara lehya*, *Laghu sutasekhara rasa* and *Brhat visamajvarantaka rasa* (Sharma et al., 1998; Sivarajan & Balachandran, 1996). Chavicol, terpine, betel phenol and sesquiterpenes are the major constituents (Dey, 1994).

**691. Piper chaba** Hunter (Plate 117 B)

Syn: *Piper retrofactum* Vahl.

Family: Piperaceae

Vernacular Name: San: Gajapippali, Chavika, Chavya

   Eng: Greater long pepper

   Kan: Gajapippali

   Mal: Aanathippali

   Tulu: Aaneippali

Habit: Creeper.

Habitat: Cultivated.

Status: Occasional.

Description: Creeping or climbing shrub. Leaves simple, ovate-oblong, dark green, 6 – 8-ribbed. Flowers minute, dioecious, in axillary 1 – 3 inch long spikes; bracts peltate, orbicular. Stamens 2. Berries concrecent, forming a fleshy spadix, red when ripe.

Uses: *Seed decoction with milk or its powder is used for asthma and bronchitis. Fruit is a milder tonic and is digestive. Fruit powder is taken with honey to expel phlegm.*

Etymology: Gajapippali, Aanathippali and Aaneippali (elephant long pepper) are due to its spikes which are larger and share close affinity with long pepper spikes.
Note: It is used in the preparation of *Panchakola*, *Chavyadi ghrtta*, *Sudarsana churna*, *Abhayarista*, *Pippalyasava*, *Yogaraja guggulu* and *Chandraprabha vati* (Dey, 1994).

**692. *Piper longum* L. (Plate 117 C)**

Family: Piperaceae

Vernacular Name: San: Pippali, Magadha  
Eng: Indian long pepper, Long pepper  
Kan: Hippali, Hippli, Pippali  
Mal: Pippali, Thippali, Kattuthippali  
Tulu: Ippali, Pippali

Habit: Undershrub.

Habitat: Cultivated, also runs wild.

Status: Frequent.

Description: Slender undershrub, with prostrate vegetative branches and subscandent flowering shoots. Leaves simple, long-petioled, ovate in sterile shoots; on fertile branches subsessile, ovate-oblong. Flowers minute, dioecious, in axillary spikes; bracts peltate, orbicular. Stamens 2. Stigmas 3 – 4. Fruit concrescent berries, forming a fleshy spadix.

Uses: Ground fruit is used with honey for cough and tonsillitis. *Fruit fried with ghee and salt is given in the morning and rasam* prepared from its seeds and salt at night for 11 days after delivery. Fruit powder in milk is taken for asthma, bronchitis, lung problems and to expel phlegm. It is a cooling agent. Root decoction is used as a carminative, also for gas trouble, epilepsy and stroke. Fruit ground with water is recommended for speech clearance in small children. *Leaf or whole plant tambuli* with butter milk is useful for tridoshas, piles and is a digestive. *Fruit, *Embelia ribes* seeds, cardamom, asafoetida, rock salt and ginger decoction is used for loss of appetite due to rheumatism. *Fruit powder, *Glycyrrhiza glabra* powder and crushed *Justicia adhatoda* leaves decoction is given with honey for cough. Fruit along with
honey is used for stammering. *Heated paste of its fruit, pepper, ginger and *Acorus calamus* rhizome is applied on forehead for headache. *Fruits ground with rock salt in water are given for immediate delivery and expulsion of placenta. Seed powder decoction is consumed in empty stomach twice a day for influenza. Seed powder is consumed with honey followed by milk for fever in children. *Fruit, *Trachyspermum ammi* seeds, ginger and cumin seeds (in equal quantity) powder are recommended twice a day with sugar for indigestion during pregnancy. *Paste of its fruit, *Acorus calamus* rhizome and *Ricinus communis* seed kernel (in equal quantity) mixed with a little castor oil is applied around the navel for quick delivery after onset of labour pain. Root decoction is given as a tonic, also to expel phlegm, helps in digestion, for fever and hepatitis. Root paste is applied for leucoderma. *Root ground in butter milk is applied for nervous debility. *3 – 4 drops of its root juice mixed with jaggery are poured into each nose for headache and nasal block. Root decoction is used for running nose and phlegm. Root extract is a digestive, blood purifier, tonic, used for rheumatism, breathing problems, epilepsy, cold, fever, skin diseases and indigestion.

Etymology: Magadha (belonging to Magadha) clearly indicates its Indian origin.

Note: It is sued in the preparation of *Abhayarista, Draksarista, Chyavanaprasha, Pippalyasava, Pancakola churna, Dasamula taila, Gudapippali, Amritarista, Ayaskrti, Asvagandharyarista, Kumaryasava, Candanasava, Kaisora guggulu, Pippalimuladi kvatha, Khadirarista, Sudarsana churna, Sanjivani vati, Talisadi churna, Trikatu churna and Yogaraja guggulu*. It has piperine, piperlongumine, piperlonguminine, α-thujene, terpinolene, ρ-cymene, dehydrocarveol, sylvatine, sesamin, dieudesmin, hentriacontane, triacontanol and β-sitosterol are the active constituents (Dey, 1994; Kapoor, 1990; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

693. *Piper nigrum* L. var. *nigrum* (Plate 117 D)

Family: Piperaceae

Vernacular Name: San: Marica, Maricha, Tikshna
Eng: Black pepper, Pepper
Kan: Olle menasu, Kari menasu, Kaalu menasu
Mal: Kurumulaku, Nallamulaku
Tulu: Eddemunchi

Habit: Climber.

Habitat: Cultivated.

Status: Common.

Description: Tall climber. Leaves simple, broadly ovate to elliptic, coriaceous. Flowers minute, unisexual or bisexual, in axillary pendulous spikes; bracts oblong, adnate to the rachis. Stamens 2. Stigmas 3 – 5. Fruit spherical, pungent berry, red at maturity.

Uses: Fruit or seed and *Zingiber officinale* rhizome decoction is used for bronchitis and asthma. Seed paste is applied for rheumatism and decoction for vomiting, to increase appetite and metal poisoning. *Oil prepared by boiling leaf juice in gingelly oil is applied for stroke and septic wounds. *Seed powder mixed with buffalo butter is applied for ulcers in the eyes of cattle. *Paste of fruit cooked with milk is applied for sprain and twist in legs or ankle. *Fruit ashes mixed with coconut oil are applied for furuncles. *Fruit, those of *Piper longum*, *Embelia ribes*, *Acorus calamus* rhizome, *Zingiber officinale* rhizome and asafoetida decoction (half glass twice a day for 3 days) is consumed for poisonous bites. *Seed paste with buffalo milk is applied for whitlow. Fruits fried in ghee are mixed with salt and eaten for cold and rhinitis. *Seeds, clove and lime juice paste is applied for migraine. Fruit, long pepper and ginger powder mixed with honey are used for headache. *Fruit powder dissolved in hot milk is taken by adding sugarcandy at night (after food) to correct digestion in children. *Fruit powder mixed with ghee is applied into the inner portion of eye lids in case of stool or urine block in cattle. Pepper, fresh ginger and sugar crushed in ghee are used for cough. Pepper ground and its paste are applied on head to stop vomiting in children. *Pepper, tea powder, palm jaggery, *Cymbopogon citratus* leaves, onion, dried ginger and *Sida rhombifolia* root decoction is consumed for fever. *Pepper, ajowan, cardamom seed coat and garlic decoction is used to
expel intestinal worms. *Pepper and rock salt powder (in equal quantity) mixed with ghee are used for phlegm, cough, cold and indigestion. Pepper paste with butter is applied for piles. *Pepper ground with gorochana is applied for pimples. *Pepper ground with onion juice is used as nasya with human urine for snake bite. Pepper powder mixed with sugarcandy is taken with honey for asthma. *Fruit ash mixed with bull horn ash and gingelly oil is applied for leprosy and other chronic skin diseases. *Seed powder mixed with nail ash in gingelly oil is applied for leprosy. *Cyclea peltata leaf ash is added to the oil prepared by heating its seed, Jasmum grandiflorum leaf, Saussurea lappa seed with gingelly oil and is applied for septic wounds and ulcers. *Seeds, clove and garlic powder boiled with Mammea suriga oil is massaged for rheumatoid arthritis. Seed paste with milk is applied to eyes in case of injury to eyes. *Oil prepared by boiling one pepper seed in equal quantities of gingelly oil and Eclipta prostrata juice is used as hair oil for cold, fever and good vision. *Fruit chutney is used internally and paste with turmeric powder in gingelly oil is applied externally to generate heat in chilled body. *After smearing the body with gingelly oil its fruit paste is applied for bruised and hardened blood clots. *Heated leaf is pressed over bruised body parts. Ground seeds heated in milk with turmeric powder and sugar is given for cold, throat pain and headache. *Powder of seeds fried in ghee is given with ghee twice a day for boils of hair follicles. *Paste of pepper powder and rock salt with ghee is applied for itches and scabies.

Etymology: Tikshna (acute), Olle menasu, Nallamulaku, Eddemunchi (good pepper), Kari menasu (black pepper), Kaalu menasu and Kurumulaku (seed pepper) are due to its fruits which are highly pungent, black in colour (when dry) and having diverse uses.

Note: It is used in the preparation of Dasamulakatutrayadi kashaya, Astachurna, Amrtarista, Maricadi taila, Dasamula rasayana, Gulgulutiktaka ghrta, Maricadi gutika, Trikatu churna, Maricadi churna and Maricadi ghrta. It has piperine, chavicine, piperidine, piperetine, piperlin, piperolein A & B as active constituents (Dey, 1994; Kapoor, 1990; Sharma et al., 1998; Sivarajan & Balachandran, 1996). Fruits are much used as spice.
694. *Piper triiocum* Roxb. (Plate 117 E)

Syn: *Piper attenuatum* Ham. ex Miq.

Family: Piperaceae

Vernacular Name: San: Vana maricha
   Eng: Wild pepper
   Kan: Kaadu kari menasu
   Mal: Kattumulaku, Kattukurumulaku
   Tulu: Kattumunchi

Habit: Climber.

Habitat: Forests.

Status: Common.


Uses: *Root decoction is used internally for gastritis, phlegm, gas trouble, to improve digestion and as a tonic for pregnant ladies. *Root or fruit ash mixed with coconut oil is applied for carbuncles. Fruit extract is a pain reliever. Root extract is a digestive and is taken for indigestion. *Leaf and *Jasminum malabaricum* leaf juice mixed with a little lime is poured into the opposite side ear in case of toothache.

Etymology: Vana maricha (forest pepper), Kaadu kari menasu, Kattukurumulaku and Kattumunchi (wild pepper) are due to its restriction to the forests and close affinity with pepper.

Note: Its roots are the much used part.
**695. Pistia stratiotes** L. (Plate 117 F)

Family: Araceae

Vernacular Name: San: Jalakumbhi, Jalakumbhika  
Eng: Nile cabbage, Water lettuce, St. Lucy’s plant  
Kan: Antaragange  
Mal: Akasathamara, Kudappayal, Neercheera  
Tulu: Antaragange

Habit: Free-floating herb.

Habitat: Tanks and ponds.

Status: Common.

Description: Small, stoloniferous, free-floating herb. Leaves sessile in a close spiral, obovate-cuneate, rounded at apex, densely pubescent, flabellate. Spathe small, white, tubular below, open above. Spadix with lower pistillate, naked portion and upper staminate portion free from spathe. Male flowers 2 – 8 in a whorl, connate into a synandrium. Female flowers solitary. Ovary 1-celled. Fruit ovoid.

Uses: Plant extract in milk is taken for urinary disorders, leucorrhoea, dry cough, to regulate excretion and urine block. *Same preparation is given for seven days from the day of menses for infertility problems. *Plant cooked with rice and coconut milk is consumed for indigestion while with rose water and sugar is recommended for cough. Root decoction is a purgative. Whole plant extract is used as a general health tonic. *Oil prepared from the plant juice is used as hair oil for cold and cough.

Etymology: Jalakumbhi and Jalakumbhika (water pot) are due to its aquatic habitat and characteristic shape.

Note: Plant is used in the preparation of white copper *bhasma*.

**696. *Pithecellobium dulce* (Roxb.) Benth. (Plate 118 A)**

Syn: *Mimosa dulcis* Roxb.

Family: Mimosaceae

Vernacular Name: Eng: Madras thorn, Monkey pod  
Kan: Kottampuli, Seeme hunase  
Mal: Korukkapuli  
Tulu: Chakkulimaro

Habit: Small tree.

Habitat: Along coastal areas, often planted as hedge plant.

Status: Occasional. Exotic.


Uses: *Leaf paste is applied for leprosy and alopecia totalis. *Leaf decoction is taken for leprosy, jaundice and for proper growth of hairs. *Plant paste is applied for poisonous bites.

Etymology: Seeme hunase (coastal tamarind) and Chakkulimaro (*chakkuli* tree) arose due to its restriction to the coastal areas and close resemblance of fruits with tamarind and *chakkuli* (traditional spirally twisted food item).

Note: Fruit pulp is edible.

**697. *Plectranthus amboinicus* (Lour.) Spreng. (Plate 118 B)**

Syn: *Coleus amboinicus* Lour.; *Coleus aromaticus* Benth. in Wall.

Family: Lamiaceae

Vernacular Name: San: Karpuravalli, Parnayavani
Eng: Indian borage, Country borage  
Kan: Doddapatre, Sambharaballi, Sambrani  
Mal: Panikoorka, Kannikoorka  
Tulu: Doddipatre, Sambrani

Habit: Succulent herb.

Habitat: Grown in gardens.

Status: Common.

Description: Perennial succulent aromatic herb. Leaves simple, broadly ovate, fleshy, hirsute above and dotted with oil globules. Flowers pink or lilac, in dense verticils at distant intervals on long slender racemes. Calyx 2-lipped; mouth oblique. Corolla 2-lipped; tube curved; upper lip recurved; lower lip elongated, deflexed, boat-shaped. Stamens 4, exerted. Fruit smooth nutlets.

Uses: *Plant is used for preparing chutney or tambuli* which is used to improve digestion. Plant juice is taken with honey for 3 – 6 days in case of morning rhinitis and cold in small children. Leaf juice is used for cold, cough and fever in children. *Plant paste is applied externally and juice is taken internally for urticaria, rashes and itches. Leaf juice is given to expel phlegm. Heated leaf juice is given by mixing with honey for three days for dry cough. Plant extract is consumed internally for biliousness. *Leaf boiled in butter milk is eaten for cold, rhinitis, cough and headache. Leaf paste or juice is applied for body pain. *Oil extracted from it is used for indigestion, urinary stones and to remove foul body odour. Leaf juice mixed with honey is used for headache, cold and fever. *Crushed leaf boiled in coconut oil is applied to the centre of head for cold and rhinitis in children. *Leaf juice is applied all over the body and bath with rice washed water (heated in sunlight) is recommended for urticaria and rashes. *Ground leaf pieces, onion, green chillies, salt and coconut gratings are dissolved in butter milk or curd and eaten by adding fried asafoetida, chillies and mustard seeds as a digestive agent. *Extract of its leaf and Nigella sativa seed powder in water is given after dipping a hot white stone in it for stomachache in children. *Leaf juice mixed with equal quantity of sugar is used
for breathing difficulty in small children. Leaf juice is taken internally and paste is applied externally for biliousness. *One spoon juice of its leaf, those of *Rosa indica*, *Tagetes erecta* and *Chrysanthemum indicum* (2:4:2:4) is consumed in empty stomach in the morning (for 3 months) for weakness in babies. Crushed leaf juice is applied over the forehead for cold and running nose in children. *Leaves crushed with cumin seeds are soaked (for ½ an hour) in tender coconut water and used in empty stomach in early morning for allergic rashes.

Etymology: Karpuravalli (camphor vine), Doddapatre (greater or chief leaf) and Sambharaballi (spicy vine) are due to its characteristic spicy aroma and diverse uses of leaves.

Note: It is used in the preparation of *Gopichandanadi gutika* and *Abhram* (101) (Sivarajan & Balachandran. 1996).

698. *Plectranthus vettiveroides* (Jacob.) N. P. Singh & B. D. Sharma (Plate 118 C)

Syn: *Coleus vettiveroides* Jacob.

Family: Lamiaceae

Vernacular Name: San: Hrivera, Hribera, Valaka
   Kan: Iruveli
   Mal: Iruveli
   Tulu: Iruveli

Habit: Succulent herb.

Habitat: Cultivated in gardens.

Status: Frequent.

Description: Succulent, aromatic herb with straw-coloured roots and quadrangular branches. Leaves simple, broadly ovate, glandular hairy. Flowers blue in terminal racemes. Calyx 2-lipped, glandular. Corolla 2-lipped, blue or purplish; upper lip 4-lobed; lower boat-shaped. Stamens didynamous.
Uses: Root decoction is used for cold and gastritis. Leaf juice is applied for rashes and urticaria. *Leaf paste is the antidote for burns caused by *Plumbago zeylanica.* *Chutney prepared from this plant is the best for indigestion. Plant paste is applied for swellings and rheumatism. Leaf juice is taken to expel phlegm. *Whole plant decoction is consumed for fever and its paste is applied for poisonous bites. Plant extract is useful for biliousness and blood disorders.

Note: If it is planted along with *Plectranthus amboinicus,* it gets perished. It is used in the preparation of *Gandha taila* and *Eladi taila* (Sivarajan & Balachandran, 1996).

**699. Plumbago indica** L. (Plate 118 D)

*Syn: Plumbago rosea* L.*

*Family: Plumbaginaceae*

*Vernacular Name: San: Agnih, Citraka, Citrakah, Raktacitraka  
Eng: Fire plant, Scarlet leadwort  
Kan: Kempu chitramoola  
Mal: Chethikoduveli, Chuvanna koduveli  
Tulu: Kempu chitamoolo*

*Habit: Subscandent shrub.*

*Habitat: Cultivated.*

*Status: Frequent. Poisonous.*

*Description: Subscandent shrub with long succulent roots and striated stem and branches. Leaves simple, ovate-elliptic, tapering into clasping petiole. Flowers red, in terminal long racemes. Calyx tubular, 10-ribbed, covered with stalked glands. Corolla salver-form; lobes 5, obovate. Stamens 5. Fruit membranous capsule.*

*Uses: Paste of root fried in coconut oil is applied for stroke, rheumatism, skin diseases, leprosy and toothache. *Root decoction is taken internally for stroke,*
rheumatism, leprosy and toothache. Root paste is applied for urticaria. Purified root decoction is recommended for gastrointestinal disorders.

Etymology: Agnih (fire), Citraka (bright coloured), Raktacitraka (bright red coloured), Kempu chitramoola, Chuvanna kudovali, Kempu chitamoolo (red fire plant) are due to its hot nature and bright red coloured flowers.

Note: It is sued in the preparation of Citrakasava, Dasamularista, Gulgulutiktaka kashaya, Yogaraja churna, Citrakadi vati, Citrakaharitaki, Citraka ghrt, Devadaradi kvatha, Sudarsana churna, Pippalyasava, Yogaraja guggulu, Laghu visagarva taila, Chandraprabha vati and Citrakadi churna. It has plumbagin as the active constituent (Dey, 1994; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

700. **Plumbago zeylanica** L. (Plate 118 E)

Family: Plumbaginaceae

Vernacular Name: San: Agnih, Citraka, Citrakah
   Eng: Ceylon leadwort, leadwort, Wild Plumbago
   Kan: Bili chitramoola
   Mal: Koduveli, Vellakoduveli
   Tulu: Boldu chitrammolo

Habit: Subscandent shrub.

Habitat: Cultivated, also run wild.

Status: Frequent. Poisonous.


Uses: It is advised to wear its flowers on the head for quick delivery. *Root ground in sour buttermilk is given for two days to induce abortion. *Oil prepared by boiling
crushed root in coconut oil is applied for skin diseases, stroke, rheumatism and leprosy. Root decoction is used for rheumatoid arthritis and to increase digestive power (it is highly abortive). *Root paste with cow urine is applied for leucoderma. Root bark extract is taken to induce sweating during fever. *Ground root mixed with mercury is applied externally for poisonous bites. Purified root decoction is used as a pain killer, wormicide, used for liver and spleen disorders. *Butter milk prepared by adding whole plant powder to milk is consumed for constipation due to piles. *Root and borax are ground in *Euphorbia nivulia* latex, mixed with gingenelly oil and is applied for bleeding piles. *Root ground with rice washed water or lime juice is heated and applied for ulcers in throat. *Root, those of *Croton laevigatus* and *Phragmites karka* ground with lime juice are applied for tonsillitis. Root paste with lime juice is applied for swelling and bubo. *Fried root paste with ghee is applied for eczema in small children.

Etymology: Agnih (fire), Citraka (bright coloured), Bili chitramoola, Vellakoduveli, Boldu chitamooloo (white fire plant) are due to its hot nature and bright white coloured flowers.

Note: It is sued in the preparation of *Citrakasava, Dasamularista, Gulgulutiktaka kashaya, Yogaraja churna, Citrakadi vati, Citrakaharitaki, Citraka ghrtta, Devadaradi kvatha, Sudarsana churna, Pippalyasava, Yogaraja guggulu, Laghu visagarva taila, Chandraprabha vati* and *Citrakadi churna*. It has plumbagin, 3-chloroplumbagin, 3, 3-biplumbagin, binaphthoquinone, isozeylinone, zeylinone, elliptinone and droserone as active constituents (Dey, 1994; Kapoor, 1990; Sharma et al., 1998; Sivarajan & Balachandran, 1996). Purified root is used in *Dasamula* preparations for better results.

701. *Plumeria alba* L. (Plate 118 F)

Family: Apocynaceae

Vernacular Name: San: Kananakaravira
Eng: White champa, Dwarf Plumeria
Kan: Gosampige, Bili devakanigalu
Mal: Vellachampakam, Velutharali  
Tulu: Gosampai

Habit: Small tree.

Habitat: Planted in gardens.

Status: Occasional. Exotic.

Description: Small tree with milky latex. Leaves simple, linear-oblong to oblong-lanceolate, densely white-pubescent below. Flowers white with yellow centre, fragrant, in terminal panicled cymes. Calyx 5-parted, glandular at tips. Corolla funnel-form; lobes 5, obovate. Stamens 5. Fruit leathery follicles.

Uses: *Latex kept in sunlight on a copper plate is applied for ringworm. Bark paste is used in limited doses as a laxative. Bark decoction is laxative property in limited dose (larger dose results in severe purgation). *Bark cooked with rice is taken for jaundice, venereal diseases and joint pain (should be used in limited dose as it is of hot nature and purgative). Root bark extract is used as a purgative. *Latex mixed with equal quantity of coconut oil is boiled and is applied for cuts and wounds. Latex is applied for chronic skin diseases. *Oil prepared from plant juice is applied for chronic wounds and ulcers. *Latex mixed with human urine is taken for pit viper bite. *Dried flower powder paste is applied for snake bite. *Latex and Hibiscus leaf juice are applied to a cloth thrice and dried. This cloth soaked in coconut oil is applied for eczema.

Etymology: Kananakaravira (forest oleander), Gosampige (Goa champak), Bili devakanigalu (white gods oleander), Vellachampakam (white champak) and Velutharali (white oleander) are due to its isolated distribution, white fragrant flowers resembling oleander flowers, introduction to India through Goa and sacred nature.

Note: Its leaves are used as natural pesticide and fungicide for Coccinia plants. It is usually planted near water sources due to its water purifying property. Flowers are used for worship and it is often planted near temples and along the fences.
702. *Plumeria rubra* L. (Plate 119 A)

Syn: *Plumeria acuminata* Ait.

Family: Apocynaceae

Vernacular Name: San: Champaka, Kshira champaka  
Eng: Temple tree, Pagoda tree  
Kan: Gosampige, Govesampige, Devaganigalu  
Mal: Ezhachampakam, Vellachampakam  
Tulu: Gosampai, Gosampage

Habit: Small tree.

Habitat: Grown in gardens.

Status: Common. Exotic.

Description: Small deciduous tree. Leaves simple, ovate-oblong, glabrous above, pubescent beneath. Flowers fragrant, in terminal long-peduncled cymes. Calyx 5-partite. Corolla funnel-form, pink, purple, red or white with a yellow centre; lobes 5; broadly ovate. Stamens 5. Fruit leathery follicles.

Uses: Same as *Plumeria alba*.

Etymology: Kshira champaka (milky lateciferous champak), Govesampige, Gosampage (Goa champak), Devaganigalu (gods oleander) and Vellachampakam (white champak) are due the presence of milky latex, its fragrant white flowers resembling that of oleander, introduction to India through Goa and sacred nature.

Note: Its leaves are used as natural pesticide and fungicide for *Coccinia* plants. It is usually planted near water sources due to its water purifying property. Flowers are used for worship and it is often planted near temples and along the fences.

703. *Pogostemon deccanensis* (Panigrahi) Press (Plate 119 B)

Syn: *Eusteralis deccanensis* Panigrahi.; *Dysophylla stellata* auct. non Lour.

Family: Lamiaceae

Vernacular Name: Kan: Gadde thulasi  
Tulu: Kanda tholasi
Habit: Procumbent herb.

Habitat: Paddy fields, after harvest.

Status: Common.


Uses: *Whole plant decoction is used as a bath for cold and cough in children.

Etymology: Gadde thulasi and Kanda tholasi (paddy field basil) are due to its habitat and characteristic aroma.

Note: Occasionally it is used as a substitute for *Pogostemon quadrifolius*.

**704. *Pogostemon heyneanus* Benth. in Wall. (Plate 119 C)**

Syn: *Pogostemon patchouli* sensu Hook. F.

Family: Lamiaceae

Vernacular Name: San: Paci
   Eng: Indian patchouli
   Kan: Pacche kadiru, Pacche thene
   Mal: Patchouli
   Tulu: Pacche kadru, Pacche kuralu

Habit: Erect herb.

Habitat: Cultivated in gardens.

Status: Frequent.

Description: Strongly aromatic herb. Leaves simple, ovate, cuneate at base, glabrescent. Flowers small, in globose clusters with a pair of small floral leaves, on

Uses: Leaf juice is used for throat irritation, cough and asthma. *Oil prepared from plant juice is applied as hair oil for cold and rhinitis. Plant juice is taken internally to expel phlegm. *Oil extracted from the plant is applied externally for rheumatism. *One spoon leaf juice is given twice a day for stomachache in small children. *About four spoon heated leaf juice is recommended once a day for loss of appetite in children. *Leaf ground and, mixed with milk is used for burning sensation in stomach. *Crushed leaf tea is used twice a day for fever due to biliousness.

Etymology: Pacche kadiru, Pacche kadru, Pacche kuralu and Pacche thene (green spike) are due to its greenish racemose inflorescence.

Note: Plant is used to ward off evil spirits. Inflorescence is used for worship and is often worn by the women.

705. *Pogostemon paniculatus* (Willd.) Benth. (Plate 119 D)

Family: Lamiaceae

Vernacular Name: Kan: Thrichata
           Mal: Trichata
           Tulu: Trichata

Habit: Erect herb.

Habitat: Forest undergrowth.

Status: Common. Weed.

Description: Erect herb. Leaves simple, in unequal pairs, membranous, ovate, appressed pubescent. Flowers small, in one-sided clusters in the secund or semilunate spikes with a pair of unequal floral leaves, on terminal panicles; bracts obliquely ovate, imbricating, ovate. Calyx 2-lipped, pubescent. Corolla purple, 2-lipped. Stamens 4, exerted. Fruit ovoid nutlets.
Uses: *Leaf or whole plant juice is taken to expel phlegm. *Plant extract is recommended for malabsorption in children. *Whole plant decoction is used as an expectorant agent for breathing problems, cough and phlegm.

Note: Plant is much used in black magic.

706. *Pogostemon purpurascens* Dalz. (Plate 119 E)

Family: Lamiaceae

Vernacular Name: 
Kan: Bhutha jade
Mal: Poothachida
Tulu: Bhuthajide

Habit: Erect herb.

Habitat: Forest undergrowths.

Status: Occasional.


Uses: *Whole plant paste with lime is applied over stomach for stomachache. *Whole plant decoction is recommended for rheumatism, body pain and sprains.

Etymology: Bhutha jade and Bhuthajide (long plaited hair of *Bhuta*) are due to its characteristic inflorescence resembling the plaited hair of *Bhuta*.

Note: Often used as a substitute for *Pogostemon paniculatus*.

707. *Pogostemon quadrifolius* (Benth.) F. Muell (Plate 119 F)

Syn: *Dysophylla quadrifolia* Benth. in Wall.; *Eusteralis quadrifolia* (Benth.) Panigrahi

Family: Lamiaceae
Vernacular Name: Kan: Paare thulasi, Paare thumbe  
Mal: Naithumba  
Tulu: Paade thumbe  

Habit: Undershrub.  

Habitat: Rocky hill slopes.  

Status: Common.  


Uses: *Oil extracted or prepared from plant juice is applied for swellings and as a pain reliever.  *Paste prepared by boiling crushed whole plant and Tectona grandis tender shoot with coconut and gingelly oil (1:1) is applied for knee swelling and pain.  *Juice of heated whole plant is applied for swelling and body pain after fever attack.  *Plant extract is used for liver disorders.  *Plant juice is applied externally for skin diseases and as a pain reliever.  *Plant juice mixed with garlic juice (¼ a spoon to children up to the age of 6 months and one spoon for children aged above 6 months) is recommended for breathing problems due to phlegm.  

Etymology: Paare thulasi (rock basil), Paare thumbe, Paade thumbe (rock Leucas) and Naithumba (dog Leucas) are due to its restriction to the rocky hill slopes, linear leaves and characteristic aroma.  

Note: Plant twigs are hanged or kept in cow shed to repel mosquitoes and flies.  

708. Polyalthia longifolia (Sonner.) Thw. (Plate 120 A)  

Syn: Uvaria longifolia Sonner.  

Family: Annonaceae  

Vernacular Name: San: Ashoka, Kastadaruh, Ulkatah  

836
Eng: Cemetery tree, Mast tree, Telegraph pole tree
Kan: Kambada mara, Madras ashoka
Mal: Aranamaram, Ashokam, Choranna
Tulu: Asoka

Habit: Small tree.

Habitat: Planted in parks and gardens.

Status: Common.


Uses: Bark decoction is recommended for fever.

Etymology: Kambada mara (pole tree) is due to its columnar growth and much use of its stem as poles.

Note: Bark is an adulterant for Saraca asoca and is widely sold in markets.

709. *Polycarpa corymbosa* (L.) Lam. (Plate 120 B)

Family: Caryophyllaceae

Vernacular Name: San: Bhisatta, Parpata, Okharadi
Kan: Paare hoo
Mal: Achaaramkolli, Akkaramkolli
Tulu: Paadepoo, Baleendra poo

Habit: Annual herb.

Habitat: Rocky hill slopes.

Status: Common.

Description: Erect annual tomentose herb. Leaves minute, fascicled at nodes, linear; stipules fimbriate. Flowers many, minute, in dense much-branched terminal cymes,

Uses: *Decoction prepared from whole plant is used as a bath for children suffering from malabsorption. *Same decoction is used internally for jaundice. *Plant paste with tender coconut husk juice is applied for rashes and urticaria. *Oil prepared from this plant or its paste is applied for rheumatism.

Etymology: Paare hoo, Paadepoo (rock flower) and Baleendra poo (Mahabali flower) are due to its characteristic habit, habitat and use to worship Mahabali.

Note: It is used as a base for *Mahanarayana taila. Plant is used to worship Mahabali during Deepavali celebrations.

710. *Pongamia pinnata* (L.) Pierre (Plate 120 C)

Syn: *Pongamia glabra* Vent.; *Derris indica* (Lam.) Bennet

Family: Papilionaceae

Vernacular Name: San: Karanja, Karanjah, Ghratakaranja  
Eng: Hongay oil tree, Indian beech tree, Pongam oil tree  
Kan: Honge, Hongemara  
Mal: Pongu, Pongam, Ungu  
Tulu: Ponge, Korungu, Korungumaro

Habit: Medium-sized tree.

Habitat: Along river banks. It is often planted as avenue tree.

Status: Common.

Uses: *Bark cooked with rice is eaten for three days in case of uterine diseases and conception failure. Bark decoction is used for cold, headache and burning sensation in the body. *Bath with leaf decoction is recommended for arthritis and rheumatism. Oil extracted from the seeds is applied for skin diseases, septic wounds, ulcers and rheumatism. *Root paste is applied for fistula and ulcers. *Bark decoction is given for infections of lactating mothers (which are responsible for indigestion in children). *Bark decoction is taken for water in legs and hands of pregnant woman. *Bark, those of *Pajanelia longifolia, *Erythrina variegata and *Adenanthera pavonina decoction is used for vomiting in pregnant woman and oil prepared from these bark juices is applied for leg pain. *Bark decoction with *Vernonia anthelmintica seeds is recommended for gas trouble in pregnant ladies. Bark cooked with rice or its decoction is used for infections. It is an antipyretic agent. Bark decoction is consumed internally, also used externally as body wash for skin diseases and scabies. Bark decoction is used for menstrual disorders and digestive problems. *Bark, those of *Erythrina variegata and *Anacardium occidentale decoction is given for conception in cattle. *Oil extracted from the seeds is applied for dog bite while bark decoction or that cooked with rice is taken internally. Seed paste with water is applied for skin diseases and wounds. *Bark, that of *Adenanthera pavonina and *Erythrina variegata (in equal quantity) decoction is used for menstrual headache. *Decoction prepared from its inner stem fibre, *Boerhavia diffusa root, *Plumbago zeylanica root, chebulic myrobalan, long pepper, ginger and rock salt is recommended for bleeding piles and *gulma*. Bark decoction is taken twice a day for headache and cold. Bark paste is applied externally for snake bite. *Bark, which of *Pajanelia longifolia and *Oroxylum indicum decoction is used internally for fever.

Etymology: Honge (one which is boiled) arose as its seeds are boiled for oil extraction.

methylfisetin, kanugin, demethoxy-kanugin, karanjin, pongachromene, pongapin, pinnatin, gamatin, glabra I & II, kanjone, pangemol and glabrin as major constituents (Dey, 1994; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

**711. *Portulaca oleracea* L. var. *oleracea* (Plate 120 D)**

Family: Portulacaceae

Vernacular Name: San: Brhallonika, Brihalloni, Loni, Lonika
   Eng: Common purselane, Garden purselane, Indian purselane
   Kan: Goni soppu, Gonikasa, Dodda goni soppu
   Mal: Kozhuppa, Kozhuppacheera, Manalcheera
   Tulu: Goli padpe

Habit: Prostrate herb.

Habitat: Weed in wastelands.

Status: Common. Exotic.


Uses: *Pounded leaf is applied for urticaria and rashes. *Plant decoction is consumed for urine block and dysentery.

Etymology: Manalcheera (sand amaranth) are as this potable herb usually grows in sandy soil.

Note: Plant is used as vegetable. It is one of the major ingredients of *Marma gutika* (Sharma et al., 1998).

**712. *Pothos scandens* L. (Plate 120 E)**

Family: Araceae

Vernacular Name: Kan: Akkiballi, Adikebeelu balli
   Mal: Anapparuva, Paruvakkodi
   Tulu: Arkkebooru, Arkkepaji
Habit: Climbing shrub.

Habitat: On trees and rocks.

Status: Common.


Uses: *Oil prepared by boiling whole plant juice with oil is applied for burns, wounds, ulcers and skin diseases. *Plant paste is applied for snake bites while its extract to wash eyes during eye pain and conjunctivitis. *Oil prepared from whole plant juice is applied for ulcers or scabies in head and furuncles. Plant decoction is used for rheumatism and water in the body. Plant decoction is taken for typhoid. *Leaf (petiole removed) ground with lime juice or the oil prepared from it is applied for furuncles in the finger. *Oil prepared from seeds is a wound healer and germicidal. *Crushed stem mixed with camphor is used as beedi* for asthma. Plant paste is applied for chickenpox, lymph node swellings, measles, wounds, ulcers, swelling and furuncles. *Chutney prepared by grinding its hoot tip and that of Caesalpinia mimosoides (fried in ghee) with cumin is a digestive and corrects gastrointestinal tract. *Plant paste with butter is applied for abscesses. *Crushed leaf blade heated with coconut oil is applied for burns (if burn is on the left side of the body then leaves on the right side of the plant should be collected).

Etymology: Akkiballi (rice vine) is due to its characteristic spadix resembling rice seeds.

Note: Stem is used for preparing ladders, platform for utensils and waist belt to hold knives. Young parts are much used as fodder.

713. *Pouzolzia wightii* Bennett var. *wightii* (Plate 120 F)

Family: Urticaceae

Vernacular Name: Kan: Gadimaddu

Mal: Parakozhuppa
Tulu: Gadimardu

Habit: Slender herb.

Habitat: Moist places in deciduous forests.

Status: Occasional.

Description: Slender herb, with hispid branchlets, gradually tapering into leafy spikes. Leaves simple, obovate-lanceolate, scabrid above, pubescent below, upper leaves gradually reduced to floral bracts. Flowers monoecious, small, yellowish-green, in axillary clusters on terminal spikes. Perianth-lobes 4. Stamens 4. Fruit obovoid, prominently winged achene.

Uses: *Whole plant paste is applied externally for burns and wounds.

Etymology: Gadimaddu and Gadimardu (medicine for wounds) arose due to its therapeutic efficacy against wounds.

Note: It is a wound healer.

714. *Pouzolzia zeylanica* (L.) Bennett (Plate 121 A)

Syn: *Pouzolzia indica* (L.) Gaud.

Family: Urticaceae

Vernacular Name: Kan: Kallurukki
Mal: Kallurukki
Tulu: Kallurukki

Habit: Erect herb.

Habitat: Weed in gardens and wastelands.

Status: Common.

Description: Erect or procumbent herb, with pubescent stem. Leaves simple, lanceolate or ovate, membranous, pubescent. Flowers small, monoecious, in axillary sessile clusters. Perianth-lobes 4. Stamens 4 – 5. Fruit ovoid achene with scarious wings.
Uses: *Whole plant decoction is recommended internally for renal calculi.

Etymology: Kallurukki (stone or rock breaker) arose due to its therapeutic efficacy against renal calculi.

Note: Tender plant parts are used as vegetable.

715. *Premna latifolia* Roxb. var. *viburnoides* (Wall.) Clarke (Plate 121 B)

Family: Verbenaceae

Vernacular Name: San: Agnimantha, Aranika, Sriparna
    Eng: Headache tree
    Kan: Agnimantha, Nerugala, Naruvala, Narvala
    Mal: Munja, Kozhichedi
    Tulu: Narvolu

Habit: Small tree.

Habitat: Found only in cultivation.

Status: Occasional.


Uses: *Leaf rasam* is used along with the meals for cold and fever during the rainy season. *Leaf tumbuli* is used for indigestion. *Leaf boiled in butter milk is taken for indigestion in children. Root or leaf decoction is given for colic and liver disorders. Root decoction is recommended for rheumatism and gastric ulcers. *Dosa* prepared from its leaves is eaten for backache. *Root decoction is a digestive and increases bodily absorption. *Leaf and a little dried ginger ground in sweet butter milk are consumed for loss of appetite. *Root paste with ghee is applied and its extract with ghee is taken internally for one week in case of red warts. *Root
ground with water is mixed with ghee and is applied repeatedly for ring worm. Leaf
paste is applied for swellings, to stop bleeding from cuts and wounds.

Etymology: Agnimantha (production of fire by friction) and Sriparna (prosperous
leaves) arose as its wood is used to produce sacred fire by friction and from much
used leaves.

Note: It is used in the preparation of Dasamularista, Dhanvantara kashaya, Agastya
rasayana, Sukumara ghrta and Agnimantha kashaya. It has premnine and ganiarine
as active components (Dey, 1994; Sivarajan & Balachandran, 1996). Wood is used
to produce sacred fire by friction in hawanas*. Leaves are used as vegetable.

716. Premna serratifolia L. (Plate 121 C)

Syn: Premna obtusifolia R. Br.; Premna integrifolia L.

Family: Verbenaceae

Vernacular Name: San: Jaya, Sriparna, Agnimantha
          Eng: Headache tree
          Kan: Agnimantha, Nerugala, Naruvala, Narvala
          Mal: Munja, Kozhichedi
          Tulu: Narvolu, Kilengi thappu

Habit: Large shrub.

Habitat: Near coast and plains.

Status: Common.

Description: Large shrub or sometimes a small tree. Leaves simple, broadly ovate,
shining above. Flowers small, in terminal corymbs. Calyx campanulate, obscurely 2-

Uses: Bark or leaf paste is applied for skin diseases. *Bark decoction is used to
induce appetite. Plant decoction is used for gas trouble and rheumatism. *Leaves,
turmeric, garlic and mustard seeds paste is applied for joint inflammation.

Etymology: Agnimantha (production of fire by friction) and Sriparna (prosperous
leaves) arose as its wood is used to produce sacred fire by friction and from much
used leaves. Kilengi thappu (house fly leaf) arose as it acts as house fly repellent.

Note: It is used in the preparation of Dasamularista, Dhanvantara kashaya, Agastya rasayana, Sukumara ghṛta and Agnimantha kashaya. It has premnine, betulin, β-sitosterol, aphelandrine, luteolin and ganiarine as active components (Dey, 1994; Kapoor, 1990; Sivarajan & Balachandran, 1996). When this plant is cut the number of house flies increases rapidly and when this plant is in full bloom their population decreases. It is used as a substitute for Premna latifolia var. viburnoides.

717. Prosopis juliflora (Sw.) DC. (Plate 121 D)

Syn: Mimosa juliflora Sw.

Family: Mimosaceae

Vernacular Name: San: Shami, Sankuphala
   Eng: Velvet mesquite
   Kan: Banni, Bannimara, Shami
   Mal: Sali, Vanni
   Tulu: Sami

Habit: Small tree.

Habitat: Planted in gardens.

Status: Occasional. Exotic.


Uses: Same as Dichrostachys cinerea.

Etymology: Shami (appeasing) is due to its therapeutic efficacy.

Note: It is usually used as a substitute for Dichrostachys cinerea. It is also used in religious rituals.
**718. *Protasparagus gonocladus* (Baker) Kamble (Plate 121 E)**

Syn: *Asparagus gonoclados* Baker.

Family: Liliaceae

Vernacular Name: San: Bahumula, Bahuputrika, Shatamuli, Shatavari
   Eng: Wild asparagus
   Kan: Ashadi beru, Halavu makkala thaayi, Shatavari
   Mal: Sathavari
   Tulu: Udrikande, Udriberu

Habit: Scandent shrub.

Habitat: Along hedges.

Status: Common.


Uses: Same as *Protasparagus racemosus*.

Etymology: Bahumula (many rooted), Bahuputrika (many daughters), Shatamuli (hundred rooted) and Halavu makkala thaayi (mother of many children) are due to its characteristic fascicled tuberous roots.

Note: It is used in synonymous with *Protasparagus racemosus*.

**719. *Protasparagus racemosus* (Willd.) Oberm. (Plate 121 F)**

Syn: *Asparagus racemosus* Willd.

Family: Liliaceae

Vernacular Name: San: Bahumula, Bahuputrika, Shatamuli, Shatavari
   Eng: Wild asparagus
Kan: Ashadi beru, Halavu makkala thaayi, Shatavari
Mal: Sathavari
Tulu: Udrikande, Udriberu

Habit: Scandent shrub.

Habitat: Along hedges.

Status: Common.


Uses: *Root decoction with milk is used as an alternative for breast milk. Same preparation is given as a general tonic for pregnant women and to increase breast milk in lactating mothers. *Root decoction with cumin seeds is used to increase lactation. Tuber decoction is taken for rheumatism, biliousness, leucorrhoea, burning urination, stomachache and ulcers. *Leaf paste with butter is applied for rashes, urticaria and swellings. *Root boiled in oil is applied for septic wounds and ulcers. Root extract is applied externally for furuncles. Root bark extract in milk is recommended for biliousness, as an appetizer and for stomachache. *Leaf cooked with ghee is given to eat as a preventive medicine for furuncles. *Tuber decoction with Kaempferia galanga rhizome is consumed for leucorrhoea. Tuber paste is applied for raktavata*, conception, ovarian and uterine diseases. *Decoction prepared from its root, which of Hemidesmus indicus, Agave americana leaf, sugarcandy and cumin seeds is recommended for five days in empty stomach to prevent threatened abortion (upto 5 months of pregnancy). *Tuber, ginger, Embelia ribes seed, Acorus calamus rhizome, Centella asiatica, Terminalia chebula fruit rind, Tinospora cordifolia, sugarcandy and ghee lehya* is recommended to increase memory power. *Tuber lehya* with gooseberry powder is recommended for leucorrhoea. *Tuber juice or dried plant powder is consumed with sugar for hyperacidity. Tuber juice is massaged for burning sensation in legs. Tuber juice
mixed with sugar and milk is given as a health tonic to increase lactation, resistance, for over menstrual bleeding and leucorrhoea. *Tuber ground with gingelly seeds in milk is applied to centre of the head for vision problems. *Root decoction is consumed with sugar and milk during night for weakness. Tuber extract is used for pancreatic calculi. *Root decoction is used as a health tonic during 9th month of pregnancy. *Tuber juice heated with ghee and mixed with honey is poured into ear in case of snake bite. *Root and *Tinospora cordifolia* stem decoction is used twice daily for rheumatism. *Root, *Biophytum reinwardtii*, bengal gram and cumin seeds boiled with water are used for one week in case of protein discharge through urine of children. *Root and that of *Dracaena terniflora* ground with lime juice is used both externally and internally for poisonous bites.

Etymology: Bahumula (many rooted), Bahuputrika (many daughters), Shatamuli (hundred rooted) and Halavu makkala thaayi (mother of many children) are due to its characteristic fascicled tuberous roots.

Note: Fruit is edible. Saponins and sitosterol are the major constituents. It is used in the preparation of *Satavari guda*, *Satavari ghrt*, *Satavari kalpa*, *Brahma rasayana*, *Puga khanda*, *Saubhagya sunti*, *Mahanarayana taila*, *Asvagandharista* and *Narasimha churna* (Sharma et al., 1998; Sivarajan & Balachandran, 1996).

720. *Pseudarthria viscida* (L.) Wight. & Arn. (Plate 122 A)

Syn: *Hedysarum viscidum* L.

Family: Papilionaceae

Vernacular Name: San: Salaparni, Saliparni
Kan: Antuparni, Moovile
Mal: Moovila
Tulu: Moojire

Habit: Undershrub.

Habitat: Shady places.
Status: Common.

Description: Viscid undershrub. Leaves 3-foliolate; leaflets ovate-rhomboid, membranous. Flowers small, in many-flowered axillary or terminal racemes. Calyx campanulate, 5-lobed. Corolla pink; petals 5; standard suborbicular. Stamens 9 + 1. Fruit linear, viscid pod.

Uses: *Coffee prepared from its root bark is used as a health drink. Whole plant decoction is taken for rheumatism, weakness, gastritis and as a general tonic. *Oil prepared from plant juice is applied for bone setting after bone fracture. *Whole plant paste with rice washed water is applied externally for urticaria and rashes. *Root and leaf juice is consumed with sugar for food poisoning (poisons of plant origin). *Root decoction with milk is consumed by adding sugarcandy at night for bone growth in children, bone fracture, heart diseases, breathing problems, piles, diarrhoea, vomiting and pain in pregnant ladies.

Etymology: Moovile, Moovila and Moojire (three leaved) arose from its trifoliolate leaves.

Note: It is one among the Dasamula*. It is used in the preparation of Dasamularista, Agastya rasayana, Anu taila and Brhat pancagavya ghrta (Sivarajan & Balachandran, 1996).

721. *Pseuderanthemum malabaricum* (Clarke) Gamble (Plate 122 B)

Syn: Eranthemum malabaricum Clarke

Family: Acanthaceae

Vernacular Name: Kan: Bili gorante
               Tulu: Boldu goranti

Habit: Undershrub.

Habitat: Forest undergrowths.

Status: Frequent. Weed.
Description: Undershrub. Leaves simple, broadly elliptic. Flowers in terminal interrupted spikes. Calyx 5-partite; lobes narrow. Corolla 5-lobed; white with purple spots on lobes; lobes obovate-oblong. Stamens 2. Fruit clavate, subcompressed capsule.

Uses: *Whole plant paste is applied for venereal diseases.

Etymology: Bili gorante and Boldu goranti (white Barleria) are due to its white flowers and resemblance with Barleria in habit.

Note: Much used for venereal diseases.

722. Psidium guajava L. (Plate 122 C)

Family: Myrtaceae

Vernacular Name: San: Bahubijaphala, Mrduphala, Perala, Perukah
   Eng: Guava, Guajava
   Kan: Seebe, Seebe hannu, Perale
   Mal: Pera, Perakka
   Tulu: Perolu

Habit: Small tree.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Small tree with smooth grey bark exfoliating in thin flakes. Leaves simple, oblong-lanceolate to elliptic, prominently nerved, pubescent beneath. Flowers 1 – 3, in axillary clusters. Calyx-tube urceolate; limb 4 – 5-lobed. Petals 4 or 5, white. Stamens many. Fruit globose, ovoid or pear-shaped fleshy berry.

Uses: *Tender shoot tip decoction is used to arrest vomiting and diarrhoea. *Leaf decoction mixed with salt is taken to improve gastrointestinal system and also as a gargle for toothache. Tender shoot tips are chewed to overcome mouth ulcers. Root and young leaf extract is used as a tonic. *Root bark decoction is recommended for
dysentery. *Tender shoot tip is chewed and artificial respiration is given to the patient who has lost consciousness due to tiger spider or lizard poison. Eating fruits is beneficial for normalizing the excretory system. *Tender shoot tip decoction or that of Briedelia scandens is used as a gargle for toothache. Root or leaf decoction is recommended internally for skin diseases. *Tender shoot tip, cumin seeds, Streblus asper leaf and tender shoot of Artocarpus heterophyllus ground in milk is given at early morning in empty stomach (for nine days) for jaundice. Leaf juice is recommended for drug intoxication. *Bark boiled with butter milk is given by adding salt for diarrhoea. *Tender shoot tip ground with butter milk is taken for rectum prolapsed and its extract is consumed for tape worm infestation. Bark decoction is recommended for diabetes. *Tambuli* prepared from tender shoot tip is recommended for piles, diarrhoea and liver problems (due to its constipating property, it is not recommended for aged people). *10 – 15 shoot tips ground with cumin seeds and Hyoscyamus niger in butter milk are taken in empty stomach for anal prolapse. For same disease, decoction of 4 – 5 handful leaves is used as wash. 5 – 6 tender shoot tips are chewed and the juice is used as gargle for toothache and mouth ulcers. Fruit is a tonic, digestive and sperm increaser (can increase phlegm). Fruit extract expels tape worm, overcomes thirst of diabetes, used for wounds and digestive problems. *One spoon leaf decoction is recommended to arrest vomiting in pregnant ladies. *Plant extract is used as an antidote for ganja, opium and lizard poison. Root ash mixed with ghee is applied for relieving pain of swelling. *Tender shoot tip, which of Syzygium caryophyllatum and cumin seeds extract is taken for blood dysentery. *Tender shoot tip and tender fruit of Manilkara zapota ground in milk are consumed for dysentery. *Bark and Erythrina variegata bark decoction is used for dysentery. *To the decoction made of its shoot tip, those of Syzygium caryophyllatum, Leucas aspera, Memecylon randerianum, Careya arborea, Holigarna arnottiana, garlic and cumin a heated white rock is dipped and given for malabsorption in children. *Shoot tip and tender inflorescence of Artocarpus heterophyllus are fried in ghee and ground in butter milk. To this mixture, a hot white rock is dipped after adding rock salt and is used for three days in case of blood dysentery. *Tender shoot tip, Streblus asper leaf and Cissus quadrangularis shoot
tip ground with milk is given in empty stomach in the morning for nine days in case of jaundice. *Tender shoot tip ground with cumin seeds in milk is used for blood dysentery in children. *Leaf, those of *Azadirachta indica, *Mangifera indica, *Artocarpus heterophyllus and *Anacardium occidentale powder is used as toothpowder in children to clear mouth and teeth. *Tambuli* prepared from its shoot tip is used internally and its paste with butter milk is applied all over the body for urticaria and rashes.

Etymology: Bahubijaphala (many seeded fruit) and Mrduphala (soft fruit) are due to its characteristic fruit with large number of seeds and soft rind (when ripe).

Note: Stem is used for lathe work. Fruits are edible. Fruit has methyl choline and quercetin as active constituents (Chaudhri *et al.*, 1996).

723. *Psilanthus travancorensis* (Wight & Arn.) Leroy (Plate 122 D)

Syn: *Coffea travancorensis* Wight & Arn.

Family: Rubiaceae

Vernacular Name: San: Pushkaramula
Kan: Pushkaramula
Mal: Pushkaramoolam, Pushkaramulla
Tulu: Pushkaramulo

Habit: Shrub.

Habitat: Cultivated in gardens.

Status: Occasional.

Uses: *Whole plant decoction is recommended for abdominal disorders and pain in one side of the body.

Etymology: Pushkaramula, Pushkaramoolam (lotus root) and Pushkaramulla (lotus jasmine) are due to its roots resembling lotus rhizome, use as a substitute for original Pushkaramula (Inula racemosa) and white flowers.

Note: Plant is used as a substitute for Inula racemosa. It is known for its expectorant activity. It is used in the preparation of Kumaryasava, Dasamularista, Brhat narayana taila, Dhanvantara ghrtta and Chyavanaprasha (Sivarajan & Balachandran, 1996).

724. *Psychotria dalzellii* Hook. f. (Plate 122 E)

Family: Rubiaceae

Vernacular Name: Kan: Dattha ele, Dattele gida

Tulu: Goomechappu

Habit: Large shrub.

Habitat: Forest undergrowths.

Status: Common.

Description: Large shrub. Leaves simple, obovate-oblong or oblanceolate, coriaceous, gradually narrowed into the petiole; stipules oblong. Flowers white, 2 – 5 together at the ends of branches in terminal peduncled cymes; bracts and bracteoles large and persistent. Calyx broadly campanulate; lobes 5, margins ciliate. Corolla-tube short; throat villous; lobes 5, ovate-oblong. Stamens 5. Fruit globose drupe, crowned with calyx-tube, black when ripe.

Uses: *Paste made of its tender shoot tip, Ixora coccinea flower, white gingelly seeds, shoot tips of Jatropha gossypifolia, Dalbergia volubilis, Flacourtia indica leaf, Barringtonia racemosa fruit, Lepidagathis prostrata spines and tender inflorescence of Areca catechu cooked in milk or rice cooked water is applied to the centre of head and kept for 3 hrs. This is performed for three days in a year for
malabsorption in children. *Paste of its leaves with Caesalpinia mimosoides shoot tip and Indigofera tinctoria leaves is applied for herpes.

Etymology: Dattele gida (thick leaf plant) and Goomechappu (owl leaf) are due to its large thick leaves.

Note: Much used for skin and children’s diseases.

725. *Psychotria flavida* Talbot. (Plate 122 F)

Family: Rubiaceae

Vernacular Name: Kan: Sanna dattele gida  
Tulu: Ellya goomechappu

Habit: Small shrub.

Habitat: Forest undergrowths.

Status: Common.

Description: Small shrub. Leaves simple, elliptic-oblong, dark green above; stipules ovate, deciduous. Flowers small, in terminal peduncled cymes. Calyx minutely 5-toothed. Corolla white; tube very short; mouth densely villous; lobes 5. Stamens 5. Fruit subglobose drupe, black when ripe; cyme-branches bright-yellow in fruit.

Uses: *Same as Psychotria dalzellii.

Etymology: Sanna dattele gida and Ellya goomechappu (smaller Psychotria dalzellii) are due to its resemblance with Psychotria dalzellii and use as its substitute.

Note: It is used as a substitute for Psychotria dalzellii.

726. *Pterocarpus marsupium* Roxb. (Plate 123 A)

Family: Papilionaceae

Vernacular Name: San: Asana, Asanah, Pitasalaka
Eng: Kino, Indian kino tree, Malabar kino tree
Kan: Olle honne, Raktha honne, Honne, Benga
Mal: Venna, Venga
Tulu: Benga

Habit: Large tree.

Habitat: Deciduous forests and plains.

Status: Occasional.


Uses: *Bark (40 gm) decoction is taken (in three doses) to arrest over menstrual bleeding or to regulate menstruation. *Bark cooked with rice is given to children suffering from scabies. Bark decoction is used as bath for children suffering from scabies. Bark and heartwood decoction is used as a blood purifier for skin diseases. Bark decoction is recommended for diabetes and poisonous bites. *Bark cooked with rice is given to bulls to make them stronger and healthier. *Bark decoction or that cooked with rice is given to cattle for conception. Bark or heartwood decoction is used for burning sensation in the body. *Extract of bark powder soaked overnight in water is consumed for three days in case over bleeding. *Gruel prepared by cooking its bark with those of Syzygium caryophyllatum, Terminalia bellirica, Syzygium cumini and coriander powder is used for digestive disorders of cattle. *Bark, barks of Erythrina variegata, Saraca asoca, Calophyllum inophyllum and Pongamia pinnata cooked with rice or their decoction is taken for leucorrhoea. *Bark and Solena amplexicaulis stem cooked with rice is eaten for urticaria and rashes. Bark decoction is used for leucorrhoea. *Bark, Dillenia pentagyna bark and cumin seeds decoction is used for backache and weakness in hands and feet of pregnant woman. *Bark cooked with rice is consumed for stomachache, leg and hand pain of pregnant woman.

Etymology: Honne (golden tree), Olle hone (good golden tree) and Raktha hone
(blood golden tree) are due to its golden yellow flowers, diverse uses and blood red gum resin.

Note: It is used in the preparation of Asanabilvadi taila, Ayaskrti, Varadi kashaya, Khadiradi ghṛta, Nyagrodhadi churna, Narasimha ghṛta and Narasimha rasayana. It has kino-tannic acid, pterosupin, pseudobaptigenin, liquiritigenin, β-eudesmol, pterostilbene, isoliquiritigenin, marsupol, carpusin, propterol and l-epicatechin as active constituents (Kapoor, 1990; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

727. *Pterocarpus santalinus* L. f. (Plate 123 B)

Family: Papilionaceae

Vernacular Name: San: Rakthachandana  
Eng: Red sanders, Red sandalwood, Ruby wood  
Kan: Kempugandha, Rakthachandana  
Mal: Rakthachandanam, Chenchandanam  
Tulu: Rakthachandano

Habit: Large tree.

Habitat: Grown in gardens.

Status: Occasional.


Uses: Heart wood extract is used as a blood purifier and for jaundice. Its paste is applied for skin diseases. *Stem paste is applied over the head for mental disorders and eye diseases.* *Heart wood powder is given with milk for piles. *Heart wood powder mixed with honey is applied for septic wounds and ulcers. Heart wood decoction is used as a pain reliever. *Heart wood extract is taken for uterine
disorders and burning urination. Heart wood paste is applied externally for raktavata*, urticaria, rashes and allergic skin conditions. *Heart wood and Phyllanthus airy-shawii decoction is used for jaundice. *Heart wood, Terminalia chebula fruit and Glycyrrhiza glabra rhizome ground in water is heated in ghee and is applied for furuncles in the head. *Paste of its heart wood and Curcuma longa rhizome with milk is applied over face in the morning (washed after three hours) for pimples, black heads, itches and black marks. *Paste of its heart wood and Memecylon randerianum leaf juice is applied for herpes.

Etymology: Rakthachandana, Kempugandha, Chenchandanam, Rakthachandano and Rakthachandanam (red sandalwood) are due to its reddish coloured heart wood and properties sharing similarity with sandalwood.

Note: It is one of the major ingredients of Candana balalakshadi taila, Candanadi lehya, Sadanga paniya, Dasanga lepa, Parpatadi kvatha and Guduchyadi kvatha. It has santalin A & B, santalic acid, santalic pterocarpin, homopterocarpin, isopterocarpolone, pterocarptriol, isoterpocarpone, pterocarpdiolone, pterocarptriol, pterostilbine, β-amyrone, lupeonone, epilupiol, lupeol, β–amyрин and butlin as active constituents (Dey, 1994; Kapoor, 1990; Sharma et al., 1998).

728. *Pterospermum acerifolium* (L.) Willd. (Plate 123 C)

Syn: Pentapetes acerifolia L.

Family: Sterculiaceae

Vernacular Name: San: Karnikara, Karnikarah, Muchakunda
   Eng: Dinner plate tree
   Kan: Kanakachampaka
   Mal: Kanakachampakam
   Tulu: Kanakachampako

Habit: Large tree.

Habitat: Cultivated in gardens.

Status: Occasional.
Description: Large tree. Leaves simple, large, broadly ovate to elliptic-oblong, entire, lobed or coarsely toothed, glabrous above, grey or white tomentose beneath; stipules multifid. Flowers axillary, solitary or in 2 – 3-flowered cymes, fragrant; bracteoles 3, palmately lobed or laciniate. Sepals 5, wooly on outside. Petals 5, white, deciduous. Stamens 15, in fascicles of 3. Fruit 5-angled, woody capsule.

Uses: *Bark decoction is used to expel phlegm and also as a pain reliever. It is abortive.

Etymology: Kanakachampaka, Kanakachampakam and Kanakachampako (golden champak) are due to its fragrant flowers with wooly sepals.

Note: Flowers are used for worship.

729. *Pterospermum diversifolium* Blume (Plate 123 D)

Syn: *Pterospermum glabrescens* Wight & Arn.

Family: Sterculiaceae

Vernacular Name: San: Karnikara, Muchakunda
    Kan: Muchukunda
    Mal: Pambaram
    Tulu: Muchukundo

Habit: Medium-sized tree.

Habitat: Deciduous forests.

Status: Occasional.


Uses: *Same as Pterospermum acerifolium.*

Note: Flowers are used for worship.
730. *Punica granatum* L. (Plate 123 E)

Family: Punicaceae

Vernacular Name: San: Bijapura, Dadima, Dadimah
   Eng: Pomegranate
   Kan: Dalimbe
   Mal: Mathalam, Mathalanaregam
   Tulu: Dalimbo

Habit: Small tree.

Habitat: Grown in gardens.

Status: Occasional.

Description: Small tree, with reddish young shoots and buds. Leaves simple, oblong or oval-lanceolate, glabrous and shining. Flowers orange-red, 1 – 5 together on the tips of axillary shoots. Calyx-tube campanulate, leathery; lobes 5 – 8, persistent. Petals 5 – 8, wrinkled. Stamens numerous. Fruit subglobose berry, yellowish green to reddish, crowned by the persistent calyx. Seeds surrounded by crimson or pink acid pulp.

Uses: Fruit rind decoction or juice is given to arrest diarrhoea and dysentery. *Bark decoction is given along with honey for throat infection. *Bark decoction with salt is used as a gargle for tonsillitis and throat irritation. Seed has aphrodisiac property. *Tender shoot tip paste is applied over the head for bleeding from nose and sleeplessness. Fruit rind decoction is used as a gargle for toothache. Fruit juice and rind decoction are nutritive and useful for tuberculosis, hiccough, indigestion, dysentery, piles and cholera. *Fruit juice mixed with jaggery is taken for uterus prolapse. Flower or tender leaf extract is given for thrush in tongue, loss of appetite and dysentery. *Root bark decoction is used to expel tapeworm. *Oil prepared by boiling crushed tender shoot tips in coconut oil is applied on the centre of head (kept for one hour) for immediate relief for pus release from ear. Eating fruit or taking its juice has laxative property making it useful for piles, acidity and gastric ulcers.
Fruit rind extract with butter milk is given for blood dysentery. *Decoction prepared from fruit juice is used as an eye wash for pain and burning sensation in eyes. Fruit rind decoction is recommended for hyperacidity. *Fruit rind decoction with *Cyperus rotundus* tuber is used for dysentery. Root decoction or bark powder in water is consumed to expel intestinal worms. *Fruit juice is used for vomiting while it with sugar (1:2) for anaemia in pregnant woman. *Tambuli* prepared from tender shoot tip or fruit rind is useful for diarrhoea, biliousness and body pain (as it can increase rheumatism it is not recommended for aged people). Fruit juice is used as *nasya* for *raktapitta*. *Fruit rind, cardamom, *Aerva lanata*, *shilajithu* and long pepper seed decoction with rice washed water is used for diabetes. *15 gm fruit rind boiled in one litre water is given to drink as an antidote for *Croton tiglium* poisoning. *Tender shoot tip ground in milk or extract with that of *Calycoperis floribunda* and cumin seeds in milk is taken for dysentery. *Root, *Tamarindus indica* seed and pearl shell powder are used to rub the body during bath to remove foul body odour. Fruit rind extract with buttermilk is used for diarrhoea. *Juice of fruit rind and *Hedyotis auricularia* heated over burning charcoal is used internally for anal prolapse due to chronic dysentery.

Etymology: Bijapura (full of seeds) is due to its characteristic fruit which is full of seeds.

Note: It is used in the preparation of *Dadimadi ghrta*, *Dadimastaka churna*, *Hinguvacadi churna*, *Hingvadi gutika*, *Dadhika ghrta*, *Bhaskara lavana*, *Bhaskara churna*, *Brhat changaladya ghrta*, *Khadiradi gutika*, *Mrtasanjivani sura*, *Kalyanaka ghrta* and *Nilikadya taila*. It has β-sitosterol, ursolic acid, nicotinic acid, delphinidin, ellagic acid, estrone, isoquercetin, punicic acid, pelletierine, isopelletierine, malvidin and pentunidin as active components (Kapoor, 1990; Sharma *et al.*, 1998; Sivarajan & Balachandran, 1996). Fruits are highly nutritious.

731. *Quassia indica* (Gaertn.) Nooteb. (Plate 123 F)

Syn: *Samadera indica* Gaertn.; *Samadera lucida* (Wall.) Planch.

Family: Simaroubaceae
Vernacular Name: San: Gucchakaranjah  
Eng: Niepa bark tree, Bitter wood  
Kan: Nipa, Samdera  
Mal: Njotta, Karinjotta  
Tulu: Karimaro  

Habit: Small tree.  

Habitat: Evergreen forests and along backwaters.  

Status: Occasional.  

Description: Evergreen tree. Leaves simple, elliptic-oblong, coriaceous, shining, with 2 glands at base. Flowers in axillary or terminal umbelliform cymes, puberulous. Calyx 4-lobed; lobes semiordicular, puberulous outside. Petals 4, oblong-oblanceolate, dorsally pubescent, white, pale yellow or purplish. Stamens 8, pubescent. Fruit 1 – 4 together, flat, glandular, compressed drupe.  

Uses: *Oil prepared from bark juice is applied externally for joint pain and rheumatism.  

Etymology: Gucchakaranjah (bundle *Pongamia*) arose as its fruits resemble that of *Pongamia pinnata* and occur as a group of 3 or 4.  

Note: It has anti inflammatory action.  

732. *Quisqualis indica* L. (Plate 124 A)  

Family: Combretaceae  

Vernacular Name: Eng: Burma creeper, Chinese honeysuckle, Rangoon creeper  
Kan: Rangoon kempu balli, Vilayathi mallige  
Mal: Kulamarinji, Thookuchethi  
Tulu: Vilayathi mallige  

Habit: Climbing shrub.  

Habitat: Cultivated in gardens, also runs wild.
Status: Common. Weed.

Description: Straggling or climbing shrub, with basal lateral branches modified into horrid spines. Leaves simple, elliptic or oblong, chartaceous beneath. Flowers white, changing to red, in terminal drooping spikes. Calyx-tube produced above the ovary; limb 5-lobed. Petals 5, elliptic. Stamens 10. Fruit dry, 5-angled or winged drupe.

Uses: *Tender shoot extract is given for thrush in tongue.

Etymology: Vilayathi mallige (foreign jasmine) and Thookuchethi (drooping Ixora) are due to its foreign origin and inflorescence resembling that of Ixora.

Note: It is commonly grown as ornamental plant.

733. *Quisqualis malabarica* Bedd. (Plate 124 B)

Family: Combretaceae

Vernacular Name: Eng: Wild Rangoon creeper
                 Kan: Kilenjisoppu
                 Tulu: Kilenjithappu

Habit: Climbing shrub.

Habitat: Evergreen forests.

Status: Occasional.


Uses: *Same as Quisqualis indica.*

Etymology: Kilenjisopppu and Kilenjithappu (bee leaf) arose as the leaves are employed to ward off honey bees during honey collection.

Note: Leaves and leaf juice are used as honey bee repellents.
**734. Rauvolfia serpentina** (L.) Benth. ex Kurz. (Plate 124 C)

Syn: *Ophioxylon serpentinum* L.

Family: Apocynaceae

Vernacular Name: San: Gandhanakuli, Nagagandha, Sarpagandha, Sarpakshi  
Eng: Serpentina, Snake root  
Kan: Sarpagandha, Garudapathala, Sarpagandhi  
Mal: Amalpori, Avalpori, Sarpagandhi  
Tulu: Sarpagandho

Habit: Undershrub.

Habitat: Open places and among bushes.

Status: Rare.

Description: Herbaceous undershrub. Leaves simple, in whorls of 3, lanceolate. Flowers in long-peduncled terminal corymbose cymes; pedicels and bracts scarlet. Calyx scarlet; lobes 5. Corolla salver-shaped, pilose within, white or pinkish; tube very slender; lobes 5, broad-ovate. Stamens 5. Fruit slightly connate 2 drupes, blackish-purple when ripe.

Uses: *Root ground with tender coconut husk juice is applied for herpes. Root decoction is recommended to lower the high blood pressure. *Root paste with *Aristolochia indica* is applied for snake bite. *Root is made into pills with *Glycyrrhiza glabra* rhizome and is used for insanity. Root decoction is taken for fever and insect bite while its powder paste for insect bites. Root paste with lime juice is applied externally and its extract is used internally for snake and scorpion bite. *Root cooked with rice is given for rabid dog bite and root paste is applied for urticaria and rashes. Root paste is applied externally for swellings. Root extract is used for cobra bite and high blood pressure. Root decoction is highly recommended for insanity and anxiety. Root ground with lime juice is applied to the centre of head for sleeplessness, biliousness, anxiety and other mental problems. *Root and leaf ground in rice washed water is applied for septic wounds and ulcers due to
poisonous bites. Root powder in milk is recommended for hypertension. *Root, Aristolochia indica root, Crinum asiaticum tuber, sandalwood and Glycyrrhiza glabra rhizome ground in Centella asiatica juice, Evolvulus alsinoides juice, Bacopa monnieri juice and cow urine are made in to pills. These pills ground in Coccinia grandis leaf juice or fresh milk is applied for insanity and mental problems. *Extract of its root along with that of Caryota urens, Thottea siliquosa, Ruta graveolens and Chassalia curviflora (in equal quantity) is consumed for food poisoning. *Root, those of Salacia chinensis, Aristolochia indica, Indigofera tinctoria, Ixora coccinea, fresh turmeric, Acorus calamus rhizome, red sandalwood and sandalwood paste with lime juice or tender coconut husk juice is applied for herpes. *Leaf juice alone or along with that of Jasminum malabaricum and root of Salacia chinensis ground in lime juice is applied for poisonous bites. Root paste with lime juice is applied for scabies. *Root, which of Croton laevigatus and Acacia caesia ground with Citrus aurantium fruit juice is applied thrice a day for herpes. *Root paste with that of Uvaria narum and tender coconut husk juice is applied for herpes and urticaria.

Etymology: Gandhanakuli (fragrant mongoose), Nagagandha, Sarpagandha, Sarpagandhi (smell of snake), Sarpakshi (snake eyed) and Garudapathala (ground eagle) arose from its therapeutic efficacy against snake bite.

Note: Reserpine, rescinnamine, reserpinine, serpentine, serpentinine, sarpagine, raubasine, yohimbine, ajmaline, ajmalinine, ajmalicine, isoajmaline, neoajmaline, rauwolfinine, rauhimbine, thebaine and papaverine are the active constituents with sedative and hypotensive properties (Kapoor, 1990). It is used in the preparation of Sarpagandhadi gutika, Sarpagandha churna, Sarpagandha vati, Sarpagandhadi churna, Sarpagandha yoga, Sarpagandha ghana vati and Nirgundyadi ghṛta (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998).

735. Rauwolfia tetraphylla L. (Plate 124 D)

Syn: Rauwolfia canescens L.

Family: Apocynaceae
Vernacular Name: San: Sarpagandha  
Eng: Serpentina, Snake root  
Kan: Sarpagandha, Sarpagandhi, Nalkele sarpagandha  
Mal: Amalpori, Avalpori, Sarpagandhi, Pambukolli  
Tulu: Sarpagandho  

Habit: Shrub.  
Habitat: Open areas and wastelands.  
Status: Frequent. Exotic and weed.  


Uses: Whole plant extract is used for insanity. *Root ground in rice cooked water is heated and applied for burning sensation and uneasiness in body. *Root paste with lime juice is applied for fungal infections and septic ulcers with foul smell. *Root extract with lime juice is taken for snake bite. Root decoction is used for skin diseases, phlegm, tonsillitis, nervous diseases, epilepsy, urine block, constipation and anxiety.  

Etymology: Sarpagandha, Sarpagandhi (smell of snake), Nalkele sarpagandha (four-leaved serpentina) and Pambukolli (snake killer) are due to its close resemblance with *Rauvolfia serpentina* and leaves which are arranged in whorls of 4.  

Note: It is usually used as a substitute for *Rauvolfia serpentina*.  

736. *Reissantia indica* (Willd.) N. Halle (Plate 124 E)  

Syn: *Hippocratea indica* Willd.  

Family: Hippocrateaceae  

Vernacular Name: Kan: Dodda madriballi, Dodda maderiballi, Kangunaballi  
Tulu: Malla maderi, Malla maderiballu
Habit: Climbing shrub.

Habitat: Evergreen forests and sacred groves.

Status: Occasional.

Description: Climbing shrub, with woody branchlets. Leaves simple, elliptic-oblong, glabrous; stipules 3-angled, 3-lobed. Flowers in axillary dichotomous cymes, pale yellow; bracts 3-angled. Sepals 5, 3-angled. Petals 5, oblong, papillose on both sides. Stamens 5. Disk cupular, thin, spreading. Ovary flask shaped. Fruit obovate-oblong capsular, with 3 divergent separate follicles; seeds broadly elliptic with membranous wing.

Uses: *Same as *Loesneriella arnottiana*.

Etymology: Dodda madriballi, Dodda maderiballi and Malla maderiballu (larger *Loesneriella*) arose due to its close resemblance with *Loesneriella arnottiana*.

Note: It is used in synonymous with *Loesneriella arnottiana*.

**737. Remusatia vivipara** (Roxb.) Schott. *(Plate 124 F)*

Syn: *Arum viviparum* Roxb.

Family: Araceae

Vernacular Name: San: Laksmana  
Kan: Marakesu  
Mal: Marachembu, Maratthaal  
Tulu: Maratevu, Marasevu

Habit: Epiphytic herb.

Habitat: In clefts of trees and rocks.

Status: Frequent.

Description: Cormous, deciduous, epiphytic herb, commonly producing leafless shoots with scaly bulbils. Leaves 1 or 2, ovate, peltate, margins undulate, often
purplish below between veins. Peduncle short, enclosed in cataphylls. Spathe coriaceous, tube ovoid, convolute, persistent, limb deciduous, yellow; spadix much shorter than spathe, with 3 parts: pistillate below, a sterile zone and staminate above. Male flowers: stamens 2 – 4, united into a synandrium. Female flowers: Ovaries 1-celled. Fruit obovoid berry.

Uses: *Burnt rhizome paste is applied and tied to expel spines or thorns and for pus release from swellings. *Rhizome paste is applied externally for tiger spider bite and swellings. *Rhizome cooked with rice is consumed for food poisoning. *Dosa prepared by grinding cooked leaf, red gram dhal, Bengal gram dhal and a little onion pieces are eaten with curd for burning during urination and urinary stones. *Rhizome paste with lime water is applied for bubo and that with water for carbuncle. Crushed rhizome is tied to expel spines or thorns from the body. *Rhizome paste is applied for ulcers in the shoulder of the bull. *Rhizome pieces are given to eat by adding ghee for five days in case of bone fracture in cattle.

Etymology: Marakesu, Marachembu, Maratthaal, Maratevu and Marasevu (tree Colocasia or Colocasia of trees) arose due to its epiphytic nature and close affinity with Colocasia esculenta.

Note: Leaves are used as vegetable.

738. *Rhaphidophora pertusa* (Roxb.) Schott. (Plate 125 A)


Family: Araceae

Vernacular Name: San: Sphotyabhujangam
   Kan: Kandapana balli, Dodda thippali, Mandeliballi, Kandodi balli
   Mal: Aanachurukki, Aanamakudam, Aanathippali, Gajathippali, Pudayavu
   Tulu: Kandodi booru, Mandeliballu

Habit: Large climber.
Habitat: Evergreen forests and plains.

Status: Frequent.

Description: Large stout climbers, with fleshy stem. Leaves simple, broadly ovate, entire or irregularly lobed, occasionally with large holes; petioles sheathing at the base. Inflorescence axillary, pedunculate; spathe full of spicular trichosclereids, deciduous; spadix covered by naked, bisexual flowers. Stamens 4. Ovary 2-celled. Fruit berry.

Uses: Plant paste is applied for arthritis and rheumatism. *3 – 4 spoons of heated stem juice are given for stomachache and indigestion. *Plant and Pothos scandens cooked with rice is given for dysentery in cattle. *Plant paste is applied or that cooked with rice is taken for viper bite and vitiated wounds. *Plant decoction is consumed for three days after delivery to remove water from the body. Plant decoction is used for venereal diseases. *Oil prepared from plant juice is applied for septic wounds and ulcers. *Stem (after removal of outer skin) cooked with rice is given to women after delivery (as a uterine tonic) and watery boils in small children. *Stem decoction is used as wash for pit viper bite, abdominal diseases and water in lungs. *Leaf juice mixed with rock salt is applied for fungal infection and septic ulcers (after the cessation of burning sensation leaf juice or oil is applied as antidote). *Rasam* prepared from crushed stem is used for loss of appetite, indigestion, gastritis and digestive disorders. *Plant along with cumin and palm jaggery are ground and consumed internally for blood vomiting due to injury.

Etymology: Kandapana balli, Mandeliballi, Kandodi balli, Kandodi booru, Mandeliballu (viper vine), Dodda thippali (larger long pepper), Aanathippali and Gajathippali (elephant long pepper) arose due to its therapeutic efficacy against viper bite and resemblance of spadix with the spike of long pepper.

Note: It is much valued for poisonous bites and digestive disorders.

739. Rhinacanthus nasutus (L.) Kurz. (Plate 125 B)

Syn: Justicia nasuta L.; Rhinacanthus communis Nees in Wall.

Family: Acanthaceae
Vernacular Name: San: Yuthikaparni, Yuthiparni  
Eng: Snake jasmine, White flowered Justicia, Ringworm root  
Kan: Doddapatika, Nagamallige, Doddapatike  
Mal: Nagamulla, Purukolli, Puzhukkolli, Vellakkurunji  
Tulu: Nagamalle

Habit: Undershrub.

Habitat: Along roadsides and wastelands.

Status: Occasional.

Description: Undershrub. Leaves simple, elliptic-lanceolate, glabrous. Flowers, solitary or 2 – 3 together, distant on the divaricate branches of very large lax terminal panicles. Calyx 5-partite; lobes linear, glandular-pubescent. Corolla white; tube long; limb 2-lipped, upper lip linear-oblong, shortly 2-lobed, lower broad, 3-lobed. Stamens 2. Fruit clavate capsule, with a solid base.

Uses: *Root and leaf paste with lime juice is applied for eczema and ringworm. *When poison entered the body, its leaf juice is given in large dose to cause vomiting. Plant paste is applied for leprosy, herpes and itches. *Root paste is applied for poisonous bites and seed paste for warts. *Leaf paste with lime juice and lime is applied for itches, wounds, fungal infections of skin and skin diseases due to contact of cloths. *Root and leaf decoction with turmeric and cumin seeds is used for septic ulcers and wounds. *Plant extract is used to remove poison from the blood. Plant decoction is a tonic, stimulant, used for phlegm, worms, rheumatism and skin diseases. Its decoction and paste have strong antibiotic and anti inflammatory actions. *Paste is applied for septic wounds, ulcers and to expel maggots from wounds.

Etymology: Nagamallige, Nagamulla and Nagamalle (snake jasmine) arose from its characteristic white corolla. Puzhukkolli (worm killer) indicate its wound healing property. Vellakkurunji (white Strobilanthes) is due to its affinity with Strobilanthes and white flowers.

Note: Much valued drug for skin diseases and wound healing, especially septic wounds.
**740. *Rhizophora mucronata* Poir. (Plate 125 C)**


Family: Rhizophoraceae

Vernacular Name: Eng: Boriti poles  
Kan: Kaandla, Kandale, Nijakaandla, Ollekaandla  
Mal: Panachikandal, Pranthakandal, Pikandal  
Tulu: Kaandla

Habit: Medium-sized tree.

Habitat: Tidal mangrove forests.

Status: Common.

Description: Medium-sized evergreen tree, supported on numerous aerial roots from the stem and branches. Leaves simple, coriaceous, elliptic, dotted with tiny red spots. Flowers 3 – 7 in axillary cymes. Calyx 4-lobed; lobes oblong-lanceolate, thick, keeled within, reflexed in fruit. Petals 4, white, oblong, hairy within. Stamens 8. Fruit ovate-conical, leathery, with persistent calyx-lobes; seeds viviparous; radicle elongated, cylindrical, clavate.

Uses: *Oil prepared from fruit juice or fruit paste is applied externally for nervine disorders, wounds, cuts and septic ulcers.

Etymology: Kaandla (mangrove), Nijakaandla (true mangrove) and Ollekaandla (good mangrove) are due to its habit, habitat and diverse uses.

Note: Wood is highly used as fuel.

**741. *Rhynchostylis retusa* (L.) Blume (Plate 125 D)**

Syn: *Epidendrum retusum* L.; *Saccolabium rheedei* Wight

Family: Orchidaceae

Vernacular Name: Kan: Seetha dande, Draupadi maale
Mal: Maravazha, Seethamudi  
Tulu: Opathimale

Habit: Epiphytic herb.

Habitat: On trees both in forests and plains.

Status: Frequent.


Uses: *Whole plant cooked with rice is given for rheumatism. *Whole plant decoction in milk is used as a tonic for weakness. *Heated leaf juice is poured into ear for earache and pus release from the ear. *Leaf is heated with coconut oil and the resulting oil is used as ear drop for pus release from ear.

Etymology: Seetha dande (Seetha’s garland), Draupadi maale, Opathimale (Draupadi’s garland) and Maravazha (tree plantain) arose from its attractive racemose inflorescence and habit resembling that of Vanda tessellata.

Note: Much valued drug for rheumatism and earache. It is used in synonymous with Vanda tessellata.

742. Ricinus communis L. (Plate 125 E)

Family: Euphorbiaceae

Vernacular Name: San: Chitrabija, Eranda, Erandah, Gandharvahastakah, Pancangulah  
Eng: Castor oil plant, Castor bean, Palma christi  
Kan: Haralu, Oudala, Eranda  
Mal: Aavanakku, Chittavanakku, Erandam, Kottamaram  
Tulu: Parelu, Alambuda, Almbudo
Habit: Shrub.

Habitat: Along roadsides and wastelands.

Status: Common. Exotic and weed.


Uses: Root decoction is used as a purgative in rheumatic conditions and constipation. Massage with seed oil is given for ankle twist. *Root, Sida rhombifolia root and cumin seeds decoction is used for sprain, pain, dyspnoea, rheumatic pain and abdominal spasm. *Tender shoot tip boiled in milk or rice washed water is given for jaundice in pregnant woman. *One tsp seed oil mixed in a glass of hot milk is taken at bed time for backache. Root bark paste is applied for skin diseases and oedema while its decoction is used internally for bronchitis, rheumatism and to normalize excretion. *Leaves are used as fan in order to reduce or get relief from burning sensation due to burn. *Root decoction is given by mixing with butter for normalizing excretions. Plant powder paste is used for rheumatism. *Seed oil mixed with camphor oil is taken to expel intestinal worms. Plant or root decoction is used for swellings. *Leaf (smeared with castor oil) is heated and tied overnight over the head for dandruff. Root and leaf decoction is recommended for rheumatism. *Root, Sida rhombifolia root, Mucuna pruriens root, Alpinia galanga rhizome and palm jaggery decoction is recommended for all types of rheumatism. *Tender shoot tip paste with Ocimum tenuiflorum leaf and rock salt is applied for pain and swelling in the backside of the ear. Leaf ground and heated by mixing with rice cooked water is applied for pain and swellings. Ground seed is heated and applied for pain and swelling due to rheumatism. *Crushed root decoction is consumed at night by adding hot milk and sugar for rheumatic complaints. *Root, ginger, Glycyrrhiza glabra, Hemidesmus indicus roots and Embelia ribes seeds
decoction is used for rheumatoid arthritis. Root crushed, made into decoction with
cumin seeds and given 3 times a day for sprain. Leaf paste in cold water is applied
over the head for jaundice. ½ ounce castor oil is given for anal prolapse due to
dysentery. *Decoction prepared from its tender shoot tip extract with ginger and
cumin seeds are given for gas trouble in pregnant women.

*Root, Sida rhombifolia root and cumin seed decoction in milk is used for
backache and body pain in pregnant women. *Seed pulp, Cynodon dactylon leaf
and back gingelly seeds are cooked in milk, ground and given twice a day for 1 – 2
weeks in case of rheumatism and arthritis. *Bark, ginger, long pepper and
Glycyrrhiza glabra rhizome (in equal quantity) decoction is used twice daily for 1 –
2 weeks in case of rheumatoid arthritis. *Root decoction mixed with musk is given
twice daily for 7 – 14 days in case of swellings and pain of rheumatoid arthritis.
*Root, cumin seeds and Arundo donax rhizome decoction is taken with musk for
abdominal spasm. *Oil prepared by grinding its root, turmeric and pepper (4:2:1)
powder with gingelly oil and keeping it in sunlight is applied for all types of wounds
and cuts. *Seed kernel ground with copper sulphate (4:1) in a copper vessel
(without coating) is applied for hardened warts. *Leaf juice is given to drink at
morning in empty stomach for jaundice. *Oil separated while boiling fried seed
kernel powder in water is consumed to expel worms. About 5 spoon root decoction
with water is used twice a day for stomach swelling due to indigestion. *Root and
cumin seed boiled with water is given with milk and sugar for easy delivery. *Paste
prepared by mixing castor oil with bee wax and turmeric powder is applied during
night for piles. *Castor oil is applied for cracks in lips. *Seed extract with milk is
consumed internally for jaundice.

Etymology: Chitrabija (ornamental seed) is due to its characteristic fruit and seeds.
Gandharvahastakah (celestial hands) arose as it is believed to be god’s gift to treat
diverse diseases. Haralu and Parelu (nodule or pebble) arose from its carunculate
seeds. Pancangulah (five angled) is from its palmately lobed leaves.

Note: It is used in the preparation of Gandharvahastadi kvatha, Gandharvahastadi
churna, Vatari guguulu, Gandharvahasta taila, Caturbhuya rasa, Caturmukha rasa,
Cintamani caturmukha rasa, Brhat saindhavadi taila, Gandharvahastadi taila, Simhanada guggulu, Misrakasneha, Balarista, Astavarga kashaya, Vidaryadi ghṛta, Eranda paka, Erandamuladi kvatha, Erandasaptaka kvatha, Rasnasaptaka kvatha, Laghu visagarva taila, Rasna panchaka kvatha and Vidaryadi lehya (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). It has ricinoleic acid, isoricinoleic acid, stearic acid, dihydroxy stearic acid, ricin and ricinine as active components with purgative, lactagogue and emmenagogue actions (Kapoor, 1990). Leaf extract in water is used as an insecticide.

743. *Rosa damascena* Mills. (Plate 125 F)

Family: Rosaceae

Vernacular Name: San: Satapatri

- Eng: Rose, Damask rose
- Kan: Gulabi, Panneru
- Mal: Rose, Panineer
- Tulu: Panneeru, Panner, Gulabu

Habit: Shrub.

Habitat: Cultivated in gardens.

Status: Common. Exotic.

Description: Armed evergreen shrubs. Leaves imparipinnate; leaflets serrate, pubescent; stipules adnate to the petiole. Flowers rose-red, in terminal corymbose cymes. Sepals 5. Petals large, numerous, very fragrant. Stamens numerous, inserted in the disk. Fruit a fleshy calyx tube covering a cluster of coriaceous achenes.

Uses: *Oil extracted from the seeds is used for eye diseases. *Fruit, seed and flower decoction has tonic action, given for dysentery and indigestion. *Petal juice is used as an eye drop which is cooling to the eyes and useful for all types of eye diseases. Oil is applied for wounds and infections. *Petal or seed decoction is nutritive and increases quantity and quality of blood. *Petal, cumin and dried ginger extract with
milk and sugarcandy is taken to arrest bleeding from body parts, indigestion, diarrhoea, thirst, giddiness, biliousness, skin diseases and mental problems.

Etymology: Satapatri (hundred wings) arose from its numerous petals. Panneru, Panineer and Panneeru (rose water) as rose water is extracted from the flowers.

Note: It is used in the preparation of Gulkhanda, Amlakayadi churna, Talisadi churna, Sarpagandha yoga, Sphatikadrava, Vasanta kusumakara rasa, Tarunarka, Pravala pisti, Mukha pisti and Trnakantamani pisti (Dey, 1994; Sharma et al., 1998).

744. *Rosa indica* Lindl. (Plate 126 A)

Family: Rosaceae

Vernacular Name:  
San: Satapatri  
Eng: Rose, Baby rose  
Kan: Gulabi, Panneru  
Mal: Rose, Panineer  
Tulu: Panneeru, Panner, Gulabu

Habit: Shrub.

Habitat: Cultivated in gardens.

Status: Common.

Description: Erect shrub, armed with curved prickles. Leaves imparipinnate; leaflets 3 – 5, deep green and shining above, paler beneath, glabrous; stipules very narrow, with slightly divergent auricles. Flowers solitary or several, in short terminal corymbose cymes; hypanthium urceolate. Sepals 5, with long filiform apex. Petals numerous, fragrant, white or rose red. Stamens many, inserted in the disk. Fruit a cluster of pyriform achenes, enclosed in the fleshy hypanthium.

Uses: Pure rose water is poured into eyes for redness in eye and conjunctivitis. Flower extract is laxative, cooling, tonic, used for diarrhoea and eye diseases. *Petal extract is used as eye drop for eye diseases.

Etymology: Satapatri (hundred wings) arose from its numerous petals. Panneru,
Panineer and Panneeru (rose water) as rose water is extracted from the flowers.

Note: It is often used as a substitute for *Rosa damascena*.

**745. Rotula aquatica** Lour. (Plate 126 B)

Syn: *Rhabdia lycioides* Mart. & Zucc.; *Ehretia cuneata* Wight

Family: Boraginaceae

Vernacular Name: San: Pasanabheda, Pasanabhedah  
Kan: Pasanabedhi, Pasanabedha  
Mal: Kallurvanchi  
Tulu: Pasanabedo, Kallurvanchi

Habit: Shrub.

Habitat: Banks and beds of rivers and streams among rocks.

Status: Common.

Description: Shrub, with flexuous branches. Leaves crowded on short lateral branchlets, obovate-spathulate. Flowers small, in axillary or terminal 1 – 4 flowered cymes. Calyx 5-partite. Corolla pink, campanulate; lobes 5, obtuse. Stamens 5. Fruit globose drupe, with persistent style, orange-coloured when ripe.

Uses: Whole plant decoction is recommended for kidney, bladder stones, urinary blocks, UTI and other urinary diseases.

Etymology: Pasanabheda, Pasanabhedah, Pasanabedhi and Pasanabedo (rock or stone breaker) clearly indicate its therapeutic efficacy against renal calculi.

Note: Much valued drug for renal calculi. It is used in the preparation of *Putikaranjasava*, *Traikantaka ghrta* and *Brhat marma gutika* (Sivarajan & Balachandran, 1996).

**746. *Rourea minor* (Gaertn.) Merr. (Plate 126 C)


Family: Connaraceae
Vernacular Name: Kan: Hulechala balli, Vikrantha balli  
   Mal: Cheriyamarikunni, Kuriel  
   Tulu: Kakke tharoli

Habit: Scrambling shrub.

Habitat: Semi evergreen forests.

Status: Common.

Description: Large scrambling shrub. Leaves imparipinnate; leaflets 5 – 9, elliptic or lanceolate, shining; petioles channeled. Flowers white, small, in axillary panicles. Sepals 5, orbicular, accrescent in fruit. Petals 5. Stamens 10. Fruit curved, elliptic follicle. Seeds ovoid-oblong, with orange aril.

Uses: *Leaf paste is applied for urticaria and rashes. *Root decoction is used for rheumatism, to promote foetus growth and also for gonorrhoea. *Whole plant decoction is taken for hernia and testicle swelling. *Leaf juice is given to cause vomiting (to remove the poison that entered the body). *Root or leaf extract with tender coconut water is used for clearing urine, backache and to rejuvenate the body.

Etymology: Kakke tharoli (crow herb) arose as its fruits are the favourite food of crows.

Note: Leaf juice is highly bitter and usually given to cause vomiting.

747. *Rubia cordifolia* L. (Plate 126 D)

Family: Rubiaceae

Vernacular Name: San: Aruna, Manjista, Manjista, Raktalata  
   Eng: Indian madder, Dyer’s madder  
   Kan: Ishtamadhu, Kaikuykana balli, Chitavalli, Manjista  
   Mal: Manjadi, Manjetti, Poovatha, Sivollikkodi  
   Tulu: Manjisto

Habit: Climbing herb.
Habitat: Moist deciduous forests.

Status: Occasional.

Description: Climbing scabrous herbs, with 4-gonous branches. Leaves simple, whorled, ovate-ovate. Flowers white, dark blue when mature, in terminal and axillary dichasial cymes. Calyx truncate; lobes 5, lanceolate. Corolla campanulate; lobes 5. Stamens 5. Fruit globose, fleshy drupe.

Uses: Whole plant decoction is given as a blood purifier. Its paste is applied externally for headache. *Oil prepared from its juice is smeared and massaged all over the body of small children for increasing the strength of their bones. *Whole plant decoction mixed with coconut oil is applied on the head for eye diseases. Plant decoction is given for rheumatism and raktavata. Plant paste is applied externally for skin diseases. *Whole plant decoction is recommended for diabetes and urinary diseases. *Decoction prepared from fried whole plant, Withania somnifera, coriander, long pepper and Hemidesmus indicus root is given with honey for inducing appetite and to normalize digestion. *Root, Tribulus terrestris, Mollugo pentaphylla, Boerhavia diffusa root, turmeric and ginger decoction is taken twice a day for bronchitis. *2 – 4 spoons of crushed stem boiled in water are given twice a day for dry cough. *Roties prepared by grinding leaf along with rice flour and cooking in charcoal (after covering with banana leaf) is eaten for nerve pain. *Root or whole plant powder boiled with water is consumed twice a day to expel intestinal worms. *Root powder boiled with coconut oil is applied for pus release from swellings.

Etymology: Raktalata (red vine) and Aruna (sun or red) arose as a red dye is obtained from this plant.

Note: It is used in the preparation of Manjistadi kvatha, Manjistaardraka, Laghu visagarva taila, Pinda taila, Dhanvantararista, Dhanvantara kulambu, Manjistadi taila, Kalyanaka ghrtta, Aravindasava, Asvagandharista, Usirasava, Candanasava, Brhat manjistadi kvatha and Khadiradi gutika (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). Purpurin, manjistin, garancin, alizarin and
xanthine are the active components (Kapoor, 1990). Much valued drug for skin
diseases.

748. *Ruellia tuberosa* L. (Plate 126 E)

Family: Acanthaceae

Vernacular Name: Eng: Minnie root, Waterkanon, Menow weed
       Kan: Jarbula gadde
       Tulu: Jarbula kande, Kande gentige

Habit: Erect herb.

Habitat: Grown in gardens, also runs wild.

Status: Frequent. Exotic.

Description: Erect herb, with tuberous roots. Leaves simple, ovate or elliptic,
tapering to the base. Flowers large, in axillary cymes. Calyx 5-partite. Corolla
infundibular, blue; lobes 5. Stamens 4, didynamous. Fruit oblong capsule.

Uses: *Whole plant juice is used as an emetic agent while tuber decoction is
recommended for diarrhoea and other digestive disorders.

Etymology: Kande gentige (tuberous *Barleria*) as it has tubers and flowers
resembling with that of *Barleria*.

Note: Sometimes it is used as an adulterant for *Withania somnifera*.

749. *Ruta chalepensis* L. (Plate 126 F)


Family: Rutaceae

Vernacular Name: San: Pitapushpa, Sarpadanshta, Guchhapatra, Vishapaha
       Eng: Herb of grace, Rue, Garden rue, Common rue
       Kan: Nagadali, Nagadali soppu, Havunanjina gida, Sadapu
       Mal: Arootha, Nagathali, Somarayal
       Tulu: Sadathappu, Sadapu
Habit: Herb.

Habitat: Cultivated in gardens, also run wild in higher altitudes.

Status: Occasional. Exotic.

Description: Erect herb, with strong aroma and more or less angled stem. Leaves 2 or 3 pinnatisect, pyramidal or oblong, strongly aromatic; leaflets obovate or elliptic. Flowers yellow, in terminal dichasial cymes; bracts leafy. Sepals 4, ovate, green. Petals 4, spathulate, fimbriate, hooded at apex, yellow. Stamens 8 or 10. Fruit 4 or 5 lobed capsule.

Uses: *Twig is kept under the bed of small children to ward off evil spirits and to prevent attack of fits. Leaf juice is given for phlegm, cough, fever, rheumatism, also as carminative and diuretic agent (due to abortive property it is not recommended for pregnant women). *Plant juice is given to induce menstruation in ladies. *Plant (ground) is used internally for quick recovery from hysteria and fits. Plant paste is applied over rheumatic joints. *Plant juice is consumed to expel intestinal worms. Oil prepared from plant juice is a digestive, induces sweating and is used for eye diseases. *Leaf juice mixed with breast milk is given internally for epilepsy.

Etymology: Pitapushpa (yellow flower) is due to its yellow flowers. Sarpadanshta (snake bite), Nagadali (snake plant), Havunanjina gida (snake poison plant) arose as it is well known as a snake repellent and widely used for snake bite. Guchhapatra (bundle of leaves) and Sadathappu (evergreen leaves) are due to its crowded pinnatisect leaves and evergreen nature.

Note: Methyl-n-nonyl ketone and rutin are the active components with stimulant and emmenagogue action (Kapoor, 1990).

750. *Saccharum munja* Roxb. (Plate 127 A)

Syn: *Saccharum bengalense* Retz.

Family: Poaceae

Vernacular Name: San: Kusah
Kan: Dodda darbe, Munji gida  
Mal: Valiya darbha  
Tulu: Malla darbe

Habit: Tall herb.

Habitat: Grown in gardens.

Status: Occasional.

Description: Tall perennial herb, with tufted culms. Leaves flat, tapering from base, glaucous, margins scabrid; sheaths silky at base, margins villous. Panicle long, lanceolate to cylindrical, plumose, spreading at flowering; rachis triquetrous, villous. Spikelets longer than joints of rachis, lanceolate. Lower glume chartaceous, with 2 strong lateral nerves. Upper glume with scabrid keels. Lower lemma empty, hyaline. Upper lemma bisexual, hyaline; palea ovate. Lodicules 2. Stamens 3. Fruit oblong caryopsis.

Uses: Whole plant decoction is taken as a tonic for burning sensation in limbs, phlegm, biliousness and urinary disorders.

Etymology: Dodda darbe, Valiya darbha, Malla darbe (larger *Imperata cylindrica* or *Desmostachya bipinnata*) and Munji gida (waist thread plant) are due to its use as synonymous with Darbha in religious ceremonies.

Note: Thread prepared from its dried stem is tied to the waist during *Upanayana**. It is one of the important ingredients of *Trinapanhamula kvatha* (Dey, 1994).

751. *Saccharum officinarum* L. (Plate (127 B))

Family: Poaceae

Vernacular Name: San: Ikshu, Ikshura, Khadgapatraka, Madhutrna  
Eng: Sugar cane, Noble cane  
Kan: Kabbu  
Mal: Karimbu  
Tulu: Karambu, Kabbu
Habit: Tall herb.

Habitat: Cultivated in fields.

Status: Common.


Uses: Stem juice is swallowed in large quantities for jaundice and biliousness. Stem decoction is recommended for thirst, urinary disorders, stomachache, tuberculosis, cough, small pox, fever and hiccough. *Stem juice is given to drink to arrest vomiting due to copper sulphate poisoning. *Heated stem juice mixed with honey is applied to remove unwanted marks on the body.

Etymology: Khadgapatraka (sword grass) and Madhutrna (sweet grass) are due to its scabrid leaf margins and sweet stem juice.

Note: Much valued for sugar extraction and jaggery preparation. It is an integral part of religious rituals. It is used in the preparation of Bala taila, Dhatryadi ghrta, Balajirakadi kashaya, Amrtaprasa ghrta, Trnapancamula kvatha, Sukumara ghrta, Brahma rasayana and Kusmandaka ghrta (Sharma et al., 1998; Sivarajan & Balachandran, 1996).

752. Saccharum spontaneum L. (Plate 127 C)

Family: Poaceae

Vernacular Name: San: Kasa, Kasah, Ikshugandha
Eng: Thatch grass, Wild sugar cane
Kan: Kaadu kabbu, Hucchu kabbu, Naayi kabbu
Mal: Chottapullu, Njangana, Nannana
Tulu: Kattu karambu
Habit: Tall perennial grass.

Habitat: Along river banks.

Status: Common.

Description: Tall perennial grass with creeping rootstock. Culms erect, with silky appressed hairs below the panicle. Leaves narrowly linear, rigid, glaucous, margins scabrid; sheaths glabrous, with fimbriate mouth; ligule membranous. Panicle lanceolate, contracted, silky hairy. Lower glume 2-nerved, coriaceous and brown below, subhyaline and white in upper two-third. Upper glume 1-nerved, margins ciliate. Lower lemma ovate- lanceolate, hyaline, ciliate. Upper lemma very slender, hyaline, ciliate; palea ciliate. Lodicules 2. Stamens 3. Fruit oblong caryopsis.

Uses: Heated stem juice is recommended for rabies and rabid dog bite. Root or rhizome decoction is recommended for urine block. *Stem or rhizome cooked with rice is consumed for dog bite and to increase urine flow. *Plant gruel with rice is given to dogs for ulcers due to hair fall. *Decoction prepared from its stem and root, Vigna unguiculata root, Solanum melongena root and bark of Gnetum edule is used for rabid dog bite. Stem juice is swallowed for jaundice.

Etymology: Kaadu kabbu, Kattu karambu (wild sugar cane), Hucchu kabbu (insanity sugar cane) and Naayi kabbu (dog sugar cane) are due to its wild nature, close affinity with sugar cane and much use for rabies.

Note: Stem peel is used for making hair decoration items. It is used in the preparation of Brhat candanadi taila, Sukumara kashaya, Trinapanchamula kvatha, Kusavaleha, Kasadya ghṛta, Karpuradyarka, Brahma rasayana, Mutravirecaniya kashaya, Mutravirecaniya churna, Stanyajanana kashaya, Stanyajanana churna, Virataradi ghṛta, Sukumara lehya and Traikantaka ghṛta (Dey, 1994; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

753. Salacia chinensis L. (Plate 127 D)

Syn: Salacia prinoides DC.

Family: Hippocrateaceae
Vernacular Name: San: Saptacakra, Ekanayaka, Pitika
Kan: Ekanayaka
Mal: Cherukoranti, Ekanayakam
Tulu: Ekanayake

Habit: Straggling shrub.

Habitat: Along hedges.

Status: Frequent.


Uses: Root decoction is recommended for indigestion and constipation. *Root ground with milk is used in case of mouth ulcers. *Oil prepared from the roots is recommended for massaging the body of children. Root decoction or extract is highly recommended for diabetes. Root decoction is taken for three days during menses (for three cycles) for conception. Root extract with lime juice or tender coconut husk juice is used for urticaria and rashes. *Root ground with milk is given for burning during urination in small children. *Root, roots of Memecylon umbellatum, Aristolochia indica and Rauvolfia serpentina ground in lime juice is taken to normalize high blood pressure. *Root paste with root of Aristolochia indica, sandalwood and Pterocarpus marsupium heart wood is applied for herpes. Root extract with lime juice is recommended for all types of poisonous bites. Root paste is applied externally for swellings. *Root decoction is used as a blood purifier for urinary diseases. *Paste prepared from its root, heartwood of Santalum album, Pterocarpus santalinus and very tender coconut is applied for chicken pox. *Paste of its root, that of Aristolochia indica, Rauvolfia serpentina, Indigofera tinctoria, Ixora coccinea, rhizomes of Curcuma longa, Acorus calamus, heartwood of Santalum album and Pterocarpus santalinus with lime juice or tender coconut husk juice is applied 7 – 8 times a day for herpes, urticaria, rashes and allergy. Root with
that of *Rauvolfia serpentina* ground in milk is given to reduce high blood pressure. Root extract with lime juice is recommended for diabetes. *Root extract is consumed for worm trouble and thrush in tongue of children.* *Root, *Acacia catechu* bark, *Syzygium cumini* bark, *Tribulus terrestris* seeds and turmeric powder decoction is used for diabetes. Root decoction is taken by adding honey for flue.

Etymology: Ekanayaka (single king) and Pitika (yellow coloured) are due to its deep yellow coloured roots which are much known for their therapeutic efficacy.

Note: Ripe fruit pulp is edible. Roots are much used for skin diseases.

**754. *Salacia fruticosa* Heyne ex Lawson (Plate 127 E)**

Family: Hippocrateaceae

Vernacular Name:  
Kan: Modake hannu, Madike hannu  
Mal: Ekanayakam, Ponkarandi  
Tulu: Modake parandu

Habit: Climbing shrub.

Habitat: Evergreen and semi evergreen forests.

Status: Common.


Uses: *Root or whole plant paste is applied for swellings.* *Bark or kernel decoction is taken to expel intestinal worms.* *Whole plant decoction is recommended for urinary disorders and as a blood purifier.*

Etymology: Madike hannu and Modake parandu (pot fruit) arose from its characteristic fruits.

Note: Ripe fruits are edible.
**755. Salacia oblonga** Wall. ex Wight & Arn. *(Plate 127 F)*

Family: Hippocrateaceae

Vernacular Name: Kan: Ekanayaka  
Mal: Ponkorandi  
Tulu: Ekanayake

Habit: Climbing shrub.

Habitat: Semi evergreen forests.

Status: Occasional.

Description: Large climbing shrub, with lenticular branchlets. Leaves simple, oblong. Flowers minute, on very short axillary peduncles. Calyx 5-lobed. Petals 5, yellow, oblong. Fruit subglobose berry, yellowish-red when ripe.

Uses: Root decoction is used internally for rheumatism, itches, asthma, diabetes, piles, digestive disorders and menstrual irregularities. Oil prepared using its root is used for skin diseases, ear ache, wounds, ulcers and poisonous bites.

Etymology: Ekanayaka (single king) is due to its deep yellow coloured roots which are much known for their therapeutic efficacy.

Note: It is used in synonymous with *Salacia chinensis*. Ripe fruit pulp is edible.

**756. Salvadora persica** L. *(Plate 128 A)*

Family: Salvadoraceae

Vernacular Name: San: Brihatpilu, Laghupilu, Pilu, Piluka  
Eng: Tooth brush tree  
Kan: Karigoni mara  
Tulu: Kirgonji

Habit: Small tree.

Habitat: Coastal areas.
Status: Rare.


Uses: Root is used as toothbrush to strengthen the teeth. *Decoction prepared from its bark is consumed for fever and menstrual disorders. *Bark paste is applied for urticaria and rashes.

Etymology: Karigoni mara (black sack tree) arose as bark fibre is obtained from this tree which usually prefers black soil.

Note: Ripe fruits are edible. Trimethylamine, β-sitosterol, benzyl isothioagnate, dibenzylurea, dibenzylthiourea and glucotrapaeolin are the active constituents with diuretic and deobstruent actions. It is used in the preparation of Misraka sneha, Pilu taila, Vaidurya rasayana, Citrakadya taila, Triphaladi gutika, Bilvakadi lepa and Pippalyadi gutika (Kapoor, 1990; Sharma et al., 1998).

757. *Salvinia molesta* D. S. Mitchell (Plate 128 B)

Family: Salviniaeceae

Vernacular Name: Eng: Kariba weed
                 Kan: Africada haavase
                 Mal: African paayal

Habit: Free-floating herb.

Habitat: Water channels, canals and ditches.

Status: Common. Exotic and weed.

Description: Free-floating aquatic fern. Leaves two types; emergent leaves: green-ovovate, hairy; submerged leaves: brownish, feather-like. Sporocarps egg-shaped, enclosed within the submerged leaves.
Uses: *Fried leaf (4 – 5) powder is given with honey for breathing difficulty in children due to phlegm and dry cough. *Leaf paste tied in a cloth is applied to the nose in case of epilepsy. *Leaves extract with milk is consumed for rheumatoid arthritis.

Etymology: Africada haavase and African paayal (African aquatic plant) clearly indicate its exotic nature.

Note: It is one of the world’s worst weeds.

758. Samanea saman (Jacq.) Merr. (Plate 128 C)

Syn: Pithecellobium saman (Jacq.) Benth.

Family: Mimosaceae

Vernacular Name: Eng: Cow tamarind, Monkey pod, Rain tree
Kan: Male mara
Mal: Mazhamaram, Urakamthoongimaram
Tulu: Barsatha maro, Devadaru

Habit: Large tree.

Habitat: Planted as avenue tree.

Status: Common. Exotic.

Description: Large tree, with spreading crown. Leaves large, bipinnate; rachilla pubescent; leaflets trapezoid to ovate-oblong, pubescent beneath. Flowers in dense heads on long, pubescent peduncles; the central flower of the head is much larger than the others, 7 – 8-merous and contains more stamens. Calyx funnel-shaped, 5-toothed. Corolla pinkish, funnel-shaped; lobes 5. Stamens infinite. Fruit fleshy, slightly flattened pod.

Uses: Fruits are used as nutritious food to increase lactation in cattle.
Etymology: Male mara, Mazhamaram and Barsatha maro (rain tree) arose as huge quantity of watery fluid (due to insect attack) gets accumulated in its shallow groves of the bark.

Note: Fruits are much valued as fodder.

759. *Sansevieria cylindrica* Bojer ex Hook. *(Plate 128 D)*

Family: Agavaceae

Vernacular Name: Eng: African bowstring hemp, African spear, Spear Sansevieria  
               Kan: Nugge manjina naru  
               Tulu: Nurge kolu

Habit: Erect herb.

Habitat: Grown in gardens.

Status: Occasional. Exotic.

Description: Perennial erect herb, with thick rhizome. Leaves radical, erect, green, thick, cylindrical, rigid. Flowers white, in long racemes. Perianth narrowly tubular; lobes 6, with narrow tips. Stamens 6. Fruit setting not seen.

Uses: *Plant extract is used internally as a tonic.*

Etymology: Nugge manjina naru (drumstick Sansevieria) and Nurge kolu (drumstick) are due to its characteristic leaves.

Note: Often grown as ornamental plant.

760. *Sansevieria roxburghiana* Schult. & Schult. f. *(Plate 128 E)*

Family: Agavaceae

Vernacular Name: San: Nagadamana, Nagini  
                  Eng: Indian bowstring hemp  
                  Kan: Manjina naru, Nagadali  
                  Mal: Manji, Muramachi  
                  Tulu: Manji
Habit: Erect herb.

Habitat: Planted in gardens, also found as garden escape.

Status: Common.

Description: Rhizomatous herb, with creeping rhizome. Leaves in a tuft, broad towards the middle, rigid, cross-striped, with rigid spine-like tip. Flowers greenish-white tinged with violet, in fascicles of 3 – 6 on long racemes. Perianth tubular; lobes 6, narrow. Stamens 6, curved and exerted. Fruit 1 – 3-seeded berry.

Uses: Leaf juice (half to one cup) is given along with honey for cough, bronchitis and chest pain (over dose results in vomiting). *Rhizome decoction is recommended with cumin seed powder for 14 days in case of vitiated skin diseases due to poisonous bites. *Leaf paste is applied for poisonous bites and over the backside of ear for earache. Young shoot juice is consumed to expel phlegm. Root decoction is taken for tuberculosis and cough. *Heated leaf juice is poured into the ear for earache and pus release from the ear. Leaf juice is used internally to expel phlegm and applied externally for scabies. *Leaf juice or powder is recommended (four days before menses) for menstrual disorders. *Tender shoot tip juice mixed with guggul and honey is used at evening for a week in case of tuberculosis in small children. Root decoction is recommended for rheumatism and biliousness. Leaf decoction is used for phlegm, bronchitis, nervine diseases, skin diseases, fever and vomiting. It is a digestive and nutritious. *Dried leaf powder or leaf juice is given twice a day (four days before menses) for menstrual problems and corrects menstrual cycle (not for pregnant women). Root juice is used as eye drops in case of eye diseases.

Etymology: Nagadamana (snake taming) and Nagini (serpent) are due to its use in synonymous with Ruta chalepensis.

Note: Plant juice is used to give shining to cloths. Plant extract is known for its vermifuge, expectorant and purgative properties. Sanseverine is the active component. It is used in the preparation of Sudarsana churna and Yogaraja guggulu (Dey, 1994; Jain et al., 1991). It is often used in synonymous with Ruta chalepensis.
761. *Santalum album* L. (Plate 128 F)

Family: Santalaceae

Vernacular Name: San: Candana, Candanah, Srigandha, Svetacandana
Eng: Sandal tree, White sandal tree
Kan: Srigandha, Gandhada mara
Mal: Chandanam
Tulu: Gandho, Gandhotha maro

Habit: Small tree.

Habitat: Lateritic hills and forests.

Status: Frequent.


Uses: Heart wood paste is applied all over the body of children suffering from fever and is taken internally for skin diseases, diarrhoea, hyperacidity and dysentery. Heart wood extract with tender coconut water is used as a blood purifier for urinary tract infections, gastritis, skin diseases and burning sensation in the body. *Heart wood extract with milk is consumed for inducing urination, protein discharge through urine, leucorrhoea and burning sensation during urination.  Heart wood paste is applied for burning sensation in the body, urticaria, rashes; it relieves thirst, headache and biliousness.  Heart wood extract in rice washed water is given to arrest vomiting and diarrhoea.  Heart wood extract with tender coconut water is taken for allergies and urticaria.  Heart wood and pearl shell paste is applied for pus release from furuncles and infectious swellings (pus gets released within two minutes).  Paste of its heart wood and that of *Pterocarpus santalinus* in tender coconut husk juice is applied for rashes and swellings.  Heart wood extract with tender coconut water is given to drink in case of herpes, urticaria, rashes and allergy.  Heart wood paste boiled with one glass each of milk and water is taken with one
spoon sugar at night for a week in case of over menstrual bleeding in ladies. Heart wood extract is a cooling agent and increases phlem. *Heart wood powder mixed with honey is recommended to arrest over urination. *One spoon heart wood extract in rice washed water is given for stomachache in children. *Heart wood paste with very tender coconut in rice washed water is applied to the body of newborn baby before bathing with *Cynodon dactylon* decoction (performed up to the 10th day). *Heart wood, *Hedyotis corymbosa*, *Cyperus rotundus* rhizome, *Coleus vettiveroides* root, *Zingiber officinale* rhizome and *Vetiveria zizanioides* root decoction is used for fever in children. Heart wood extract in tender coconut water is recommended for burning urination and indigestion. *Paste of heart wood, red sandalwood, deer horn powder (in equal quantity) is applied on the head (after the application of old ghee) for 12 days in case of sleeplessness. *Sandalwood decoction with milk is consumed for viper bite. *Heart wood extract with rice washed water is used with sugar and honey for dysentery. Heart wood paste is applied over the stomach for burning sensation in the stomach. *Paste of its heart wood and that of *Pterocarpus santalinus* is taken for constipation in children. *Heart wood paste with *Acorus calamus* rhizome is applied for itchy tinea versicolor. *Heart wood ground with borax in lime juice is applied for tinea versicolor. Tender coconut water in which its heart wood paste soaked overnight is consumed on the next morning for sleeplessness. *Sandalwood and red sandalwood paste is applied (after heating) over the forehead for headache in children.

Etymology: Srigandha (auspicious sweet scented plant), Svetacandana (white sandalwood), Gandhada mara and Gandhotha maro (sweet scented tree) are due to its much use in religious rituals, whitish heartwood and sweet fragrance.

Note: Heartwood paste is applied all over the body of persons taking part in various religious rituals. It is an integral part of religious ceremonies. It is used in the preparation of *Asokarista, Candanasava, Anu taila, Dhanvantara kashaya, Kalyanaka ghṛta, Candanadi churna, Chandanadi vati, Sudarsana churna, Pippalasava, Ayaskrti, Marma gutika, Candanadi taila* and *Asvagandhadyarista*. Santalol, α-santalol, β-santalol, santanone, santalone and β-sitosterol are the active
components (Dey, 1994; Kapoor, 1990; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

762. **Sapindus emarginatus** Vahl. (Plate 129 A)

Syn: *Sapindus trifoliata* sensu Hiern in Hook. f.

Family: Sapindaceae

Vernacular Name: San: Arishta, Aristaphala
   Eng: Soap nut tree
   Kan: Antuvala, Antavala
   Mal: Soppinkaimaram, Soppinkaaya
   Tulu: Nurekkayi

Habit: Small tree.

Habitat: Plains.

Status: Occasional.


Uses: Same as *Sapindus trifoliatus*.

Etymology: Arishta (misfortune), Soppinkaaya (soap nut) and Nurekkayi (froth fruit) arose as this plant is believed to ward off the misfortune, use of fruits as detergent and characteristic froth formation when fruits are crushed in water.

Note: Fruits are used as detergent.

763. **Sapindus trifoliatus** L. (Plate 129 B)

Syn: *Sapindus laurifolius* Vahl.

Family: Sapindaceae

893
Vernacular Name: San: Arishta, Aristaphala  
Eng: Soap nut tree  
Kan: Antuvala, Antavala  
Mal: Soppinkaimaram, Soppinkaaya  
Tulu: Nurekkayi

Habit: Medium-sized tree.

Habitat: Plains.

Status: Common.


Uses: *Fruit, *Acacia sinuata bark powder and *Albizia chinensis bark powder paste is applied for skin diseases. *Fruit extract is given to drink to remove poison through vomiting during the treatment of poisonous bites. Mucilage from the fruits is used to clean wounds and skin. *3 – 4 drops of fruit extract is poured into the nose in case of hysteria and epilepsy. *Fruit rind decoction is used for lung diseases while its extract is applied externally for wounds. *Seed is chewed for fits. *Fruit powder mixed with jaggery is taken to expel intestinal worms. *Juice of 2 – 3 fruits is consumed with hot water for asthma and bronchitis. Fruit juice is recommended internally for stomachache. Bark decoction is used to wash cuts and wounds. *Fruit juice is poured into the nose for 1 – 3 days in case of asthma and bronchitis. *Foam of fruit crushed in water is applied on the centre of head, navel and feet for stomachache. *Fruit paste is applied over the navel to expel intestinal worms. *Fruit soaked water is used as shampoo or soap to wash the body which prevents skin diseases and helps for proper growth of hair.

Etymology: Arishta (misfortune), Soppinkaaya (soap nut) and Nurekkayi (froth fruit) arose as this plant is believed to ward off the misfortune, use of fruits as detergent and characteristic froth formation when fruits are crushed in water.
Note: Fruit extract is used as a nematicide in banana plantations. Fruits are used as detergent. Fruits are credited with hypotensive activity (Chaudhri, 1996).

**764. Sapium insigne** (Royle) Benth. (Plate 129 C)

Syn: *Falconeria insignis* Royle.; *Falconeria malabarica* Wight

Family: Euphorbiaceae

Vernacular Name: San: Mukulaka
Kan: Kurudanandi, Kanapade
Mal: Kannampotti
Tulu: Kanappatti, Kannampatti

Habit: Small tree.

Habitat: Laterite hills.

Status: Common. Poisonous.

Description: Small deciduous tree, with corky, deeply fissured bark. Leaves simple, crowded at the ends of the branches, elliptic-ovate; petioles biglandular below apex. Flowers dioecious or monoecious, greenish, appearing in leafless tree, in simple terminal erect spikes; male in rounded clusters; female solitary. Perianth 3-lobed. Stamens 2. Fruit globose, fleshy drupe.

Uses: Latex is applied for whitlow and hardened tumours (application should be very careful). *Purified bark cooked along with rice is recommended for venereal diseases, scabies and ulcers due to hair fall in dogs (purification is by cooking it in water / coconut water / milk). *Very small leaf heated in coconut oil is applied as a germicide for septic wounds, urticaria and allergy (for one or two days). *Leaf or bark paste with butter is applied for rabid dog bite.

Etymology: Kannampotti, Kanappatti and Kannampatti (one which cause blindness) arose from its highly toxic latex which can cause blindness if comes in contact with the eyes.
Note: Both *Excoecaria agallocha* and *Sapium insigne* are having similar toxic
effects and hence both are known as Kannampotti. Wood is used as firewood for the
traditional spirit worship.

765. *Saraca asoca* (Roxb.) de Wilde (Plate 129 D)

Syn: *Saraca indica* sensu Bedd.

Family: Caesalpiniaceae

Vernacular Name: San: Ashoka, Hemapushpa
Eng: Asoka tree
Kan: Ashoka
Mal: Ashokam
Tulu: Asoka, Ashoka

Habit: Small tree.

Habitat: Grown in gardens.

Status: Frequent.

Description: Small evergreen tree. Leaves paripinnate; leaflets oblong-lanceolate,
glabrous, red-coloured when young. Flowers in axillary or terminal compact
corymbose panicles, sometimes from the old wood; bracteoles erect, embracing the
calyx-tube. Calyx yellow, turning to orange and finally to red; tube cylindric; lobes
4, ovate. Petals absent. Stamens 7 – 8, much exerted. Fruit compressed pod, tapering
at the ends.

Uses: Bark decoction is used for DUB, menstrual problems, dysentery, diarrhoea
and as a blood purifier. *Leaf decoction is also used as a blood purifier. *Leaf juice
mixed with cumin seed extract is consumed for stomachache. Bark decoction is
taken internally for leucorrhoea, ovarian problems and water in arms and legs of the
pregnant women. *Flower paste is used as a face pack. Bark decoction with milk is
taken by adding sugar at night (after food) for menstrual problems in ladies. *Its
bark boiled water is reduced after adding milk and given by adding sugarcandy for 6
days from the 4th day of menses (for three cycles) in case of any menstrual disorders. *Paste of its flower and leaf (vein removed) boiled in coconut oil (until becomes black) is applied for scabies and itches in children. Bark decoction is given with milk, sugarcandy and cumin seeds twice a day for four days in case of menstrual problems. *Dried flower powder (10 gm) mixed with honey (5 gm) is taken twice a day for itch in scrotum, pain, breathing problems, chest, neck, joint, heart pain and sleeplessness. Bark decoction is consumed by adding one spoon honey for 7 – 14 days in case of leucorrhoea. Bark decoction is recommended internally for conception in cases where conception is failed due to pain during menses and irregular menses.

Etymology: Ashoka and Ashokam (without sorrow) arose from its much use for gynecological and infertility problems. Hemapushpa (brownish flowered) is due to its characteristic flowers.

Note: Flowers (stamen removed) are used as vegetable. Petal juice is used as a healthy drink. Fruit is masticated just like arecanut. Flowers are much used for worship. It is used in the preparation of Asoka ghrta and Asokarista. Catechin, hematoxyline, ketosterol and saponin are the active constituents (Kapoor, 1990; Sivarajan & Balachandran, 1996).

766. Sarcostemma viminale (L.) R. Br. (Plate 129 E)

Syn: Sarcostemma acidum (Roxb.) Voigt.; Sarcostemma brevistigma Wight & Arn.

Family: Asclepiadaceae

Vernacular Name: San: Somalata, Somavalli
  Eng: Moon creeper, Moon plant
  Kan: Somalathe, Konanahambu
  Mal: Somavalli, Somalatha
  Tulu: Somavalli

Habit: Straggling shrub.

Habitat: Along bushes in higher hills, also grown in gardens.
Status: Occasional.

Description: Straggling leafless shrub; stem succulent, terete, jointed. Flowers greenish-white, in terminal or axillary sessile umbels. Calyx 5-lobed. Petals 5, ovate. Pollinia 5; outer corona 10-lobed, wavy; inner 5-lobed, fleshy. Fruit smooth, lanceolate follicles.

Uses: Plant juice is recommended for phlegm, asthma and bronchitis. It is a tonic. *Liquor prepared from the plant juice is taken for bronchial asthma. *Plant paste is applied for rabid dog bite. Dried plant powder is used for asthma.

Etymology: Somalata, Somavalli, Somalathe (Soma* climber) and Konanahambu (male buffalo vine) are due to the belief that Soma* is obtained from this plant and resemblance of its fruits with the horn of male buffalo.

Note: Stem juice is used to kill termites. Much used in religious rituals.

767. *Sarcostigma kleinii* Wight & Arn. (Plate 129 F)

Family: Icacinaceae

Vernacular Name: San: Ingudi
Mal: Erumathali, Odal, Vellodal
Tulu: Ingudi ballu

Habit: Woody climber.

Habitat: Semi evergreen forests and sacred groves.

Status: Common.


Uses: *Oil extracted from the seed is applied externally for nervine spasm, vitiated wounds, ulcers, leprosy, erysipelas, rashes and other skin diseases.
Etymology: Vellodal (white *Gnetum*) arose due to its whitish bark resembling that of *Gnetum*.

Note: Oil extracted from the seeds is used as illuminant.

768. *Sauropus androgyinus* (L.) Merr. (Plate 130 A)

Syn: *Sauropus albicans* Blume.; *Sauropus indicus* Wight.

Family: Euphorbiaceae

Vernacular Name: Eng: Chikurmanis, Sauropus
    Kan: Chakramuni soppu, Vitamin soppu
    Mal: Elakkera
    Tulu: Vitamin chappu

Habit: Erect shrub.

Habitat: Grown in gardens.

Status: Frequent.

Description: Erect shrub. Leaves simple, ovate-lanceolate or elliptic to lanceolate, glaucous beneath. Flowers greenish-red, in axillary fascicles or solitary; pedicels capillary. Perianth 6-lobed; in male disciform; in female accrescent. Stamens 3. Fruit globose capsule, white or pinkish when ripe.

Uses: *Tambuli* prepared from tender shoot is useful for mouth ulcers and it acts as a blood purifier. *Tambuli* prepared using its tender shoot tip, which of *Solanum americanum*, *Centella asiatica* and *Syzygium caryophyllatum* is used for thrush in tongue. *Leaf powder dissolved in butter milk is consumed for gastric ulcers. *Root, seeds of *Cucumis melo* and cardamom decoction is used for urine block, bladder infection and urinary infections. *Leaf, washed rice and onion paste with coconut water is applied externally and extract is taken internally for heel cracks. *Root decoction is recommended for fever. *Leaf is used as beedi for swelling inside the body and throat swelling.
Etymology: Vitamin soppu, Vitamin chappu (vitamin leaf) and Elakkera (leafy amaranth) are the clear indicators of its palatability and nutritious nature.

Note: It has properties similar to that of *Basella alba* and is known as multi vitamin grain. Tender shoot is used as vegetable.

**769. Scaevola sericea** G. Forst. ex Vahl. (Plate 130 B)

Syn: *Scaevola taccada* (Gaertn.) Roxb.; *Scaevola frutescens* (Mill.) Krause

Family: Goodeniaceae

Vernacular Name: San: Bhadraksha

Eng: Beach plum, Beach grape, Fan flower

Kan: Bhadrakshi

Mal: Bhadraksham, Vellamodakam

Tulu: Bhadrakshi

Habit: Large shrub.

Habitat: Along sea shore.

Status: Common.

Description: Large bushy shrub, with greenish, stout branches. Leaves simple, obovate, gradually narrowed to the base, glabrous; petioles with a tuft of white hair in leaf axils. Flowers in axillary cymes. Calyx pubescent; lobes 5, linear-lanceolate, persistent. Corolla white; tube curved, hairy within; lobes 5, spreading. Stamens 5. Fruit ovoid or subglobose drupe, white or purplish when ripe.

Uses: Same as *Elaeocarpus ganitrus*.

Etymology: Bhadraksha and Bhadrakshi (prosperous eyes) are due to its fruits which resemble eye balls and much use as an adulterant for *Elaeocarpus ganitrus*.

Note: It is used as an adulterant for *Elaeocarpus ganitrus*.

**770. Schleichera oleosa** (Lour.) Oken (Plate 130 C)

Syn: *Schleichera trijuga* Willd.

Family: Sapindaceae
Vernacular Name: San: Kosamra, Ksudramra, Laksavrksa, Raktamrah
Eng: Ceylon oak, Lac tree, Macassar oil tree
Kan: Kendale, Sagade, Takote mara
Mal: Poovam, Puvam
Tulu: Chakate

Habit: Large tree.

Habitat: Moist deciduous forests.

Status: Common.


Uses: *The gummy secretion of the stem is used as a blood purifier and also for healing the broken bones. Bark decoction is recommended for fever, malaria, skin diseases and rheumatism. Bark paste is applied for skin diseases and rheumatism. *Oil extracted from the seeds is useful for pain, swellings and rheumatism. *Bark decoction is used both externally and internally for rheumatism. *Bark paste or oil extracted from it is applied for elephantiasis.

Etymology: Ksudramra (inferior mango), Raktamrah (red mango) and Laksavrksa (lac tree) are due to its resemblance with mango tree, reddish coloured wood and secretion of the gum resin (lac).

Note: It is a tough timber. This tree is the dwelling place of owls.

771. *Scleria lithosperma* (L.) Sw. (Plate 130 D)

Syn: *Scirpus lithosperma* L.

Family: Cyperaceae

Vernacular Name: Kan: Balu hullu
Mal: Nakkapullu
Tulu: Balupanthi
Habit: Perennial herb.

Habitat: Moist shady places as forest undergrowth.

Status: Common.

Description: Perennial herb with woody, nodulose rhizome. Stem slender, triquetrous. Leaves distichous; sheaths hairy. Panicle slender with distant spikate branches. Spikelets in clusters, ferruginous, unisexual or bisexual. Glumes broadly ovate. Stamens 1 – 3. Fruit ovoid, obtusely trigonous, white, shining nut, with a brown glandular patch at the base of each face.

Uses: *Rhizome decoction is recommended for urinary tract infections. *Whole plant and cumin seeds paste is applied over the forehead for depression seen on the forehead of young children (breast milk is applied after half an hour of application).

Etymology: Balu hullu and Balupanthi (sword grass) is due to the sharp margins of its leaves.

Note: Much used for children’s diseases.

772. Scleropyrum pentandrum (Dennst.) Mabb. (Plate 130 E)

Syn: Scleropyrum wallichianum (Wight & Arn.) Arn.

Family: Santalaceae

Vernacular Name: Kan: Benduga, Naaikkuli
    Mal: Irumulli
    Tulu: Naaikkuli

Habit: Small tree.

Habitat: Laterite plains.

Status: Common.

Description: Small tree, armed with sharp spines. Leaves simple, elliptic-lanceolate or ovate, coriaceous. Flowers small, reddish, polygamous, in short, clustered catkin-
like spikes at the leafless nodes of the branchlets. Perianth-tube of male flowers solid; lobes 5, with a tuft of hairs behind the stamens. Stamens 5. Fruit large, pyriform, brown, stalked drupe.

Uses: *Paste of leaf fried in coconut oil is applied for dog bites. Oil extracted from the seeds is applied for dog bite, pain, ulcers, burns, poisonous bites and septic wounds. *Decoction (similar to coffee) prepared from its seed powder is taken for bodily weakness. Bark or fruit paste is applied externally for cut and wounds. *Bark, turmeric and ginger powder mixed with honey is consumed for asthma. Bark paste is applied for abscess and poisonous bites. *Shoot tip paste is applied over the head followed by cold water dhara* for rabies. *Shoot tip, Moringa pterygosperma bark and fresh turmeric paste is applied for dog bite.

Etymology: Naaikkuli (dog tooth) is due to its therapeutic efficacy against dog bite.

Note: Much valued drug for dog bite.

773. Scoparia dulcis L. (Plate 130 F)

Family: Scrophulariaceae

Vernacular Name: Eng: Sweet broom weed
               Kan: Manithumbe
               Mal: Kallurukki
               Tulu: Kallurukki

Habit: Small herb.

Habitat: Along wastelands.

Status: Common. Exotic and weed.

Description: Small herb, with angled stem. Leaves simple, in whorls of 3, elliptic- obovate or oblanceolate. Flowers solitary, axillary. Calyx deeply 4-partite. Corolla rotate, subregular, white; lobes 4, reflexed with age; throat densely bearded with white hairs. Stamens 4. Fruit subglobose capsule.
Uses: Whole plant decoction is recommended for fever and burning during urination. Whole plant juice is used of kidney and bladder stones. *Whole plant juice is applied externally for scabies. *Whole plant, *Hyoscyamus niger* seeds and turmeric powder decoction is taken for urinary disorders, fever, liver problems and phlegm. Plant extract is consumed for biliousness. Whole plant extract with cumin seeds is used for gas trouble, indigestion, stomachache, headache, gastritis and vomiting due to indigestion. Plant extract is recommended for anaemia, diabetes, diabetic retinopathy, asthma, cough and liver problems. *Whole plant decoction is consumed twice a day by adding sugar for 6 – 12 days in case of repeated fever attack in children. *Whole plant and *Tribulus terrestris* seeds (4:1) decoction is used twice a day (75 ml) for urinary tract infections and kidney stone.

Etymology: Manithumbe (bell *Leucas*) and Kallurukki (destroyer of stones) are due to its habit resembling *Leucas*, bell-like fruits and therapeutic efficacy against renal calculi.

Note: Much valued drug for renal calculi.

**774. Sebastiana chamaelea** (L.) Muell.-Arg. (Plate 131 A)

Syn: *Microstachys chamaelea* (L.) Muell.-Arg.

Family: Euphorbiaceae

Vernacular Name: Kan: Nelaharalu

Mal: Kodiyanakku, Njetavanakku

Tulu: Nelaparalu

Habit: Erect herb.

Habitat: Along wastelands.

Status: Common. Weed.

Description: Annual herb with grooved branches. Leaves simple, linear-oblong, glabrous. Flowers minute, monoecious, in axillary or leaf-opposed racemes. Perianth
5-lobed in male, 3-lobed in female. Stamens 2 – 4. Fruit subglobose-oblong, 3-lobed capsule, with 2 rows of reddish warty outgrowths on each coccus.

Uses: *Oil prepared using plant juice is applied on the head for getting relief from typhoid and other fever. It is also used for cold and cough.

Etymology: Nelaharalu and Nelaparalu (ground castor) are due to its herbaceous nature and resemblance of fruits with that of castor.

Note: Much used for fever and ENT problems.

775. *Seidenfia rheedei* (Sw.) Szlach (Plate 131 B)

Syn: *Malaxis rheedei* Sw.

Family: Orchidaceae

Vernacular Name:  
San: Jeevaka  
Kan: Jeevaka  
Mal: Jeevakam, Pachilaperumal  
Tulu: Jeevako

Habit: Terrestrial herb.

Habitat: Shady places.

Status: Frequent.

Description: Terrestrial herb with erect stem. Leaves 3 – 5, broad, membranous, plicate, ovate or lanceolate, green-purple, margins wavy. Flowers greenish-yellow to purple, in terminal racemes; bracts reflexed. Sepals 3; dorsal sepal linear-oblong; lateral sepals obliquely oblong, deflexed. Petals 3, lanceolate; lip semi-circular, pectinate. Pollinia 4. Fruit pyriform capsule.

Uses: *Tuber decoction is recommended with milk for fever, burning sensation, nerveine disorders, piles, blood disorders and bile diseases. It is also used for increasing sexual power, conception and to increase lactation*
Etymology: Jeevaka, Jeevakam and Jeevako (living or life giving) are due to its tonic action.

Note: Plant is much used as a general health tonic.

776. *Selaginella delicatula* (Desv.) Alston. (Plate 131 C)

Family: Selaginellaceae

Vernacular Name: Kan: Keramane gida, Sone gida

Tulu: Peratthane dai, Sone panthi

Habit: Suberect herb.

Habitat: Shady places and moist walls.

Status: Common.

Description: Suberect to scandent delicate herb; stem apices become black when dry. Leaves minute, dimorphous; dorsal leaves ovate to narrowly ovate, strongly oblique at base, strongly curved in outline; lateral leaves spreading outward, entire, with white margins. Strobili tetragonous.

Uses: *Leaf or twig extract with milk is used as a blood purifier, general tonic and to increase intellect. *Aerial part (ground) mixed with coconut oil is applied for dry skin, cracks in skin, dandruff and itches. *Stem, leaf, wheat and cumin seeds ground in rice washed water is taken for blood discharge through urine in calves. *Plant decoction is recommended for dysentery, skin diseases, urinary, menstrual problems, fever and bone ache.

Etymology: Keramane gida, Peratthane dai (coconut scrapper plant), Sone gida and Sone panthi (plant of the month *Sona*°) are due to its characteristic habit and use in religious rituals during the month of *Sona*°.

Note: Shoot tip is used for *Hostilu pooja*° during the month of *Sona*°. Plant is used in the preparation of nail polishes.

777. *Selaginella involvens* (Sw.) Spreng. (Plate 131 D)
Family: Selaginellaceae

Vernacular Name: Kan: Garudappacche
Mal: Garudappaccha
Tulu: Garudappacche

Habit: Erect herb.

Habitat: Grown in gardens.

Status: Occasional.

Description: Erect herb; stem covered with adpressed leaves. Leaves monomorphic, acuminate, equilateral, directed upwards, green. Strobili tetragonous.

Uses: Dried plant extract with milk is used both externally and internally for poisonous bites.

Etymology: Garudappacche and Garudappaccha (eagle green herb) are due to its evergreen nature and much use for poisonous bites.

Note: On soaking in milk, the dried plant becomes fresh.

778. *Semecarpus anacardium* L. f. (Plate 131 E)

Family: Anacardiaceae

Vernacular Name: San: Agnimukha, Bhallataka, Mahatikshna
Eng: Marking nut tree, Oriental cashew
Kan: Goddugeru, Guddada geru
Mal: Alakkucheru, Cheru, Cherumaram
Tulu: Kerukaayi, Gerkaayi

Habit: Medium-sized tree.

Habitat: Along hill slopes of higher elevation.

Status: Occasional. Poisonous.

Uses: Seed coat oil is applied for leprosy. *Fruit juice is recommended for piles and digestive problems. Seed oil or fruit lehyam* is taken for skin diseases. Purified seed coat oil is applied for alopecia totalis, ankle twist, sprains, corns and rheumatism. Bark decoction is used internally and also applied externally for gonorrhoea and syphilis. *Seed coat oil mixed with milk is given to expel worms (it should be used only after purification, strict fasting is necessary during the treatment and bath should be with *Nalpamara* decoction). *Acrid juice of this tree is applied for warts. *Resin from seed coat is applied with cotton for cracks in heels, fungal infections between fingers and ulcers. *Oil prepared by heating seed powder, *Eclipta prostrata* leaf juice and gingelly oil is applied for hair fall due to worm infestation. *Seed and *Terminalia chebula* fruit rind powder mixed with jaggery is taken twice a day for blood in stool and burning sensation in the body. *One seed kernel cooked with half litre milk and two litre water is given by adding sugar once a day for three days to expel intestinal worms. *Fruit paste is applied externally for thick itchy black marks on the skin.

Etymology: Agnimukha (fury mouth), Mahatikshna (very hot) and Guddada geru (cashew nut of hills) are due to its morphological resemblance with cashew nut tree, restriction to high ranges and highly toxic nature.

Note: Dried fruit preserved in jaggery decoction is used as tasty food. It is purified by boiling then washing in lime water and cow urine. It is used in the preparation of *Guggulutiktaka ghrta, Nimbamrtasava, Narasimha rasayana, Varanadi kashaya, Bhallataka taila, Sanjivani vati, Bhallataka rasayana, Bhallatakadi modaka* and *Amrta bhallataka lehya*. It has cardol, catechol, anacardol, semecarpol and bhilawanol as active constituents (Dey, 1994; Kapoor, 1990; Sharma *et al.*, 1998; Sivarajan & Balachandran, 1996).
**Senna alata** (L.) Roxb.  (Plate 131 F)

Syn: *Cassia alata* L.

Family: Caesalpiniaceae

Vernacular Name: San: Dadrugna

   Eng: Ringworm Senna, Candle bush, Carrion crow bush  
   Kan: Dodda tagache  
   Mal: Malamthakara, Puzhukkadithakara  
   Tulu: Anethajanku, Purithappu

Habit: Large shrub.

Habitat: Grown in gardens, also runs wild.

Status: Common. Exotic.

Description: Large shrub. Leaves paripinnate; leaflets oblong; stipules deltoid, auriculate at base. Flowers in terminal or axillary spicate racemes; bracts petaloid, yellow or orange, ovate-elliptic, caducous. Sepals 5, orange-coloured. Petals 5, yellow or yellow-orange. Stamens 10. Fruit linear, septate, many-seeded pod, with longitudinally winged valves.

Uses: Leaf paste is applied for boils, swellings, warts and ulcers in cattle. Leaf paste with turmeric is applied for allergic swellings, skin diseases and ulcers due to isolated hair fall in cattle. Leaf paste is applied for ringworm and marks of herpes as well as eczema. *Leaf juice mixed with lime juice is applied for ringworm, scabies with itch and insect bites. Leaf decoction is used as a laxative in case of constipation. Leaf or plant juice is applied for urticaria, rashes, itchies, allergies and scabies. *Leaf juice boiled with coconut oil is applied externally for boils, blisters and scabies. Leaf paste with salt is applied for ringworm. *Bark paste is applied for ringworm in dogs. *Leaf juice mixed with fresh turmeric paste is applied for ulcers due to hair fall in dogs. *Paste of two handful leaves with 2 tsp salt is applied for 5 – 6 days in case of skin diseases. *Leaf, *Curcuma longa* leaf, turmeric and lime paste is applied for water oozing skin diseases, warts and poisonous bites. Seed or leaf
decoction is wormicidal. *Leaf ground with lime juice is mixed with coconut oil and is applied for itchy tinea versicolor. Plant or leaf juice is applied for ulcers due to hair fall in cattle.

Etymology: Dadrughna (leprosy or herpes killer), Dodda tagache (larger *Senna*), Anethajanku (elephant *Senna*) and Purithappu (worm leaf) are due to its larger habit, wormicidal activity and much use for a variety of skin diseases.

Note: Tender shoot is used as vegetable. Much valued drug for skin diseases.

780. *Senna angustifolia* M. Vahl. (Plate 132 A)

Syn: *Senna alexandrina* Mill.; *Cassia senna* L.; *Cassia angustifolia* Vahl.

Family: Caesalpiniaceae

Vernacular Name: San: Svarnapatri

    Eng: Alexandrian Senna, Tinnevelly Senna
    Kan: Nelavarike, Sonamukhi
    Mal: Chonnamukki
    Tulu: Sonamakki

Habit: Small shrub.

Habitat: Grown in gardens.

Status: Occasional.


Uses: *Dried leaf extract is used as a purgative for jaundice and piles. Cooked leaf or whole plant decoction is recommended for constipation. Plant extract is used as a laxative. *Whole plant, impure sodium chloride and *Anethum graveolens* seed
powder dissolved in hot water is consumed at bed time for constipation. *Leaf, leaves of *Syzygium cumini, *Syzygium caryophyllatum and *Salacia chinensis root (in equal quantity) decoction is used for diabetes.

Etymology: Svarnapatri (golden leaved), Sonamukhi (golden coloured) and Nelavarike (ground *Senna) are due to its smaller habit and yellowish plant body.

Note: It is used in the preparation of *Satsakara churna, *Yastyadi churna, *Panchasakara churna and *Sarivadyasava. It has kaempferin, anthraquinone, kaempferol, isorhamnetin, rhein, emodin, sennoside A & B are the active components (Dey, 1994; Sharma *et al.*, 1998).

781. *Senna auriculata* (L.) Roxb. (Plate 132 B)

Syn: *Cassia auriculata* L.

Family: Caesalpiniaceae

Vernacular Name: San: Avartaki, Pitapushpa

Eng: Tanner’s Cassia, Tanner’s Senna

Kan: Avarike, Olle thangadi, Honnavarike

Mal: Aviram, Ponnavara

Tulu: Ponnavarike

Habit: Shrub.

Habitat: Grown in gardens.

Status: Occasional.

Description: Shrub with tomentose branchlets. Leaves paripinnate; leaflets obovate, puberulous below; glands opposite to all leaflets; stipules foliaceous, persistent. Flowers golden yellow, in axillary and terminal corymbose racemes. Sepals 5, ovate. Petals 5, ovate-orbicular. Stamens 10, upper 3 staminodes. Fruit flat, brown, shining pod.
Uses: Leaves are chewed for diabetes. *Seed powder mixed with coconut oil is applied for conjunctivitis and burning sensation in eyes. Root is used as tooth brush. Bark decoction is recommended for diabetes, constipation and urinary diseases. *Bark, leaves of *Aegle marmelos* and *Syzygium cumini* decoction or their powder in hot water is consumed for 12 / 24 / 48 days in case of diabetes.

Etymology: Pitapushpa (yellow flowered), Olle thangadi (auspicious *Senna*), Honnavarike and Ponnavarike (with golden covering) are due to its golden yellow flowers.

Note: Much used for diabetes.

**782. *Senna hirsuta* (L.) Irwin & Barneby** *(Plate 132 C)*

Syn: *Cassia hirsuta* L.

Family: Caesalpiniaceae

Vernacular Name: Kan: Adavi thangadi  
Tulu: Kattu thajanku

Habit: Undershrub.

Habitat: Wastelands.

Status: Frequent. Exotic and weed.

Description: Tomentose undershrub, with grooved branches. Leaves paripinnate, with a gland just above the base of the petiole; leaflets ovate-lanceolate, hirsute; stipules linear. Flowers in pairs in the leaf-axils and in terminal corymbose racemes; bracts lanceolate. Sepals 5, hirsute at base. Petals 5, yellow. Stamens 6 – 7. Fruit linear, curved, densely hirsute pod.

Uses: *Leaf paste is applied for allergic skin diseases while its decoction is used internally for urinary disorders. *Gargle with its bark decoction is useful for toothache.
Etymology: Adavi thangadi and Kattu thajanku (wild Senna) are due to its close affinity with Senna and weedy nature.

Note: Occasionally used as a substitute for Senna surattensis.

783. Senna occidentalis (L.) Link (Plate 132 D)

Syn: Cassia occidentalis L.

Family: Caesalpiniaceae

Vernacular Name: San: Kasamardah, Kasamardakah
Eng: Coffee-Senna, Fetid Senna, Septic weed
Kan: Elehuri gida, Dodda thagache
Mal: Karinthakara, Mallanthakara
Tulu: Malla thajanku, Ane thajanku

Habit: Undershrub.

Habitat: Wastelands.

Status: Common. Exotic and weed.

Description: Erect undershrub, with glabrous branches. Leaves paripinnate, with a gland just above the base of the petiole; leaflets elliptic-ovate; stipules linear-lanceolate. Flowers in few-flowered racemes, forming a terminal panicle. Sepals 5. Petals 5, orange-yellow. Stamens 9 or 10. Fruit linear, compressed, slightly upcurved pod.

Uses: Leaf decoction is used as a laxative. *Root decoction has diuretic property, used for gastro intestinal tract disorders, cough and swellings. Leaf paste is applied for ringworm and scabies. *Heated leaf is pasted over itches, septic ulcers and wounds. *Root paste with lime juice is applied for psoriasis and other skin diseases.

Etymology: Kasamardah (cough medicine), Dodda thagache, Malla thajanku (larger Senna) and Ane thajanku (elephant Senna) are due to its therapeutic efficacy, larger habit and close affinity with Senna.

Note: It is used in the preparation of Surasadi taila (Sivarajan & Balachandran, 1996). It is sued in synonymous with Senna sophera.
784. *Senna siamea* (Lam.) Irwin & Barneby *(Plate 132 E)*

Syn: *Cassia siamea* Lam.

Family: Caesalpiniaceae

Vernacular Name: Eng: Iron wood tree, Siamese Senna  
Kan: Avarike, Seeme thangadi  
Mal: Manjakonna  
Tulu: Seeme thajanku

Habit: Small tree.

Habitat: Planted in parks and along roadsides.

Status: Common.


Uses: *Bark decoction is recommended for diabetes.

Etymology: Seeme thangadi and Seeme thajanku (boundary *Senna*) arose as this plant is usually planted on the sides of roads and parks to mark the boundary.

Note: Usually planted as ornamental tree.

785. *Senna sophera* (L.) Roxb. *(Plate 132 F)*

Syn: *Cassia sophera* L.

Family: Caesalpiniaceae

Vernacular Name: San: Kasamarda, Kasamardaka  
Eng: Senna sophera  
Kan: Elehuri, Elavarige  
Mal: Ponnamthakara, Ponnaviram  
Tulu: Elavadiga
Habit: Erect undershrub.

Habitat: Grown in gardens.

Status: Common. Exotic.

Description: Erect undershrub, with subglabrous branches. Leaves paripinnate; petiole with a globular gland; leaflets oblong-lanceolate; stipules ovate, caducous. Flowers in axillary or terminal corymbose racemes. Sepals 5, ovate. Petals 5, yellow. Stamens 10, unequal. Fruit compressed, oblong, many-seeded pod.

Uses: Whole plant decoction is used as a blood purifier, cooling agent and appetizer. Root paste is applied for urticaria. *Root decoction and plant tambuli* are recommended to overcome the measles and chickenpox. *Leaf and root bark paste is applied for herpes, ringworm and eczema*. *Leaf paste is taken with sugar for jaundice and is applied externally for herpes*. Leaf decoction is taken for fever and body pain. *Leaf extract mixed with sugar is consumed for jaundice*. *Plant paste mixed with honey is applied over the ulcers and bruises*. Whole plant decoction is recommended for asthma, skin diseases, over urination and allergic asthma. *Bark decoction or seed powder mixed with honey is consumed for over urination*. Root decoction is used for eczema, erysipelas, giddiness, fever and allergies. *Root extract (by boiling 20 gm root in three cup of water) is consumed at early morning in empty stomach for allergic swellings, itches and scabies*. Tender shoot extract is recommended for skin diseases, cough and to expel phlegm. *Root extract is given with sugar at morning in empty stomach for 3 – 6 days and leaf paste is applied externally for allergic swellings, itches and scabies*. *Root ground in ripe coconut water is mixed with ghee or honey and is taken at night (after food) for breathing difficulty, cough, loss of appetite, fever, skin diseases, poisonous bites, urticaria, urinary problems and night blindness*. *One spoon of root extract with milk is consumed for eczema*. *Leaf and rock salt (in equal quantity) are ground and given with butter milk (once a day) for amoebiasis*. *A little extract of its root with that of Aegle marmelos and lime juice is recommended once a day for watery discharge in pregnant women*. *Tender shoot tip ground with buttermilk is used internally for oedema due to anaemia*. *Tambuli* prepared by grinding fried leaves with pepper,
coriander and coconut gratings is eaten with rice for stomach swelling due to gastritis. Root extract with water is used for liver disorders. *Root and Glycyrrhiza glabra rhizome decoction or its root cooked with rice is consumed by adding honey for urticaria and eczema.

Etymology: Elehuri (strong leaf) arose as the leaves are the most officinal part of this plant. Kasamarda (cough medicine) clearly indicates its therapeutic efficacy.

Note: It is used in the preparation of Surasadi taila (Sivarajan & Balachandran). Tender leaves are used as vegetable. Much valued drug for cough and skin diseases.

786. *Senna surattensis* (Burm. f.) Irwin & Barneby (Plate 133 A)

Syn: Cassia surattensis Burm. f.; Cassia glauca Lam.

Family: Caesalpiniaceae

Vernacular Name: Eng: Glaucous Cassia, Scrambled egg bush
Kan: Adavi thangadi, Bettathagache
Tulu: Kattu thajanku

Habit: Small tree.

Habitat: Wastelands and plains, also planted in gardens.

Status: Occasional.

Description: Small tree with pubescent branchlets. Leaves paripinnate; leaflets oblong-elliptic; rachis with glands opposite to 3 basal pairs of leaflets. Flowers yellow, in axillary corymbose racemes. Sepals 5, unequal. Petals 5, clawed. Stamens 10, all perfect. Fruit flat, compressed, strongly nerved pod.

Uses: *Flower paste is applied for poisonous bites. *Flower extract with milk is used internally during pregnancy for getting a child with good complexion.

Etymology: Adavi thangadi and Kattu thajanku (wild Senna) are due to its wild nature and close affinity with Senna.

Note: Often it is used in synonymous with Senna hirsuta.
**787. Senna tora** (L.) Roxb. (Plate 133 B)

Syn: *Cassia tora* L.

Family: Caesalpiniaceae

Vernacular Name: San: Cakramarda, Cakramardah  
Eng: Fetid Senna, Sickle Senna, Wild Senna  
Kan: Thagache, Thagatthe  
Mal: Thakara, Ponthakara  
Tulu: Thajanku

Habit: Erect herb.

Habitat: Weed in wastelands.

Status: Common. Weed.

Description: Erect annual herb. Leaves paripinnate, with subulate glands between the leaflets of the 2 lower pairs; leaflets obovate, pubescent beneath. Flowers in axillary pairs; bracts linear. Sepals 5, oblong to rounded. Petals 5, yellow. Perfect stamens 6 – 7. Fruit linear, subtetragonal, puberulous pod.

Uses: Leaf paste is applied for erysipelas and eczema. Dishes prepared from this plant are used to normalize gastrointestinal system, as nutritious and detoxifying agents. *Leaf juice mixed with salt is taken for blood dysentery and diarrhoea.*  
*Plant paste with buttermilk is applied for scabies. Leaf decoction is used as a wash for scabies and itches.*  
*Root paste with lime juice is applied for eczema, carbuncles and warts.*  
*Hot leaf paste is applied for carbuncles.*  
*Leaf juice or pounded leaf is applied for bee sting.*  
*Seed paste with buttermilk is applied for ring worm and scabies. Leaf decoction is recommended for fever. Heated leaf is pasted for pus release from furuncles and joint pain. Plant decoction is consumed to expel worms and for rheumatism. It is nutritive, toxin remover and useful for respiratory allergy.*  
*Whole plant or leaf chutney is eaten for biliousness. Plant juice or paste is used as a wound healer and anti cancerous agent. Leaf juice is recommended for cough and phlegm during rainy season. Whole plant decoction is taken for menstrual disorders.*
*Tambuli* prepared from its shoot tips is beneficial for rheumatism, biliousness and skin diseases (it can produce phlegm and is not recommended for children). *Bath with leaf juice is recommended for psoriasis. *Paste prepared by grinding its leaf along with *Acalypha indica* and *Justicia adhatoda* leaves with gingelly oil is applied for skin cracks (during winter). *Seeds, *Psoralea corylifolia* seeds, dried gooseberry, turmeric and sulphur (in equal quantity) ground with buttermilk is applied for tinea versicolor. *Fried seeds ground with buttermilk are applied for scabies, itchy tinea versicolor, scabies and itches.

Etymology: Cakramarda (ringworm medicine) is due to its therapeutic efficacy.

Note: It is used in the preparation of *Maharajaprasarini taila, Yastimadhukadi taila, Nimbadi churna, Kasisadi ghṛta, Maha visagarba taila, Brahanmaricadya taila, Dadrughni vati* and *Sarsapadi taila*. Emodin and anthraquinones are the major constituents (Dey, 1994; Sharma *et al.*, 1998; Sivarajan & Balachandran, 1996). Much used as leafy vegetable.

788. *Sesamum orientale* L. (Plate 133 C)

Syn: *Sesamum indicum* L.

Family: Pedaliaceae

Vernacular Name: San: Tila, Tilah

Eng: Sesame, Gingelly

Kan: Ellu, Kariellu

Mal: Ellu, Karuthellu

Tulu: Enme, Ellu

Habit: Erect herb.

Habitat: Wastelands and along road sides. It is also widely cultivated in paddy fields after the harvest of paddy crop.

Status: Common. Weed.
Description: Erect annual pubescent herb, with obtusely quadrangular and furrowed branches. Leaves variable, lower 3-lobed, 3-partite or palmately compound, puberulous beneath, long-petioled; upper leaves oblong-lanceolate, short-petioled. Flowers solitary, axillary. Calyx 5-partite; lobes oblong-lanceolate. Corolla tubular-ventricose, 2-lipped, white, pink or purplish; lobes 5. Stamens didynamous. Fruit erect, oblong, pubescent capsule.

Uses: *Seeds ground with jaggery are given to eat in case of piles. *Seed extract mixed with jaggery is taken for backache and to normalize menstruation. *Seed decoction is used with honey for anaemia. *Seed powder (30 gm) is taken daily for three months in case of dysmenorrhoea. Seed paste or oil is applied for rheumatism. *50 gm seeds are consumed daily for increasing lactation. *Leaf paste is applied on the scalp to prevent hair fall and for proper growth of hair. Seed paste is applied over the forehead for migraine while internally for toothache and cough. *Seed powder or paste (black variety) is taken for bleeding piles while its paste with milk is applied for rheumatoid arthritis. Leaf poultice is useful for furuncles and swellings. Seed oil is applied for wounds and ulcers. *Paste of seeds (white variety) cooked with milk is applied for rheumatoid arthritis. Seed decoction with milk is recommended for rheumatism, water in legs and to normalize menstruation. Seed extract is taken for leucoderma. *Seed oil mixed with latex of *Calotropis gigantea* and jaggery is applied externally for dog bite. *Gingelly oil mixed with lime is applied for burns. *Seed paste is applied for black heads and over the stomach for urine block. *Gingelly oil mixed with *Ocimum tenuiflorum* leaf juice is consumed internally to expel the dead baby. *Black gingelly seeds are recommended with jaggery to make people strong and thick. Oil extracted from the seeds of black variety is applied for rheumatism and pain. *Fried seed powder is eaten after mixing it with milk and jaggery to remove toxins from the body. *A hot cloth soaked in *Vitex negundo* leaf decoction is pressed after two hours of massage with its seed oil for rheumatoid arthritis. *Oil prepared by mixing its seed oil, *Aloe vera* juice, milk (1:4:1), *Glycyrrhiza glabra* rhizome and *pacche karpura* is applied for insanity. *Seeds mixed with wheat bran and jaggery is used for abdominal spasm. *For the same disease, heated paste of gingelly oil and bee wax (3:1) is applied all over the body.
*Seed (white variety) extract in milk is used with one cup milk in empty stomach at early morning for three days in case of piles. *Seeds, *Ixora coccinea* and *Ricinus communis* leaves cooked in fresh milk are ground and applied on the head for sleeplessness in children. *200 ml seed oil mixed with one litre lime water is used as dhara for burns. *About 10 gm seeds (black variety) ground and given with sugar in goat’s milk for piles. *Seed ground and mixed with butter is also recommended for bleeding piles. *Seeds (black) crushed with old jaggery are eaten to normalize over urine flow. One handful seed mixed with jaggery are eaten or their decoction is taken with jaggery for menstrual disorders. *Seeds, turmeric powder and jaggery (in equal quantity) are ground and given to eat for five days to decrease the quantity of urine in case of over urination. Seed (black) paste is eaten daily morning for strengthening the body. *Paste of seeds boiled with ten crushed pepper seeds is applied over the head for biliousness. *Gingelly oil is applied over the head while hot paste prepared by mixing it with castor oil, bee wax and turmeric powder is applied for cracks in heel. *Gingelly oil mixed with castor oil and clay powder is applied for mastitis in cattle. *Gingelly oil mixed with equal quantity of lime water is poured as dhara for 1 – 2 hours in the case of burns.

Note: It is used in the preparation of *Tiladi gutika, Tiladi lepa, Laghu visagarva taila, Jatiphaladi churna, Narasimha churna, Haridradi lepa, Tiladi yoga, Priyaladi yoga, Sunthyadi churna, Pathyadi gutika, Hingvadi yoga* and *Bhallatakadi modaka*. Sesamin and sesomolin are the major components (Dey, 1994; Kapoor, 1990; Sharma et al., 1998). Seeds yield an edible oil.

789. *Sesbania grandiflora* (L.) Poir. (Plate 133 D)

Syn: *Agati grandiflora* (L.) Desv.

Family: Papilionaceae

Vernacular Name: San: Agati, Agasthya, Dirghaphalaka, Vakrapushpa
Eng: Sesban, Swamp pea
Kan: Agase
Mal: Agathicheera, Agathi
Tulu: Agase, Katthi poo
Habit: Small tree.

Habitat: Grown in gardens.

Status: Occasional. Exotic.

Description: Small soft-wooded tree. Leaves paripinnate; leaflets numerous, oblong, pubescent. Flowers in axillary 2 – 4-flowered racemes. Calyx campanulate, 5-toothed. Corolla sickle-shaped, red, pink or white; petals 5, long clawed. Stamens 9 + 1. Fruit long, tetragonous pod.

Uses: *Bark paste with sugar is applied for small pox. Leaf juice is used as a blood purifier for duodenal and gastric ulcers. *Bark decoction is taken along with sugar for chickenpox, fever, cough and fits. Leaf paste is applied over the head for headache. *Flower juice is poured into the nose in the form of nasya for running nose and anxiety neurosis while it is applied externally for knee and ankle pain. *Seed powder mixed with honey and ghee is recommended for increasing memory and grasping power. Bark decoction is used as a tonic (over dose can cause vomiting). Leaf decoction is consumed for fever and cough. *Flower extract is poured into the eyes in case of vision problems. Leaf paste is applied for itches and scabies. Root paste is applied for poisonous insect bites. Flower and leaf decoction is recommended for biliousness. *Tambuli prepared from its shoot tip is nutritious and tonic. *Leaf cooked with ghee is eaten at morning and noon while flower juice is used as eye drops once in three days for night blindness, vision problems, eye diseases and vomiting due to biliousness. *Petal juice (6 drops) is poured into the nose once in three days for sinusitis, migraine and rhinitis. It is taken internally for breathing problems, biliousness and is a digestive. Bark decoction is recommended for fever, breathing problems, uterine diseases, urinary tract infections, urticaria and skin diseases. *Pod decoction is used for cough, digestive problems and jaundice. *Plant paste is used as a poultice over the chest for convulsion. *Dried fruit powder poultice is given over the chest followed by hot water steam for phlegm. Flower juice is recommended for correcting the vision problems. *Leaf juice heated with coconut oil (4:1) and a little Nigella sativa seeds are applied for cuts.
Etymology: Dirghaphalaka (with long fruits), Vakrapushpa (curved flower) and Katthi poo (sword flower) are due to its long fruits and sickle-shaped corolla.

Note: Leaves and tender shoot are used as vegetable.

**790. *Sesbania sesban* (L.) Merr. (Plate 133 E)**

Syn: *Sesbania aegyptiaca* Poir.

Family: Papilionaceae

Vernacular Name: San: Jaya, Jayanti, Sukmapatra  
Eng: Common sesban, Egyptian rattle pod  
Kan: Arasina jeenangi, Puttasage  
Mal: Kedangu, Nellithali  
Tulu: Puttasage

Habit: Shrub.

Habitat: Grown in gardens.

Status: Frequent. Exotic.

Description: Shrub. Leaves paripinnate; leaflets oblong; stipules linear. Flowers golden yellow, in pendent lax racemes; bracts linear. Calyx campanulate, 5-toothed. Petals 5; standard obovate-orbicular, appendaged, dark brown to purple. Stamens 9 + 1. Fruit subterete, torulose, horned pod.

Uses: *Root ground with cold milk is used for menstrual irregularities and over menstrual bleeding. *Leaf cooked with rice cooked water is applied on the head for 12 days in case of sleeplessness. *Leaf poultice is given for pus release and quick heal of furuncles.

Etymology: Sukmapatra (little leaved) and Puttasage (little sesban) are due to its small sensitive leaves and habit which is a miniature of sesban.

Note: It is sued in the preparation of *Ratnagiri rasa* and *Vajrakapata rasa* (Sharma et al., 1998).
791. *Sida acuta* Burm. f. (Plate 133 F)

Syn: *Sida carpinifolia* sensu Mast.

Family: Malvaceae

Vernacular Name: San: Bala, Rajabala  
Eng: Horn bean leaved Sida, Blue okra  
Kan: Bhimana kaddi, Anekadeeru  
Mal: Anakurunthotti, Kurunthotti  
Tulu: Malla kadre, Anekurunthotti

Habit: Erect herb.

Habitat: Along roadsides and waste places.

Status: Common. Weed.

Description: Erect herb. Leaves simple, distichous, ovate or linear-lanceolate; stipules linear-lanceolate, one 3-nerved. Flowers 1 – 2 in each axil. Calyx campanulate; lobes 5, triangular. Petals 5, yellow. Stamens monadelphous. Fruit a schizocarp, with 5 – 9 puberulous, strongly reticulated mericarps.

Uses: *Root and ginger decoction is used for fever. Root decoction is recommended for rheumatism and diabetes.*

Etymology: Bala (strength), Rajabala (king of strength), Anekadeeru, Anakurunthotti and Anekurunthotti (elephant *Sida*) are due to nervine tonic property and stronger as well as larger roots.

Note: It is used as a substitute of *Sida rhombifolia, Sida rhomboidea, Sida alnifolia* and *Sida cordata*. It is sued in synonymous with *Abutilon indicum*. It is sued in the preparation of *Ksirabala, Dhanvantara ghṛta, Balarista, Baladi kvatha, Baladya ghṛta, Candanabalaalakshadi taila, Sudarsana churna, Rasnadi kashaya* and *Asvagandhadi lehya* (Dey, 1994; Sivarajan & Balachandran, 1996).
792. *Sida alnifolia* L. (Plate 134 A)


Family: Malvaceae

Vernacular Name: San: Bala  
Eng: Broom jute Sida  
Kan: Kadeeru, Kadeeru beru  
Mal: Kurunthotti  
Tulu: Kadeer, Kurunthotti

Habit: Erect herb.

Habitat: Waste places.

Status: Common. Weed.

Description: Erect herb with ascending branches. Leaves simple, towards stem base obovate, upper leaves elliptic-lanceolate, margins serrate-dentate at the distal half and entire towards the proximal half, stellata-pubescent beneath. Flowers solitary, axillary. Calyx campanulate; lobes 5, ovate to triangular. Petals 5, orange-yellow. Stamens monadelphous. Fruit a schizocarp, with 7 – 10 mericarps.

Uses: *Root and ginger decoction is used for chronic fever and digestive disorders. *Leaf juice mixed with honey is used for chest pain, indigestion and snake bite.

Etymology: Bala (strength giving) is due to its close resemblance with *Sida rhombifolia* and use as its substitute.

Note: It is used in synonymous with *Sida rhombifolia* and *Sida rhomboidea*. It is sued in the preparation of *Ksirabala, Dhanvantara ghrta, Balarista, Baladi kvatha, Baladya ghrta, Candanabalalakshadi taila, Sudarsana churna, Rasnadi kashaya* and *Asvagandhadi lehya* (Dey, 1994; Sivarajan & Balachandran, 1996).

793. *Sida cordata* (Burm. f.) Borss (Plate 134 B)

Syn: *Sida veronicaefolia* Lam.

Family: Malvaceae
Vernacular Name: San: Bhumibala, Nagabala  
Kan: Bekkinathale gida, Nelacchari, Balli kurunthotti  
Mal: Vallikurunthotti  
Tulu: Nelacchari, Peratthane chappu

Habit: Trailing herb.

Habitat: Moist shaded places.

Status: Common. Weed.

Description: Slender, pubescent trailing herb. Leaves simple, ovate; stipules linear. Flowers solitary, axillary, ultimately in few-flowered racemes. Calyx campanulate; lobes 5, triangular, with spreading setaceous hairs. Petals 5, pale yellow, slightly exceeding the calyx. Stamens monadelphous. Fruit a schizocarp, with 5 mericarps.

Uses: *Whole plant ground in one day old rice cooked water is taken by mixing jaggery to get relief from bleeding piles and dysentery (gets cured within two days). Whole plant extract with milk is consumed for gastritis. *Plant paste is applied over the head and extract is taken internally for biliousness and insanity. Whole plant decoction is used for biliousness, rheumatism and diarrhoea. *Whole plant ground with cumin seeds in rice washed water is used for dysentery. *Whole plant paste with cumin seeds in milk is applied externally while extract is consumed for body and joint pain. Whole plant extract is recommended for stomachache, indigestion, dysentery, fever, biliousness, burning during urination, leucorrhoea and weakness. *Plant juice is used to clean wounds while whole plant paste is used as a poultice for cuts and wounds. *One ounce plant juice mixed with tender coconut water is consumed for 3 – 6 days in case of stomachache during menses.

Etymology: Bhumibala (ground *Sida*), Nagabala (snake *Sida*), Balli kurunthotti, Vallikurunthotti (climbing *Sida*) and Peratthane chappu (coconut scraper leaf) are due to its trailing nature, close affinity with *Sida* and characteristic leaves.

Note: Much valued drug for digestive disorders.
794. *Sida cordifolia* L. (Plate 134 C)

Family: Malvaceae

Vernacular Name: San: Bala, Svetabala  
Eng: Country mallow  
Kan: Hethutti, Bili kurunthotti, Bili kadeeru  
Mal: Kurunthotti, Anakurunthotti, Vellooram  
Tulu: Kadeer, Boldu kadeer

Habit: Undershrub.

Habitat: Sandy soil near sea coast and wastelands.

Status: Common. Weed.

Description: Undershrub with velutinous to tomentose plant body. Leaves simple, orbicular, tomentose; stipules setaceous. Flowers solitary, axillary or few together. Calyx campanulate; lobes 5, triangular, densely pubescent outside. Petals 5, pale yellow. Stamens monadelphous. Fruit a schizocarp, with 8 – 10 strongly reticulated mericarps, ciliate on the upper margins.

Uses: Root decoction mixed with cumin seed powder is used for all types of rheumatic complaints. Oil prepared using its root is applied for arthritis and rheumatism. *Leaf paste is applied for rashes and urticaria.

Etymology: Bala (strength giving), Svetabala, Bili kurunthotti, Bili kadeeru and Boldu kadeer (white *Sida*) are due to its nervine tonic property and whitish plant body.

Note: It is used in synonymous with *Sida alnifolia*, *Sida rhomboidea* and *Sida rhombifolia*. It is sued in the preparation of *Ksirabala*, *Dhanvantara ghrta*, *Balarista*, *Baladi kvatha*, *Baladya ghrta*, *Candanabalalakshadi taila*, *Sudarsana churna*, *Rasnadi kashaya* and *Asvagandhadi lehya*. Phytosterol and ephedrine are the active constituents (Dey, 1994; Kapoor, 1990; Sivarajan & Balachandran, 1996).
795. *Sida mysorensis* Wight & Arn. (Plate 134 D)

Syn: *Sida glutinosa* Roxb.

Family: Malvaceae

Vernacular Name: Kan: Antuthutti
Tulu: Antukadeer

Habit: Erect herb.

Habitat: Moist shaded places.

Status: Frequent. Exotic and weed.

Description: Erect viscid herb, with spreading hairs. Leaves simple, ovate; stipules linear. Flowers solitary, axillary or in racemes. Calyx campanulate; lobes 5, triangular, with spreading setaceous hairs. Stamens monadelphous. Fruit a schizocarp, with 5 mericarps.

Uses: *Root decoction is recommended for fever, rhinitis and phlegm.*

Etymology: Antuthutti (sticky *Abutilon*) and Antukadeer (sticky *Sida*) are due to its viscid plant body as well as close affinity with *Abutilon* and *Sida*.

Note: Occasionally used as a substitute for *Sida* complex.

796. *Sida rhombifolia* L. (Plate 134 E)

Syn: *Sida rhombifolia* L. ssp. *rhombifolia*

Family: Malvaceae

Vernacular Name: San: Bala, Mahabala
Eng: Broom jute Sida
Kan: Kallangadale, Kadeeru, Kadeeru beru
Mal: Kurunthotti, Vankurunthotti
Tulu: Kadeer
Habit: Erect undershrub.

Habitat: Waste places and along roadsides.

Status: Common. Weed.

Description: Erect undershrub, with minutely stellately hairy branches. Leaves simple, ovate to oblong, more or less rhomboid, pubescent; stipules filiform. Flowers solitary, axillary or 2 – 5 in clusters. Calyx campanulate; lobes 5, triangular to ovate. Petals 5, yellow to pale orange. Stamens monadelphous. Fruit a schizocarp, with 6 – 12 mericarps.

Uses: Root decoction with milk is used for body pain, rheumatism and arthritis. Root decoction with cumin seeds is recommended for gas trouble and vomiting in pregnant women. Root extract in ghee (ksheerabala) is taken for arthritis and rheumatism. Root decoction is used for diabetes, gas trouble and helps in conception. *Root decoction with cumin and coriander is consumed with milk at night by adding sugarcandy for backache, leg pain, waist pain and rheumatism in pregnant women. *Root, Solanum melongena root and cumin seed decoction is heated with gingelly oil and given for muscle spasm, sprain and abdominal spasm. Leaf extract is given to drink in case of bleeding piles. *Root and Ricinus communis root decoction is recommended for Alzheimer’s disease. Root decoction with cumin seeds is recommended for urinary disorders. *Root decoction with Hemidesmus indicus is taken by adding milk for 6 – 12 days in case of weakness in children. *Root decoction is given during first month of pregnancy as a tonic. *Root, Nymphaea nouchali rhizome, Hemidesmus indicus root and Vetiveria zizanioides root decoction with milk is used for diseases related with pregnancy. *Root extract with rice washed water is taken for leucorrhoea and burning during urination. *Leaf paste mixed with cheese and saffron is applied for carbuncles. *Whole plant juice boiled with coconut oil is used as hair oil for sleeplessness. Root decoction with coriander seeds is given in empty stomach for fever. *Root bark, Tinospora cordifolia stem and Cedrus deodara heart wood (3:2:1) decoction is consumed twice a day by adding sugar for swelling in the knee joint.
Etymology: Bala (giving strength), Mahabala (much stronger) and Vankurunthotti (larger *Sida*) are due to its tonic action and larger size.

Note: Leaf juice is used as a shampoo. Dried stem is used as broom. Leaf juice mixed with jaggery is used as glue for binding wooden particles. It is used in synonymous with *Sida alnifolia*, *Sida rhomboidea* and *Sida cordifolia*. It is sued in the preparation of *Ksirabala, Dhanvantara ghrta, Balarista, Baladi kvatha, Baladya ghrta, Candanabalalakshadi taila, Sudarsana churna, Rasnadi kashaya, Maha visagarbha taila* and *Asvagandhadi lehya*. Vasicinone and vasicine are the active constituents (Dey, 1994; Sharma *et al.*, 1998; Sivarajan & Balachandran, 1996).

**797. Sida rhomboidea** Roxb. ex Fleming (Plate 134 F)


Family: Malvaceae

Vernacular Name: San: Bala, Mahabala  
Eng: Broom jute Sida  
Kan: Kallangadale, Kadeeru, Kadeeru beru  
Mal: Kurunthotti, Vankurunthotti  
Tulu: Kadeer

Habit: Subshrub.

Habitat: Open wastelands and forest undergrowths.

Status: Common. Weed.

Description: Erect Subshrub. Leaves simple, rhomboid to lanceolate; stipules filiform. Flowers solitary, axillary; pedicels filiform. Calyx campanulate; lobes 5. Petals 5, yellow. Stamens monadelphous. Fruit a schizocarp, with 8 – 10 indehiscent mericarps.

Uses: Root decoction is used as a general tonic for weakness and rheumatism.

Etymology: Bala (giving strength), Mahabala (much stronger) and Vankurunthotti (larger *Sida*) are due to its tonic action and larger size.
Note: It is used in synonymous with *Sida alnifolia*, *Sida rhombifolia* and *Sida cordifolia*. It is sued in the preparation of *Ksirabala*, *Dhanvantara ghrta*, *Balarista*, *Baladi kvatha*, *Baladya ghrta*, *Candanabalalakshadi taila*, *Sudarsana churna*, *Rasnadi kashaya* and *Asvagandhadi lehya* (Dey, 1994; Sivarajan & Balachandran, 1996).

**798. Smilax zeylanica** L. (Plate 135 A - 1, A - 2)

Syn: *Smilax macrophylla* Roxb.

Family: Liliaceae

Vernacular Name: San: Vanamadhusnahi  
Kan: Kaadu hambu, Chennare balli  
Mal: Kareelanchi, Valiyakanni  
Tulu: Chennare booru, Chennare ballu

Habit: Climbing shrub.

Habitat: Along hedges and forests.

Status: Common.

Description: Large climbing shrub, with prickly stem. Leaves simple, broadly ovate to oblong-lanceolate, reticulately-veined; petioles bearing a tendril on either side above the base. Flowers dioecious, small, in axillary umbels. Perianth-segments 6. Stamens 6. Fruit globose berry.

Uses: Root or stem decoction is used for swellings, venereal ulcers, to wash boil and abscesses. It is a blood purifier. *Decoction prepared from its aerial parts is used as bath for body pain. *Leaf decoction is used for bath during jaundice. Root decoction rejuvenates and gives strength to the body. *Plant ash is applied externally for swellings and ulcers due to burns. Purified plant extract is taken as a blood purifier. *Oil prepared from the plant juice is applied for malnutrition in children.

Etymology: Kaadu hambu (wild climber), Chennare balli and Chennare booru (reddish climber) are due to its wild nature and reddish colour of the tender shoot.
Note: Occasionally fruits are used as a substitute for *Piper cubeba*. Root decoction is used as a blood purifier in the absence of *Hemidesmus indicus*. Fruits are used as vegetable.

799. *Smithia conferta* Smith (Plate 135 B)

Syn: *Smithia geminiflora* Roth.

Family: Papilionaceae

Vernacular Name: Kan: Kuduhullu  
Mal: Muthirapullu  
Tulu: Kudupanthi

Habit: Diffuse herb.

Habitat: Moist open places.

Status: Common. Weed.

Description: Diffuse annual herb. Leaves paripinnate; leaflets oblong, bristly-ciliate along the margins and on the midrib beneath. Flowers 1 – 4 in the axils of upper leaves; bracteoles elliptic-oblong, with bristles at the apex. Calyx rigid, 2-lipped, with a few long bristles at the apex and on the back. Petals 5, yellow, with reddish markings. Stamens 5 + 5. Fruit 3 – 6 jointed lomentum.

Uses: *Gruel prepared from whole plant is given to cattle for digestive disorders, gas trouble and to increase lactation.*

Etymology: Kuduhullu, Muthirapullu and Kudupanthi (horse gram plant) are due to its use just like horse gram to strengthen the cattle.

Note: Whole plant is much used as fodder.

800. *Smithia sensitiva* Ait. (Plate 135 C)

Family: Papilionaceae

Vernacular Name: Kan: Neera huruli  
Mal: Aattu muthira  
Tulu: Neerkudu
Habit: Diffuse herb.

Habitat: Moist places.

Status: Occasional. Exotic and weed.

Description: Diffuse much branched herb. Leaves paripinnate; leaflets linear-oblong, bristly on margins and midrib beneath; stipules lanceolate, prolonged below the insertion into long auricles. Flowers 5 – 8, in short racemes from the axils of the upper leaves; bracteoles ovate, bristle-pointed. Calyx rigid, 2-lipped, with few scattered bristles. Petals 5, yellow. Stamens 5 + 5. Fruit 4 – 6-jointed, orbicular, papillose lomentum.

Uses: *Whole plant decoction is recommended for digestive disorders, ulcers and to increase lactation in cattle.

Etymology: Neera huruli and Neerkudu (water horse gram) are due to its restriction to the moist places and use just like horse gram to strengthen the cattle.

Note: Whole plant is used as fodder.

801. *Solanum americanum* Mill. (Plate 135 D)

Syn: *Solanum nigrum* sensu Gamble

Family: Solanaceae

Vernacular Name: San: Kakamaci

Eng: American black nightshade, Black nightshade, Common nightshade

Kan: Kakamaci, Kakihannu, Chavi soppu

Mal: Karimthakkali, Manathakkali

Tulu: Kakethappu, Chavi parandu

Habit: Erect herb.

Habitat: Wastelands and along roadsides.
Status: Common.

Description: Erect annual herb. Leaves simple, ovate-lanceolate, decurrent along the petiole. Flowers small, in extra-axillary, several-flowered cymes. Calyx small; lobes 5. Corolla white, rotate; petals 5, reflexed. Stamens 5. Fruit globose berry, black at maturity.

Uses: *Eating raw fruits helps to overcome mouth ulcers. Continuous use of fruit helps to overcome mild blood cancer. Leaf juice is taken with honey for cold and cough in children. *Whole plant decoction is recommended for pregnant women to prevent habitual abortion (used after delivery as a tonic). Root decoction is used for urinary disorders, toothache, cough and vomiting. Leaf extract with milk is given to drink in case of DUB. Fruit and leaf decoction is used for gas trouble and to expel worms. *Tambuli prepared from shoot tip is consumed regularly for cancer (useful in the starting stage). Plant juice is applied for skin rashes and for abscess. *Tender shoot tip ground with cumin seeds in butter milk is boiled and given for one week in a month for increasing blood plasma. *Whole plant cooked with raw rice is eaten for 14 days for same purpose. Juice of two fruits mixed with honey is taken to correct the digestive system. *Leaf juice is applied and root or whole plant decoction is consumed internally for itchy wounds in the genitals. Leaf paste is applied externally and its decoction is used as bath for skin diseases. *Six spoon leaf juice mixed with three spoon honey is used to expel intestinal worms. *Leaf juice (1 – 3 spoons) is given thrice in a month for indigestion in children. Leaf juice with cumin seed extract is recommended for 3 – 6 days in case of DUB. *One spoon leaf juice is given twice a day for constipation in young children. *Whole plant juice and milk (1:1) ground with pepper and cumin seeds are given to drink by adding sugar for piles and dysmenorrhea. *Powder of its leaf and Artocarpus heterophyllus shoot tip (fried) mixed with coconut oil is applied for scabies. *Leaf, leaf of Pogostemon heyneanum, Jasminum sambac shoot tip, panchavalli* variety Piper betle leaf paste mixed with Cuminum cyminum seeds, Zingiber officinale rhizome, Glycyrrhiza glabra rhizome, Nelumbo nucifera stamen, Syzygium aromaticum bud, mace, nutmeg, ox bile are ground with panchavalli* betel leaf juice or Erythrina variegata
leaf juice and made into pills (Bengal gram size) and shade dried. Two pills are taken three days before menstruation while the rest after six days of menstruation to normalize the menstrual cycle.

Etymology: Kakihannu (black fruit), Karimthakkali (black tomato), Chavi soppu (DUB leaf) and Chavi parandu (DUB fruit) are due to its globose black fruits and much use for DUB.

Note: Plant is used for making rasam* and sambar*. Kadubu* made of its leaf pieces, Cucumis melo leaf and fruit rind, Lagenaria siceraria, Ipomoea batatas leaf, Colocasia esculenta leaf (in equal quantity) and rice floor are used for bhoomipooja* during the month of October. Solanine and solamargine are the active constituents. Hrdyarnava rasa, Mahavisagarva taila and Rasaraja rasa are the major preparations (Kapoor, 1990; Sharma et al., 1998).

802. *Solanum erianthum* D. Don. (Plate 135 E)

Syn: Solanum verbascifolium sensu Clarke

Family: Solanaceae

Vernacular Name:  San: Gandira, Pathi, Priyankari
Eng: Common nightshade
Kan: Kaadusunde
Mal: Chunda, Erichunda, Malachunda
Tulu: Kattusunde

Habit: Shrub.

Habitat: Dry forests and hills of higher elevation.

Status: Occasional. Exotic.

Description: Shrub with fulvous or stellate-tomentose branchlets. Leaves simple, elliptic-oblong or ovate-lanceolate, tomentose above, woolly below. Flowers white, in many-flowered terminal and axillary corymbose cymes. Calyx cup-shaped; lobes 5. Corolla rotate, white; lobes 5. Stamens 5. Fruit globose berry, yellow when ripe.
Uses: *Plant preparations help to relieve phlegm. *Leaf juice is a cooling agent.

Etymology: Kaadusunde, Kattusunde (wild nightshade) and Malachunda (hill nightshade) are due to its wild nature, restriction to hills of higher elevation and close affinity with nightshade.

Note: Tender plant and fruits are used as vegetable.

**803. *Solanum lasiocarpum* Dunal (Plate 136 A)**

Syn: *Solanum ferox* auct. non L.

Family: Solanaceae

Vernacular Name: San: Lakshmana, Svetakantakari
   Eng: White nightshade
   Kan: Bilisunde
   Mal: Anachunda, Pechunda, Veluthavazhuthana
   Tulu: Bolduchunde

Habit: Stout shrub.

Habitat: Along forest borders.

Status: Occasional.

Description: Stout prickly shrub; stem and leaves stellate velvety. Leaves simple, elliptic-lanceate, prickly, with shallow coarse triangular lobes, coriaceous. Flowers in extra-axillary clusters. Calyx cup-shaped, glabrous; lobes 5. Corolla rotate, white; petals 5. Stamens 5. Fruit globose, densely hispid berry, golden yellow when ripe.

Uses: *Root decoction is recommended for fever due to rheumatism.

Etymology: Svetakantakari, Bilisunde, Veluthavazhuthana and Bolduchunde (white nightshade) are due to its whitish plant body and globose fruits.

Note: Occasionally used as a substitute for *Solanum virginianum.*
804. *Solanum melongena* L. (Plate 136 B)

Syn: *Solanum coagulans* Forssk.

Family: Solanaceae

Vernacular Name: San: Brhati  

Eng: Asian egg plant, Brinjal  

Kan: Badane, Gulla badane  

Mal: Kathirikka, Vazhuthina  

Tulu: Gulle, Badane

Habit: Undershrub.

Habitat: Cultivated.

Status: Common.

Description: Stout undershrub, armed with prickles. Leaves simple, sinuately lobed, softly stellately-pubescent, unequal sided at base, armed along the midrib. Flowers solitary. Calyx 5-lobed; lobes lanceolate, usually prickly. Corolla rotate, bluish; petals 5. Stamens 5. Fruit pendent, ovoid, oblong or obovoid berry, purple, greenish or striped.

Uses: Fruits are nutritious, easily digestible, toxin removers and useful for phlegm. Fruit is a blood purifier, used for rheumatism, skin diseases and anaemia (it may cause allergy in some). *Seed ground with water is taken as a preventive medicine for chicken pox.* *Paste of fruit (with small holes) fried in gingelly oil is applied for toothache.* *Root decoction is recommended as a health tonic during the second month of pregnancy.* *Gojju* prepared from the fruit is consumed for constipation in children.

Etymology: Brhati (great or large) is due to its large fruits and diverse uses.

Note: Fruits are much valued as vegetable. It is used in the preparation of *Brhatyadi kashaya, Brihatyadi kvatha, Sudarsana churna, Devadarvadi kvatha, Satayadi kvatha, Dasamularista and Indukanta ghṛta* (Sivarajan & Balachandran, 1996).
805. *Solanum torvum* Sw. (Plate 136 C)

Family: Solanaceae

Vernacular Name: San: Brhati  
Eng: Turkey berry, Devil’s fig  
Kan: Kudane, Kaadu sunde  
Mal: Chunda, Chithiramchunda, Malamchunda  
Tulu: Kudane, Kattuchunde

Habit: Shrub.

Habitat: Waste places.

Status: Common. Exotic.

Description: Stellately-hairy shrub, with prickles on stem and petioles. Leaves simple, ovate-lanceolate, with somewhat triangular lobes, stellately pubescent. Flowers in extra-axillary corymbose cymes. Calyx 5-lobed, not enlarging in fruit. Corolla rotate, white; petals 5. Stamens 5. Fruit globose, greenish berry.

Uses: *Bark decoction is recommended for arthritis, rheumatism, gas trouble, worms and fever. *Fruit and root paste is applied for swellings. Fruit extract is a digestive, blood purifier, increases absorption, used for liver problems and children’s diseases. Root and leaf extract is an appetizer.

Etymology: Brhati (large or great), Kaadu sunde and Kattuchunde (wild nightshade) are due to its diverse uses, wild nature and close affinity with nightshade).

Note: Tender fruits are used as vegetable.

806. *Solanum trilobatum* L. (Plate 136 D)

Syn: *Solanum acetosaefolium* Lam.

Family: Solanaceae

Vernacular Name: San: Achuda, Agnidamani, Vallikanta
Eng: Climbing brinjal, Three lobed nightshade
Kan: Ambusunde, Ballisunde
Mal: Thothuvala
Tulu: Balluchunde

Habit: Trailing undershrub.

Habitat: Grown in gardens.

Status: Occasional. Weed.

Description: Trailing prickly undershrub. Leaves ovate-angular, chartaceous, prickly. Flowers purple or white, in extra-axillary racemose cymes. Calyx cupular; lobes 5, linear, prickly, recurved. Corolla rotate; petals 5, triangular. Stamens 5. Fruit globose berry, green with white spots.

Uses: *Root, leaf and tender shoot extract is recommended for tuberculosis. *Flower and fruit decoction is used for cough. Plant extract is taken for bronchitis.

Etymology: Vallikanta (climbing spinous plant), Ballisunde and Balluchunde (climbing nightshade) are due to its trailing habit, prickly nature and close affinity with nightshade.

Note: Much valued drug for lung diseases.

**807. *Solanum tuberosum* L. (Plate 136 E)**

Family: Solanaceae

Vernacular Name: San: Golakandah

Eng: Potato
Kan: Batate, Aalugadde
Mal: Urulakkizhangu
Tulu: Batate

Habit: Sprawling herb.

Habitat: Cultivated.
Status: Occasional.

Description: Sprawling sparsely pubescent herb, with underground white, globose, fleshy tubers. Leaves imparipinnate; leaflets ovate, pilose. Flowers white or bluish, few in long peduncled forking clusters. Calyx 5-lobed; lobes lanceolate. Corolla rotate; petals 5. Stamens 5. Fruit globose, yellowish or green berry.

Uses: *Tuber paste is applied over the burnt skin for quick recovery.

Etymology: Golakandah (globose tuber) is due to its characteristic tubers.

Note: Tubers are much valued as vegetable.

808. *Solanum violaceum* Ortega ssp. *multiflorum* (Clarke) Matthew (Plate 136 F)

Syn: *Solanum indicum* var. *multiflorum* Clarke.; *Solanum anguivi* Lam. var. *multiflora* (Roth ex Roem. & Schult) Chithra

Family: Solanaceae

Vernacular Name: San: Brhati, Kantakari, Ksudrabrhati
Eng: Indian nightshade
Kan: Kirigulla, Biligulla
Mal: Cheruchunda, Cheruvazhuthana, Nilavazhuthana
Tulu: Ellya badane

Habit: Shrub.

Habitat: Waysides and waste places in plains.

Status: Occasional.

Description: Prickled shrub. Leaves simple, sinuate, base obliquely truncate, thick-chartaceous, prickly along the midrib, softly tomentose. Flowers in extra-axillary 8 – 10-floered racemes. Calyx prickly, 5-lobed. Corolla bluish, rotate; lobes 5. Stamens 5. Fruit globose berry, orange-red when ripe.

Uses: Root decoction is recommended for cough, worms, asthma and bronchitis.
*Root and fruit extract increases bodily absorption and is useful for rheumatism.
*Root decoction is consumed as a health tonic during the 6th month of pregnancy.

Etymology: Ksudrabrhati, Cheruvazhuthana, Ellya badane (small or little brinjal), Kirigulla and Cheruchunda (smaller nightshade) are due to its small fruits and close affinity with the egg plant.

Note: Fruits are used as vegetable. It is used in the preparation of Brhatyadi kashaya, Brihatyadi kvatha, Sudarsana churna, Devadarvadi kvatha, Satayadi kvatha, Dasamularista and Indukanta ghṛta (Dey, 1994; Sivarajan & Balachandran, 1996).

809. *Solanum violaceum* Ortega var. violaceum (Plate 137 A)

Syn: *Solanum anguivi* auct. non Lam.; *Solanum indicum* Hook. f.

Family: Solanaceae

Vernacular Name:  
San: Ksudrabrhati, Lakshmana  
Eng: Poison berry  
Kan: Kirigulla, Sanna badane  
Mal: Chunda, Cheruchunda, Cheruvazhuthina  
Tulu: Ellya badane

Habit: Undershrub.

Habitat: Wastelands and waysides.

Status: Common. Weed.

Description: Prickly undershrub, with yellowish-villous branchlets. Leaves simple, sinuately lobed or pinnatifid, stellately woolly beneath, with yellowish prickles along the mid-nerve. Flowers purplish-white, in extra-axillary racemes. Calyx cupular; lobes 5, prickly. Corolla rotate; petals 5. Stamens 5. Fruit globose berry, orange-yellow when ripe.

Uses: *Fruit (spine removed) extract with breast milk is recommended for diarrhoea in small children (in case of adults, extract with lime juice is used). *Spine removed fruits are eaten to expel intestinal worms.
Etymology: Ksudrabrhati, Sanna badane, Cheruvazhuthina, Ellya badane (small brinjal), Kirigulla and Cheruchunda (smaller nightshade) are due to its small globose fruits and close affinity with the egg plant.

Note: It is used in the preparation of Brhatyadi kashaya, Brihatyadi kvatha, Sudarsana churna, Devadarvadi kvatha, Satayadi kvatha, Dasamularista and Indukanta ghrita. It has solanine, solanidine and diosgenin as active constituents (Dey, 1994; Sivarajan & Balachandran, 1996).

810. Solanum virginianum L. (Plate 137 B)

Syn: Solanum surattense Burm. f.; Solanum xanthocarpum Schrad & Wendl.

Family: Solanaceae

Vernacular Name: San: Kantakari, Vyaghri, Brhati
Eng: Yellow berried nightshade
Kan: Nelagulla, Kantakari
Mal: Kandakarichunda, Kandankathiri
Tulu: Kattu badane, Nelagulle

Habit: Undershrub.

Habitat: Wastelands and sandy soils.

Status: Occasional. Weed.

Description: Prickly undershrub; prickles straight, compressed, yellowish. Leaves ovate or elliptic, pinnatifid half-way down, base very unequal, prickly along the nerves and petiole. Flowers in few-flowered axillary cymes. Calyx prickly; lobes 5, lanceolate. Corolla violet, rotate; petals 5. Stamens 5. Fruit globose berry, yellow or white with green blotches.

Uses: Root decoction is recommended for rheumatism, lumbago, cough, asthma, tonsillitis, urine block and digestive disorders. *Smoke of burning seed is given to get relief from toothache. Stem, flower and fruit decoction is used for burning sensation in the feet and gas trouble. *Fruit extract is consumed and paste is applied
externally for piles. *Root paste with milk or ghee is applied for burning sensation or pain of furuncle in the finger. *Whole plant decoction is taken internally and its smoke is passed into the anus for piles. Root and fruit extract increases absorption and is useful for rheumatism. *Root decoction is recommended as a health tonic during the 3rd month of pregnancy. Root powder is given with honey (twice daily) for asthma.

Etymology: Vyaghri (tigress), Nelagulla, Nelagulle (ground nightshade) and Kattu badane (wild brinjal) are due to its hot nature, diffuse habit, wild form and close affinity with the egg plant.

Note: It is used in the preparation of Kantakari ghrta, Kanakasava, Putikaranjasava, Kantakari avaleha, Chyavanaprasha, Dasamularista, Sudarsana churna, Pancatiktaka ghrta, Vyaghri haritaki, Sarvajvarahara lehya, Devadarvadi kvatha, Kanakasava and Suranadi lehya. Solanocarpine, solanine-S and solanidine-S are the active constituents (Dey, 1994; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

811. *Solena amplexicaulis* (Lam.) Gandhi (Plate 137 C)

Syn: *Bryonia amplexicaulis* Lam.; *Zehneria umbellata* (Klein) Thw.

Family: Cucurbitaceae

Vernacular Name: San: Sukakandah  
Kan: Gauti balli, Karugala  
Mal: Karuvikizhangu  
Tulu: Karolu, Karvolu

Habit: Climbing herb.

Habitat: Along bushes and hedges.

Status: Common.

Description: Slender climbing herb. Leaves simple, highly variable, ovate or 3 – 5-lobed or -angled, membranous, amplexicaul at base. Flowers small; male in umbels;
female solitary. Calyx tubular-campanulate, 5-toothed. Corolla creamy-white, deeply 5-partite. Stamens 3. Fruit ovoid to oblong, beaked, smooth to ribbed, red when ripe.

Uses: Plant extract is recommended for urinary disorders and skin diseases. Plant paste is applied externally for furuncles and skin diseases. Seed powder is taken to expel intestinal worms. Plant decoction has insecticidal property. Fruit is rich in vitamins and is nutritive. Plant decoction and paste are used for rheumatism. Fruit or whole plant extract is a blood purifier. Plant paste is applied over the head for sleeplessness and bruises in the body. Leaf paste with water is applied for bruises caused by Holigarna arnottiana. Leaf, cumin seeds, onion, ghee and sugar extract is recommended for blood purification. Leaf ground with water is mixed with coconut milk and used as antidote for Semecarpus anacardium and other plant allergies. Leaf extract mixed with sugar and milk is also used for same purpose. Root and leaf paste is applied for urticaria, rashes and skin diseases while their extract is sperm count enhancer. Root decoction is taken internally for digestive tract disorders. Whole plant juice is used for poisonous bites.

Etymology: Sukakandah (parrot tuber) arose from its tubers and fruits with characteristic beak.

Note: Fruit is edible. Leaf, flower and fruits are used as vegetable. It is used in the preparation of Brhat marmagutika (Sivarajan & Balachandran, 1996).

812. *Sorghum halepense* (L.) Pers. (Plate 137 D)

Syn: *Andropogon halepensis* (L.) Brot.

Family: Poaceae

Vernacular Name: Eng: Johnson grass  
Kan: Kahijola, Hucchu jola, Kaadu galagu hullu  
Mal: Aricholam, Kakkacholam  
Tulu: Arijolo

Habit: Perennial grass.
Habitat: Along the sides of streams.

Status: Occasional. Weed.


Uses: *Root decoction is recommended for skin diseases and digestive tract complaints.

Etymology: Hucchu jola (insanity maize), Aricholam and Arijolo (paddy maize) arose due to its maize like habit, seeds resembling paddy seeds and rapid colonization.

Note: Culms and leaves are used as fodder.

813. *Spatholobus parviflorus* (Roxb. ex DC.) O. Ktze. (Plate 137 E)

Syn: *Butea parviflora* Roxb. ex DC.; *Spatholobus roxburghii* Benth.

Family: Papilionaceae

Vernacular Name: Kan: Balli mutthuga, Mukkate balli

Mal: Valliplash

Tulu: Mudiballu

Habit: Woody climber.

Habitat: Forests.

Status: Common.

Description: Large woody climber. Leaves trifoliolate; leaflets broadly elliptic or rhomboid-obovate, silky-pubescent, lateral leaflets unequal sided. Flowers in

Uses: *Bark decoction is recommended for gas trouble, indigestion, diarrhoea, cough and fever. *Root decoction is applied externally for nervine spasm, skin diseases and wounds.

Etymology: Balli mutthuga, Valliplash (climbing *Butea*) and Mudiballu (vine for oval bundle of plant fibres containing rice seeds) are due to its leaves sharing close affinity with that of *Butea*, climbing nature and use for preserving rice seeds.

Note: Bark peels are used for *Mudi* - an oval bundle made plant fibres containing rice seeds.

814. *Spermacoce articularis* L. f. (Plate 137 F)

Syn: *Borreria articularis* (L. f.) F. N. Will

Family: Rubiaceae

Vernacular Name: San: Tukah

Eng: Shaggy button weed

Kan: Tartavalu

Mal: Kudalchurukki, Tharthavel

Tulu: Tartavalu

Habit: Diffuse herb.

Habitat: Wastelands and waysides.

Status: Common. Weed.

Description: Diffuse herb, with 4-angled, rusty brown stem. Leaves simple, elliptic-oblong or obovate, pubescent; stipules membranous. Flowers in axillary few-flowered clusters. Calyx 4-lobed. Corolla funnel-shaped, pink; lobes 4, ovate to triangular. Stamens 4. Fruit obovoid, hispid capsule.
Uses: *Plant juice heated with coconut oil or gingelly oil is applied to heal cuts and wounds. *Whole plant decoction is recommended for leucorrhoea and urinary diseases.

Etymology: Kudalchurukki (intestine shrinking) arose due to its therapeutic efficacy against digestive tract disorders.

Note: It is used in the preparation of *Traikantaka ghṛta*, *Vastyaṃayantaka ghṛta* and *Virataradi kṣaṇaya* (Sivarajan & Balachandran, 1996).

**815. *Spermacoce hispida* L. (Plate 138 A)**

Syn: *Borreria hispida* (L.) K. Schum.

Family: Rubiaceae

Vernacular Name: San: Bukah, Madanaghanta
  Kan: Daarekaddi, Madanaganti
  Mal: Tharthavel, Kudalchurukki
  Tulu: Daarekaddi

Habit: Diffuse herb.

Habitat: Sandy areas and along waysides.

Status: Frequent. Weed.

Description: Diffuse herb, with 4-angled or terete stem, covered with pilose hairs. Leaves simple, broadly elliptic to obovate, margins highly flexuous; stipules membranous. Flowers in few-flowered axillary cymes. Calyx 4-lobed, ciliate on the margins. Corolla funnel-shaped, pink; lobes 4. Stamens 4. Fruit obovoid, hispid capsule.

Uses: *Whole plant ground with water or butter milk is applied for urticaria, rashes and scabies. *Whole plant, cumin, coriander and fenugreek seeds ground with coconut milk are given by adding sugar to induce heat in cattle. *Leaf juice is recommended for uterine bleeding. Seed decoction is a nervine tonic, blood purifier, digestive and taken for gall bladder stones.
Etymology: Kudalchurukki (intestine shrinking) and Daarekaddi (channeled stick or stem) are due to its therapeutic efficacy and angled or channeled stem.

Note: It is used in the preparation of *Traikantaka ghrta*, *Vastyamayantaka ghrta* and *Virataradi kashaya* (Sivarajan & Balachandran, 1996).

816. *Spermacoce latifolia* Aubl. (Plate 138 B)


Family: Rubiaceae

Vernacular Name: San: Bukah, Madanaghanta
- Kan: Daarekaddi, Madanaganti
- Mal: Tharthavel, Kudalchurukki
- Tulu: Daarekaddi

Habit: Diffuse herb.

Habitat: Wastelands.

Status: Common. Exotic and weed.

Description: Diffuse herb, with 4-angled hispid stem; angles prominently winged. Leaves simple, broadly ovate or elliptic, yellow-green when dry, puberulous; stipules with papillate bristles. Flowers in axillary clusters. Calyx 4-lobed. Corolla funnel-shaped, white to purplish-pink; lobes 4, ovate to triangular. Stamens 4. Fruit ellipsoidal to subglobose, pubescent capsule.

Uses: *Whole plant decoction is recommended for patients suffering from dysentery.

Etymology: Kudalchurukki (intestine shrinking) and Daarekaddi (channeled stick or stem) are due to its therapeutic efficacy and angled or channeled stem.

Note: It is used in synonymous with *Spermacoce hispida*.
817. *Sphaeranthus indicus* L. (Plate 138 C)

Syn: *Sphaeranthus hirtus* Willd.

Family: Asteraceae

Vernacular Name: San: Alambusa, Hapusa, Kadambapuspi

   Eng: Indian globe flower, East Indian globe thistle

   Kan: Adike kasa, Gadde karande, Bettu karande

   Mal: Adakkyamaniyan, Mangachedi

   Tulu: Bottu karande, Karande

Habit: Erect herb.

Habitat: Paddy fields.

Status: Common. Weed.

Description: Erect aromatic herb, with 4-angled stem; wings toothed, glandular hairy. Leaves simple, oblongate or spatulate, strongly decurrent at base, whitish-pilose. Heads heterogamous, in terminal ovoid-globose glomerules; involucral bracts membranous; peduncles with narrow toothed wings. Florets purplish. Outer florets female; corolla narrowly tubular, 2 – 3-lobed. Inner florets bisexual; corolla tubular, 5-dentate. Stamens 5, with sagittate anther-bases. Fruit oblong, angular achene, minutely puberulous on the ribs.

Uses: *Whole plant boiled in buttermilk is given to stop dysentery. Whole plant decoction is recommended for block in urine flow, indigestion, cough, fever and as an antiseptic agent. Plant paste is applied for skin diseases. *Plant ash is taken for gastric stomachache and to increase brain power. Whole plant decoction has diuretic and laxative property. *Root decoction with cumin powder is used for upset stomach. Root extract with honey is consumed for cough and infections. *Seed powder is taken to expel intestinal worms. *Root bark is applied for piles. Flower extract is recommended to purify blood. Whole plant decoction is used internally and paste is applied externally for rheumatism. *Dried plant powder is given for 48 days (12 days in buttermilk and next 12 days in rice cooked water.) for strengthening
the body of ladies. *Plant extract is poured into nose as nasya* for sinusitis and rhinitis. Plant extract is much used for liver and spleen disorders. Whole plant decoction is recommended for urinary disorders. *Whole plant, and Curcuma longa rhizome paste is applied externally and whole plant decoction is taken internally for lymph node swellings. *Root bark boiled in buttermilk is consumed at morning in empty stomach while root paste with buttermilk is applied externally for bleeding piles. Plant decoction is a nerve tonic, used for worms, phlegm, piles, jaundice, tumours, lymph node swellings, diabetes and chronic skin diseases. *Whole plant extract with buttermilk is used internally for diarrhoea due to indigestion.

Etymology: Kadambapuspi (cadamba flowered), Gadde karande and Bottu karande (paddy field Carissa) are due to its characteristic head inflorescence showing resemblance with that of cadamba as well as fruits of Carissa and restriction to paddy fields.

Note: Dried plant is kept along with the crops to prevent insect attack. Plant is used as a fertilizer and nematicide to Coccinia grandis plants. It is used in the preparation of Kumaryasava, Surasadi taila, Dhanvantara ghrta, Vatagajankusa rasa, Ratnagiri rasa and Sukumara kashaya. Sphaeranthine is the active constituent (Kapoor, 1990; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

**818. Spilanthes calva** DC. in Wight (Plate 138 D)

Syn: Spilanthes acmella sensu Hook. f.

Family: Asteraceae

Vernacular Name: San: Sarahattika

Eng: Paracress, Toothache plant

Kan: Hommugulu

Mal: Akravu, Palluvedanachedi

Tulu: Koolibenetha dai

Habit: Scandent herb.

Habitat: Wastelands and marshy places.
Status: Common.


Uses: Flower bud is used as local anesthesia in case of toothache. Plant paste is a wound healer, stops bleeding from cuts and wounds. It is also used for swellings. *Flower bud along with tubers of Ipomoea mauritiana and Protasparagus racemosus used in the preparation of a sexual tonic. Plant extract is taken to expel phlegm and for intestinal worms. Whole plant paste is applied for septic wounds and pain. *Chewing of its bud increases salivation and is useful for tonsillitis, sound fall and clear voice. Root decoction is used for dysentery, kidney stones and urine block.

Etymology: Hommugulu (one which spits gold), Palluvedanachedi and Koolibenetha dai (toothache plant) are due to its yellow heads and therapeutic efficacy against toothache.

Note: Plant juice is insecticidal. Much valued drug for toothache. α-myristin, α-angustin, β-sitosterol, phytosterin and spilanthol are the active constituents with anesthetic properties (Chaudhri, 1996).

819. *Spilanthes paniculata* Wall ex DC. (Plate 138 E)

Syn: Spilanthes acmella var. paniculata (DC.) Clarke

Family: Asteraceae

Vernacular Name: San: Sarahattika

Eng: Paracress, Toothache plant

Kan: Hommugulu

Mal: Akravu, Palluvedanachedi

Tulu: Koolibenetha dai

Habit: Erect herb.

Habitat: Moist places.
Status: Frequent.


Uses: Same as *Spilanthes calva*.

Etymology: Hommugulu (one which spits gold), Palluvedanachedi and Koolibenetha dai (toothache plant) are due to its yellow heads and therapeutic efficacy against toothache.

Note: Plant juice is insecticidal. Much valued drug for toothache. It is used in synonymous with *Spilanthes calva*.

820. *Spondias pinnata* (L. f.) Kurz. (Plate 138 F)

Syn: *Spondias mangifera* Willd.

Family: Anacardiaceae

Vernacular Name: San: Amrataka, Markatamra, Kapichuda

Eng: Hog plum, Indian hog plum, Wild mango

Kan: Amatekaayi, Ambate

Mal: Ambazham, Kattambazham

Tulu: Ambate, Kattambate

Habit: Medium-sized tree.

Habitat: Grown in fields and gardens.

Status: Common.

Uses: Bark decoction is used for piles, urinary diseases and diarrhoea. Paste prepared by boiling its bark or leaf pieces and coconut gratings in coconut oil is applied for ulcers due to burn. Root paste or decoction is recommended for normalizing menstruation. Leaf and fruit juice is poured into the ear in case of earache. Fruit and bark juice is taken to stop diarrhoea. Bark decoction is consumed for cardiac troubles, indigestion and to normalize menstruation. Fruit extract is regularly taken for malnutrition in children. Fruit extract is a digestive, used for piles, diarrhoea and urinary disorders. Oil prepared from its leaf and bark juice is used for burns. Bark paste mixed with human hair ash is applied to remove the marks of burn. *Tambuli* prepared from its tender leaf is useful for rheumatism, indigestion and dysentery (not recommended for those with biliousness). Shoot tip, cardamom, Hyoscyamus niger, Holarrhena pubescens seeds, turmeric, long pepper and ginger decoction is used for malnutrition in children. Paste prepared from its leaf pieces heated with coconut oil after adding coconut gratings is applied for burns. Leaf (fried in coconut oil) powder mixed with equal quantity of fried hair powder is heated with coconut oil into a thick paste which is applied for removing burnt marks.

Etymology: Markatamra (monkey mango) is due to its soft wooded stem and characteristic acidic fruits resembling mango.

Note: It is used in the preparation of Pathadi gutika, Pancamla taila, Annabhedisindura, Pusyanuga churna, Dadhika ghrtta and Varahyadi ghrtta (Sharma et al., 1998; Sivarajan & Balachandran, 1996). Fruits are used as vegetable.

821. Stachyphrynium spicatum (Roxb.) Schum. (Plate 139 A)

Family: Marantaceae

Vernacular Name: Kan: Kaadukoove
    Mal: Kattukoova
    Tulu: Kattukoove

Habit: Acaulescent herb.
Habitat: Forest undergrowths.

Status: Frequent.

Description: Acaulescent herbs, with creeping rhizome. Leaves radical, oblong; petioles longer than the blade. Flowers white, in narrow simple spike, arising directly from the rhizome; bracts ovate. Sepals 3, narrow. Corolla-tube longer than the lobes; lobes 3. Outer petaloid staminodes obovate, clawed. Fruit 3-seeded capsule.

Uses: Same as *Maranta arundinacea*.

Etymology: Kaadukoove, Kattukoova and Kattukoove (wild arrowroot) are due to its wild nature and close affinity with *Maranta arundinacea*.

Note: Usually used as a substitute for *Maranta arundinacea*.

822. *Stachytarpheta jamaicensis* (L.) Vahl. (Plate 139 B)

Syn: *Stachytarpheta indica* sensu Clarke.; *Stachytarpheta indica* (L.) Vahl. var. *jamaicensis* (L.) Moon.

Family: Verbenaceae

Vernacular Name: Eng: Jamaica vervain, Wild verbena  
Kan: Kari uttarane, Kaadu uttarane  
Mal: Narivalan, Seemakongini  
Tulu: Kattu uttarane

Habit: Tall herb.

Habitat: Along roadsides.

Status: Common. Exotic and weed.

Description: Tall herb. Leaves simple, elliptic-ovate, decurrent at base. Flowers in terminal elongate spikes; rachis deeply excavated; bracts lanceolate. Calyx
compressed, 5-lobed. Corolla salver-shaped, blue-purple; tube cylindric, curved; limb oblique, with 5 spreading lobes. Stamens 2. Fruit cylindric capsule.

Uses: *Whole plant, outer skin of *Bambusa bambos* stem, *Homonoia riparia, Pseudarthria viscida, Desmodium gangeticum* roots and *Xylia xylocarpa* bark decoction is used for pain due to bruises. Whole plant paste is applied for cuts, wounds and pain while its decoction is recommended for gas trouble, asthma, bronchitis and lung disorders. *Leaf (heated) juice mixed with lime juice is applied for ulcers in nose. *Leaf, turmeric and pepper paste is applied for fungal infections of hand and feet. Whole plant decoction is recommended for digestive problems, diabetic ulcers, worms, fever, rheumatism, diarrhoea, indigestion and cough. *Dried leaf tea is taken for fever and pain.

Etymology: Kari uttarane (black *Achyranthes*), Kaadu uttarane and Kattu uttarane (wild *Achyranthes*) are due to its blackish plant body and resemblance of its spike with that of *Achyranthes*.

Note: Much used as a pain reliever.

823. *Sterculia foetida* L. (Plate 139 C)

Family: Sterculiaceae

Vernacular Name: San: Putidaru  
Eng: Hazel Sterculia, Java olive  
Kan: Peenari, Kudregotu  
Mal: Peenari, Poothimanathi, Poothiyunarthi  
Tulu: Peenari

Habit: Large tree.

Habitat: Plains and sacred groves.

Status: Occasional.

Description: Large deciduous tree. Leaves digitate with 5 – 9 leaflets; leaflets oblanceolate; stipules caducous. Flowers reddish, foetid, unisexual or polygamous,

Uses: *Oil extracted from its bark is applied for joint pain while smoke of dried bark powder or heart wood is given for malabsorption in children. *Oil prepared from its heart wood is applied for mental disorders and sleeplessness. Bark and leaf decoction is recommended to normalize the excretory system. *Heart wood, outer peels of garlic and mustard seeds are smoked for warding off fear in small children. *Heart wood oil is applied to expel maggots from wounds and also as insect or fly repellent.

Etymology: Putidaru (foul wood) and Peenari (stool smell) arose due to its foetid flowers and heart wood.

Note: It is used as an ingredient of Himasagara taila in the absence of Celtis timorensis. Oil extracted from its heart wood is used in the preparation of insecticides. Seeds are roasted and eaten.

**824. Sterculia guttata** Roxb. ex DC. (Plate 139 D)

Family: Sterculiaceae

Vernacular Name: San: Putidaru

Eng: Hazel Sterculia
Kan: Peenari, Jenukaayi
Mal: Aanathondimaram, Peenari, Thondi
Tulu: Peenari, Gonapotthelu

Habit: Large tree.

Habitat: Plains and sacred groves.

Status: Frequent.

Description: Large deciduous tree. Leaves simple, ovate or oblong, softly tomentose beneath; petioles thickened at tip. Flowers yellow-purple, foetid, unisexual or
polygamous, in terminal and axillary racemes, male and bisexual flowers mixed. Calyx densely tomentose; lobes 5, reflexed, broadly ovate. Petals absent. Staminal column reflexed. Ovary strigose with stellate hairs, 3 – 5-lobed, on a stout gynophore. Fruit woody, obovoid, bright-red or scarlet follicle, stellately villous outside.

Uses: Same as Sterculia foetida.

Etymology: Putidaru (foul wood) and Peenari (stool smell) arose due to its foetid flowers and heart wood. Jenukaayi (honey fruit) and Gonapotthelu (ox scrotum) are due to it’s the characteristic shape and colour of its fruits.

Note: Seeds are roasted and eaten.

825. Stereospermum colais (Buch.-Ham. ex Dillw.) Mabb. var. colais (Plate 139 E)

Syn: Stereospermum chelonoides sensu Wight

Family: Bignoniaceae

Vernacular Name: San: Patala, Patali
   Eng: Trumpet flower, Yellow snake tree
   Kan: Patali, Padari
   Mal: Pathiri, Poopathri
   Tulu: Padari, Birmara

Habit: Deciduous tree.

Habitat: Moist deciduous forests and plains.

Status: Frequent.

Uses: Bark and flower decoction is used for fever while that of leaf for *gulma*.
*Bark paste with butter is applied for rashes, thrush in tongue and urticaria. *Flower juice is recommended as a tonic for weakness after the attack of fever. Root decoction increases urine flow and appetite, useful for diarrhoea, hiccough, hemicrania and dropsy. Root bark decoction is taken for rheumatism. *Bark extract with lime juice is consumed for snake bite. Root or bark decoction is a digestive, used for rheumatism and children’s diseases. *Root paste with milk is applied all over the body for pit viper bite.

Etymology: Patali, Patala (pale red) and Birmara (firm tree) are due to its pale reddish tender shoots and firm stem.

Note: It is one among the *dasamulas*. It is used in the preparation of *Dasamularista, Dhanvantara taila, Chyavanaprasha, Dasamuladi kvatha, Panchamuladi kvatha, Patali taila, Patoladi kvatha, Amrtarista, Dantyadyarista, Indukanta ghrta and Agasthya rasayana* (Dey, 1994; Sharma *et al.*, 1998; Sivarajan & Balachandran, 1996).

**826. Stereospermum suaveolens** (G. Don.) DC. (Plate 139 F)

Syn: *Tecoma suaveolens* G. Don.

Family: Bignoniaceae

Vernacular Name:  
San: Patala, Patali  
Eng: Trumpet flower, Yellow snake tree  
Kan: Patali, Padari  
Mal: Pathiri, Poopathri  
Tulu: Padari, Birmara

Habit: Large tree.

Habitat: Deciduous forests and hill slopes.

Status: Occasional.

Description: Large deciduous tree. Leaves imparipinnate; leaflets broadly elliptic, serrulate when young. Flowers dull crimson, fragrant, in large terminal panicles.
Calyx campanulate, unequally 5-lobed. Corolla tubular-campanulate, curved, 2-lipped. Stamens didynamous. Fruit elongate, nearly terete, straight loculicidally 2-valved capsule.

Uses: Same as Stereospermum colais.

Etymology: Patali, Patala (pale red) and Birmara (firm tree) are due to its pale reddish tender shoots and firm stem.

Note: It is used in the preparation of Dasamularista, Dhanvantara taila, Chyavanaprasha, Dasamuladi kvatha, Panchamuladi kvatha, Patali taila, Patoladi kvatha, Amrtarista, Dantyadyarista, Indukanta ghrta, Dasamula churna and Agasthya rasayana (Dey, 1994; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

827. Streblus asper Lour. (Plate 140 A)

Family: Moraceae

Vernacular Name: San: Shakhota, Sakhotaka
Eng: Siamese rough-bush, Paper bark
Kan: Ponnolige, Mittle mara, Mittli mara
Mal: Paravamaram, Paruva
Tulu: Ponnolige

Habit: Small tree.

Habitat: Along hedges and near villages.

Status: Occasional.

Description: Small evergreen tree. Leaves simple, ovate, obovate or rhomboid, scabrid. Flowers dioecious; male in shortly peduncled globose heads; female axillary, solitary or fascicled. Perianth 4-partite. Stamens 4. Fruit globose drupe, with persistent perianth, yellow to orange when ripe.
Uses: *Stem or twig is used as tooth brush for teeth and gum problems. *Root paste is applied for ulcers and glandular swellings. *Bark decoction is recommended for gastro intestinal disorders during fever, dysentery, diarrhoea, piles and leprosy. Bark or leaf paste is applied for cuts and wounds for quick healing. *The tender coconut water in which its leaf is soaked for sometimes is taken for dysentery. *Leaf extract in tender coconut water is consumed with cumin seeds for urinary disorders. *Bark extract with tender coconut water is recommended as a cooling tonic for pregnant women.

Etymology: Paravamaram (rough tree) is due to its scabrid leaves.

Note: Sioraside and strebuloside are the active constituents. It is used in the preparation of *Brhanmanjisthadi kvatha* and *Brhanmanjisthadi churna* (Chaudhri, 1996; Sharma *et al.*, 1998).

### 828. *Strobilanthes ciliatus* Nees in Wall. (Plate 140 B)

**Syn:** *Nilgiranthus ciliatus* (Nees) Bremek.

**Family:** Acanthaceae

**Vernacular Name:** San: Sahacarah, Sairyakah  
  Kan: Karigentige  
  Mal: Karimkurunji, Kurunji  
  Tulu: Kappugentige

**Habit:** Subshrub.

**Habitat:** Evergreen forests and stream sides.

**Status:** Common.

**Description:** Subshrub. Leaves simple, elliptic-lanceate, chartaceous, base attenuate, lateral veins prominent. Flowers in axillary spikes; bracts obovate; bracteoles oblanceolate. Calyx 5-lobed; lobes connate near the middle. Corolla tubular, ventricose above, white with pink blotches on lower lip; lobes 5. Stamens 4. Fruit narrowly obovoid, pubescent capsule.
Uses: *Leaf juice or paste is applied for fungal infection of foot and friction ulcer with foul smell. Root decoction is recommended for rheumatism, cough, breathing problem, whooping cough, leucoderma, CNS problems and backache. Whole plant decoction is taken internally for septic conditions and infections. It is used externally to wash septic wounds. *Plant juice mixed with *Artocarpus hirsutus fruit juice and gingelly oil is applied for chronic wounds and ulcers. *Leaf paste is applied externally while root, cumin seeds and turmeric decoction is consumed for septic wounds and ulcers. *Root decoction is used with gingelly oil for rheumatism (during rainy season).

Etymology: Sahacarah (going together) arose as this plant grows in large masses.

Note: Plant is used to worship lord Shiva. Pink and blue dyes obtained from this plant are used to colour the saris. It is used in the preparation of *Sahacaradi taila, *Sahacaradi kashaya and *Brhat rasnadi kashaya (Sivarajan & Balachandran, 1996).

829. *Strychnos colubrina* L. (Plate 140 C)

Syn: *Strychnos wallichiana* Steud. ex. DC.; *Strychnos cinnamomifolia* Thw.

Family: Loganiaceae

Vernacular Name: San: Anjanaki, Karaskaralata
      Kan: Ballikasaraka
      Mal: Modirakanjiram, Vallikanjiram
      Tulu: Ballukkayer

Habit: Woody climber.

Habitat: Forests and sacred groves.

Status: Common.

Description: Large woody climber, with bifid circinate tendril. Leaves simple, ovate-elliptic, strongly 3-nerved. Flowers small, in short peduncled cymes, axillary and on old wood. Calyx 5-lobed. Corolla salver-shaped, greenish-white; lobes 5. Stamens 5. Fruit ovoid berry.
Uses: *Leaf, bark or root decoction is used to wash septic wounds, ulcers and as bath for rheumatic conditions. *Root bark paste is applied for scorpion and snake bites. *Purified seed paste is applied for rheumatism. *Leaf paste is applied for swellings, ulcers and wounds.

Etymology: Karaskaralata, Ballikasaraka, Vallikanjiram, Ballukkayer (climbing *Strychnos*) and Modirakanjiram (ring *Strychnos*) are due to its climbing nature, close affinity with *Strychnos* tree and characteristic circinate tendrils.

Note: It is less toxic than the *Strychnos* tree. Much used for cutaneous affections (Jain *et al.*, 1991).

**830. Strychnos nux-vomica** L. (Plate 140 D)

Family: Loganiaceae

Vernacular Name: San: Karaskarah, Visamusti, Vishatinduka  
   Eng: Nux-vomica tree, Poison nut, Snake wood  
   Kan: Kasaraka, Nanjinakoradu  
   Mal: Kanjiram  
   Tulu: Kayar, Kayer

Habit: Medium-sized tree.

Habitat: Degraded forests.

Status: Common.


Uses: *Heated ripe fruit is continuously pressed by feet (for one hour) for fungal infection of sole and burning sensation in feet and hand. Leaf decoction is used as a wash for skin diseases, arthritis and wounds. *Bark paste with lime juice is applied
for scorpion and snake bites. *Paste of tender shoot tip fried in coconut oil is applied for ulcers and wounds. Leaf decoction is recommended for headache, rheumatism and rheumatic swellings. *Bark extract with rice cooked water is taken for biliousness. Root decoction is recommended for fever, poisonous bites and biliousness. Purified seed extract is taken for stroke and leprosy. Heated leaf is used as a pain reliever. Leaf or seed paste is applied for poisonous bites. Purified seed extract is consumed for rheumatism. Oil extracted from the seed is applied for swellings and rheumatism. *Eggs of red ant seen on this tree are ground with hot water and preserved. Half spoon of this is given for a week for malnutrition in children. Bath with root decoction is recommended for rheumatoid arthritis, burning sensation of whitlow and for purifying blood. *Yellow portion seen inside the bark is crushed with betel leaf and used for constipation. *Tender shoot tip paste with butter is applied for furuncles. *Seed, *Acorus calamus rhizome and *Withania somnifera root paste with butter is applied over the penis for erection and strength. *Purified seed (heating in fire) paste is applied for tetanus, abscess, poisonous bites and rheumatism. Bark is kept in mouth to prevent the spread of poison above the neck (in case of snake bite). *Leaf paste itself is the antidote for its thorn poisoning. Seed kernel paste is applied for dog bite. *Crushed fruit boiled with castor or coconut oil is applied for warts. *Root paste with milk or tender coconut husk juice or rice washed water is applied for pus release from the swellings. *Seed decoction is boiled with ghee and resulting ghee is applied for heel cracks. *Root ground with rice washed water is applied by mixing it with *Datura metel juice for swellings. *Root extract mixed with equal quantity of cheese is applied or root decoction mixed with milk is used as *dhara* for septic ulcers and wounds. *Tender shoot tip paste boiled with oil is applied on the head for sleeplessness. *Oil prepared using yellow portion of the bark is applied for skin diseases.

Etymology: Nanjinakoradu (poison wood) and Visamusti (handful of poison) are due to the poisonous nature of this tree.

Note: After delivery when woman walks out of her house she wears branch or leaf of this plant around her waist. Leaf is used to ward off evil spirits. Kaempferol,
quercetin, protostrychnine, strychnine, nor-macusine, β-loganin, brucine, vomicine, methoxystrychnine, c-mavacurine, pseudobrucine, α & β-colubrine, pseudostrychnine, igasurine, strychnicine and novacine are the active constituents. It is used in the preparation of Agnitudi vati, Vishamusti taila, Visatinduka taila, Maha visagarbha taila, Ekangavira rasa, Visatinduka vati, Navajivana rasa and Lakshmivilasa taila (Dey, 1994; Jain et al., 1991; Kapoor, 1990; Sharma et al., 1998).

831. Strychnos potatorum L. f. (Plate 140 E)

Family: Loganiaceae

Vernacular Name: San: Cakshushya, Katakah
   Eng: Clearing nut tree
   Kan: Chillada mara, Chilli beeja
   Mal: Chillam, Thettamparel
   Tulu: Chilibitthu

Habit: Medium-sized tree.

Habitat: Deciduous forests.

Status: Rare.

Description: Medium-sized tree. Leaves simple, elliptic, chartaceous, quintuple-ribbed. Flowers small, in cymes from the top of previous year’s wood. Calyx 5-lobed. Corolla salver-shaped; throat with woolly tomentum; lobes 5. Stamens 5. Fruit globose berry.

Uses: *Seed paste is applied around the eyes for boils on the sides of eye. Seed extract is taken for urinary diseases (it has diuretic property). *Seed paste is applied for furuncles in the breast. *Seed powder mixed with honey is applied for wounds and furuncles while that with milk for burning sensation in the eyes. Seed extract is recommended for over urine discharge, protein in urine, diabetes and eye diseases. *Seed paste with milk is applied for boils in eye brows.
Etymology: Chilli beeja (small seeds) and Cakshushya (pleasing to the eyes) are due to its small seeds and much use for eye diseases.

Note: Seeds are used to purify muddy water, asavas and aristas. Seed is used to clean utensils. Brucine and galactomannan are the active constituents. It is used in the preparation of Dasamularista and Niruryadi gutika (Chaudhri, 1996; Sharma et al., 1998).

832. *Swertia corymbosa* (Griseb.) Wight ex Clarke (Plate 140 F)

Family: Gentianaceae

Vernacular Name: San: Kiratikta

   Kan: Kiratakadii, Nelabevu

   Mal: Avalpoovu

   Tulu: Nelabevu

Habit: Erect herb.

Habitat: Grassy rocks of higher altitude.

Status: Rare


Uses: Whole plant decoction is recommended for fever, worms, digestive disorders, indigestion and gas trouble. *Plant extract mixed with extracts of orange rind and cardamom seeds are applied for swellings. *Whole plant decoction is taken by adding jaggery once a day for three days for blood purification and for stomachache due to worms. *Whole plant, *Tinospora cordifolia* stem and neem bark decoction is used once a day for fever. *Plant decoction is consumed with sugar for stomach swelling due to gas trouble in children. *Whole plant, *Glycyrrhiza glabra* and long pepper powder decoction is recommended by adding equal quantity of milk and sugar twice a day for increasing body strength.
Etymology: Nelabevu (ground neem) is due to its highly bitter nature and use in synonymous with *Andrographis paniculata*.

Note: It is used in synonymous with *Andrographis paniculata*.

**833. *Symphorema involucratum* Roxb. (Plate 141 A)**

Family: Verbenaceae

Vernacular Name: Kan: Narambodalu
Mal: Njarambodal
Tulu: Narambodal

Habit: Scandent shrub.

Habitat: Laterite plains.

Status: Occasional.


Uses: *Whole plant paste with water is applied for cuts, wounds, nervine spasm and muscle sprains.*

Etymology: Narambodalu, Njarambodal and Narambodal (medicine for nervine spasm) are due to its therapeutic efficacy.

Note: Much used by the traditional bonesetters.

**834. Symplocos cochinchinensis** (Lour.) Moore ssp. *laurina* (Retz.) Nootb. (Plate 141 B)

Syn: *Symplocos spicata* Roxb.; *Symplocos laurina* (Retz.) Wall. ex G. Don.

Family: Symplocaceae

Vernacular Name: San: Lodhra, Rodhra
Eng: Lodh tree, Symplocos bark
Habit: Small tree.

Habitat: Along streamsides in forests.

Status: Occasional.


Uses: Bark decoction with milk is taken for menstrual disorders. *Bark paste is applied for pus release and easy heal of furuncles, bruises and boils.

Etymology: Rodhra (one which stops or arrests) arose from its therapeutic efficacy. It is much used to normalize menstrual bleeding.

Note: Seeds are used as beads for chains worn by the tribes. It is used in the preparation of Lodhrasava, Gandha taila, Dasamularista, Draksadi kashaya and Pusyanuga churna (Sivarajan & Balachandran, 1996). It is used in synonymous with Symlocos racemosa.

835. Symlocos racemosa Roxb. (Plate 141 C)

Syn: Symlocos candolleana Brand.

Family: Symlocaceae

Vernacular Name: San: Lodhrah, Rodhra
    Eng: Lodh tree, Symlocos bark
    Kan: Lodhrah, Shabarlodhra, Pachoti
    Mal: Pachotti, Pambari
    Tulu: Lodhrah, Pachotti

Kan: Lodhra, Shabarlodhra, Pachoti
Mal: Pachotti, Pambari
Tulu: Lodhra, Pachotti
Habit: Small tree.

Habitat: Evergreen forests.

Status: Rare

Description: Small tree. Leaves simple, elliptic or elliptic-lanceate, thick-coriaceous, tomentose beneath. Flowers small, in terminal and axillary unbranched spikes. Calyx tomentose; lobes 5, lanceate. Corolla white; lobes 5. Stamens infinite, in many series. Fruit ellipsoid drupe.

Uses: Flower or stamen extract with milk is taken as a blood purifier, tonic for leucorrhoea and to arrest diarrhoea. Flower extract is highly recommended for leucorrhoea and ovarian diseases.

Etymology: Rodhra (one which stops or arrests) arose from its therapeutic efficacy. It is much used to normalize menstrual bleeding.

Note: It is one of the major ingredients of Lodhrasava, Brhat gangadhara churna, Pusyanuga churna, Lodhradi kvatha and Pippalasava. Loturine, loturidine, kinorin and colloturine are the active constituents (Dey, 1994; Kapoor, 1990; Sharma et al., 1998).

836. Synedrella nodiflora (L.) Gaertn. (Plate 141 D)

Syn: Verbesina nodiflora L.

Family: Asteraceae

Vernacular Name: Eng: Synedrella
              Kan: Naayitulasi, Kattutulasi
              Mal: Mudianpaccha
              Tulu: Kattutholasi

Habit: Erect herb.

Habitat: Weed in cultivated lands.
Status: Common. Exotic.


Uses: *Leaves are rubbed as an antidote for Laportea allergy. Plant paste is applied for wounds, cuts and skin diseases. *Plant juice is applied to arrest bleeding from cuts and wounds.

Etymology: Naayitulasi (dog basil), Kattutulasi and Kattutholasi (wild basil) are due to its wild nature and characteristic aroma.

Note: Both Synedrella nodiflora and Ageratum conyzoides are known as Kattutulasi or Naayitulasi.

837. *Syzygium aqueum* (Burm. f.) Alston (Plate 141 E)

Syn: *Eugenia aquea* Burm. f.

Family: Myrtaceae

Vernacular Name: Eng: Watery rose-apple
               Kan: Nakshatra nerale
               Mal: Chamba
               Tulu: Nakshatra nerale

Habit: Small tree.

Habitat: Cultivated in gardens.

Status: Common.

Stamens many. Fruit turbinate berry, crowned with fleshy calyx segments, white to red, glossy.

Uses: *Fruit juice is thirst reliever, useful for burning sensation, dysentery and mouth ulcers.

Etymology: Nakshatra nerale (star black plum) is due to its characteristic fruits and aroma similar to that of black plum.

Note: Fruits are edible.

838. Syzygium aromaticum (L.) Merr. & Perry (Plate 141 F)

Syn: Eugenia caryophyllata Thunb.

Family: Myrtaceae

Vernacular Name:  San: Devakusuma, Lavanga, Varala
Eng: Clove tree, Cloves
Kan: Lavanga
Mal: Grambu, Karayambu
Tulu: Lavango

Habit: Medium-sized tree.

Habitat: Cultivated.

Status: Common. Exotic.


Uses: Clove oil is used as a local anesthesia for toothache, also for strengthening gums and teeth. Flower bud extract is an aphrodisiac agent, used for cough and flatulence. Flower bud extract expels phlegm. *Bark or leaf paste is used as a pain reliever. Bud is kept in the mouth for getting relief from cold and rhinitis. *Flower
bud extract is given to sip for vomiting during pregnancy. *Bud paste with hot water is applied for pimples. *Flower buds, cucumber and turmeric ground with coconut milk are applied for pimples. *Buds, long pepper, nutmeg, cumin, ginger, pepper, liquorice and *Clerodendrum serratum* powder is given twice a day for 48 days in case of asthma and bronchitis. *Two cloves are eaten before meals for cracks in tongue due to increased body heat. *Buds crushed with salt are applied for toothache.

Etymology: Devakusuma (divine flower) arose as its flower buds are the officinal part with diverse uses.

Note: Flower buds are used as condiment. It is used in the preparation of *Lavangadi churna, Lavangadi vati, Devakusumadi rasa, Sudarsana churna, Pippalasava* and *Khadirarista*. It has eugenol, eugenacetate and caryophyllene as active constituent (Dey, 1994; Sharma *et al.*, 1998).

**839. *Syzygium caryophyllatum* (L.) Alston (Plate 142 A)**

Syn: *Syzygium caryophyllaeum* sensu Gamble

Family: Myrtaceae

Vernacular Name: San: Hrasvajambuh, Jambuh  
Kan: Kuntu nerale, Kuntangila  
Mal: Cherunjara, Karinjara, Njara  
Tulu: Kuntangeru, Kuntala

Habit: Small tree.

Habitat: Forests and Laterite plains.

Status: Common.

Uses: *Tender shoot tip tambuli* is recommended for improving digestive system and liver functions. Flower or leaf decoction is used for mouth ulcers and gum problems. Tender shoot tip decoction is recommended for menstrual problems, burning sensation in the body and heart burn. *Root decoction is taken along with cumin for vomiting. Root and leaf decoction purifies blood. Leaf decoction is consumed for heart burn, wounds and ulcers. *Leaf, flower or fruit decoction is used as gargle for strengthening gums. *Root and bark powder is applied for chronic infected ulcers. *Oil prepared using its root juice is applied for burns. Tender shoot tip decoction is used for oral ulcer, mouth ulcer, skin diseases and blood discharges. *Tender shoot tip ground with fresh milk is consumed for a week for leucorrhoea. *Bark decoction is used to wash wounds and ulcers. *Leaf juice mixed with lime juice and sugar is used as a tonic for poisonous bites and to remove poisons from the body. *Leaf juice mixed with sugar is recommended for jaundice. Fruit extract and bark decoction is also recommended for diabetes. Leaf decoction is used as gargle for gum decay, ulcers, pyorrhoea, gum bleeding, foul smell of teeth and loose teeth. *Leaf boiled in milk is taken for 2 – 3 days for vomiting, burning sensation in the chest and digestive problems. Tender shoot tip chutney is useful as a blood purifier for phlegm and septic ulcers. *Tender shoot tip is chewed for mouth ulcers. *Bark decoction is consumed with milk for cracks in mouth and lips. *Bark (collected using stone) extract with milk is used for anal prolapse due to dysentery. *Tambuli* prepared using its tender shoot tip, those of Careya arborea, Mangifera indica, Ixora coccinea and Psidium guajava is given at least twice a month to increase immunity in children, to control phlegm and asthma. *Tender shoot tip (fried in ghee) ground with curd is used for cough and dry cough.

Etymology: Hrasvajambuh, Kuntu nerale and Cherunjara (smaller black plum) are due to its smaller fruits resembling that of black plum.

Note: Stem is used as support for vegetable and betel vines. Ripe fruits are edible. It is used in the preparation of Usirasava, Varahyadi ghrta and Lohasindura (Sivarajan & Balachandran, 1996).
840. *Syzygium cumini* (L.) Skeels var. *cumini* (Plate 142 B)

Syn: *Eugenia jambolana* Lam.; *Syzygium jambolanum* (Lam.) DC.

Family: Myrtaceae

Vernacular Name: San: Jambu, Jambula, Phalendra
   Eng: Black plum, Jambu, Jambol, Jaman
   Kan: Nerale
   Mal: Njara, Njaval
   Tulu: Nerolu

Habit: Large tree.

Habitat: Forests, also planted as avenue tree.

Status: Common.


Fruit ovoid, globose or oblong berry, pink, turning black-purple when ripe.

Uses: Seed powder or bark decoction is much used for diabetes. Bark decoction is recommended for ulcers in the mouth, diabetes and liver disorders. It is also taken for dysentery, diarrhoea, fever, burning sensation in the body, thirst, liver problems and to wash septic ulcers. *Seed decoction is consumed for amoebiasis and dysentery. Root decoction is recommended for indigestion. Fruit juice relieves excessive thirst, useful for dysentery, burning sensation in the body and mouth ulcers. *Bark and *Phyllanthus emblica* bark decoction is used for fever. *Bark extract with cumin seeds is poured into the eye in case of eye pain, injury to eyes and eye infections. *Seed or leaf decoction is recommended for allergic complaints. Bark decoction is a cooling agent, taken for skin diseases and digestive problems. *Tambuli* prepared from shoot tip is useful for decreased urine flow, stomachache and phlegm. *Seed powder dissolved in hot water or along with turmeric powder in honey is recommended for over urination. *Bark crushed with three pepper seeds is
poured into the eye in case of eyeache. *Tender shoot tip extract with cumin seeds in milk is consumed for dysentery. *Bark (collected using stones) crushed with buffalo milk is taken for anal prolapse due to dysentery. *Tender shoot tip ground with milk or rice washed water is given to prevent abortion.

Etymology: Jambu (belonging to India), Phalendra (king of fruits) and Nerale (purple) are due to its indigenous nature and characteristic purple fruits with diverse uses.

Note: Ripe fruits are edible. Wood is sued as timber. It is one of the important ingredients of Usirasava, Varahyadi ghṛta, Pusyanuga churna, Lohasindura, Jambadya taila and Panchapallava yoga. Ellagic acid, jamboline, gallic acid and jambosine are the active constituents (Dey, 1994; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

**841. *Syzygium hemisphericum* (Wight) Alston (Plate 142 C)**


Family: Myrtaceae

Vernacular Name: Kan: Kaadu pannerale, Naayi nerale
Mal: Payanjaval, Tholnjaval
Tulu: Naayi nerolu

Habit: Medium-sized tree.

Habitat: Evergreen and semi evergreen forests.

Status: Occasional.

Description: Medium-sized tree. Leaves simple, ovate-lanceolate, narrowed into the petiole at the base. Flowers white, fragrant, in short terminal panicled cymes. Calyx-tube hemispheric, slightly rugose outside; lobes rounded, deflexed or spreading. Petals 4, suborbicular, concave. Stamens numerous. Fruit globose berry, crowned with the calyx-lobes.
Uses: *Fruit has the capacity to increase water content in the body.

Etymology: Kaadu pannerale (wild *Syzygium jambos*) and Naayi nerale (dog black plum) are due to its wild nature, close affinity of fruits with that of *Syzygium jambos* and *Syzygium cumini*.

Note: Ripe fruits are edible.

842. *Syzygium jambos* (L.) Alston (Plate 142 D)

Syn: *Eugenia jambos* L.; *Jambosa vulgaris* DC.

Family: Myrtaceae

Vernacular Name:  San: Campeyah, Jambu, Jambula  
Eng: Malabar plum, Pomme rosa, Rose apple  
Kan: Pannerale, Jambu nerale  
Mal: Champa, Malaykachampa, Seema jamba  
Tulu: Jambunerolu

Habit: Small tree.

Habitat: Cultivated

Status: Occasional.


Uses: Fruit eaten or its juice is taken as a nutritious tonic for gastritis. Seed powder or bark decoction is recommended for diabetes. *Leaf decoction is used as eye wash in case of eye pain. Bark decoction is recommended for gastric troubles, sound clearance, dysentery and phlegm. *Seed paste is applied for abdominal spasm and sexual disorders. *Seed extract with butter milk is consumed for dysentery. *Bark extract with water is taken once a day for body swelling due to anaemia. *Root
ground with lime juice is used twice a day for stomachache due to worm infestation. *Root and *Celastrus paniculatus root ground with lime juice is taken thrice a day for expelling phlegm. *Cotton seeds soaked in its bark decoction are given for diarrhoea in cattle.

Etymology: Jambu (Indian), Jambu nerale and Jambunerolu (Indian black plum) are due to its indigenous nature and close affinity with black plum.

Note: Ripe fruits are edible.

843. *Syzygium travancoricum* Gamble (Plate 142 E)

Family: Myrtaceae

Vernacular Name: Kan: Vathamkolli
     Mal: Poriyal, Vathamkollimaram
     Tulu: Vathamkolli

Habit: Large tree.

Habitat: Plains and sacred groves.

Status: Occasional.


Uses: *Bark decoction is taken internally and externally as bath for rheumatism and joint pain. Bark decoction is also recommended to expel phlegm. *The water in which its leaves are boiled is poured as *dhara* for rheumatic body pain.

Etymology: Vathamkolli (rheumatism killer) and Vathamkollimaram (rheumatism killer tree) are due to its therapeutic efficacy against rheumatism.

Note: Much used for rheumatic complaints.
844. Syzygium zeylanicum (L.) DC. (Plate 142 F)

Syn: Eugenia zeylanica (L.) Wight

Family: Myrtaceae

Vernacular Name:  Kan: Gudda nerale, Jogimara, Bilikuntala  
Mal: Poochappazham, Pula, Velutthakanali  
Tulu: Boldukuntala

Habit: Small tree.

Habitat: Forests and along banks of streams.

Status: Common


Uses: *Leaf decoction is used as a gargle for mouth ulcers, also taken internally for dysentery.  *Leaf tambuli* improves gastro intestinal tract. *Bark and Pterocarpus marsupium bark decoction or gruel is used for leucorrhoea. *Root decoction with milk is recommended for leucorrhoea and other menstrual problems.  *Bark or root and coriander decoction is consumed with sugarcandy for vomiting due to biliousness.  *Tender shoot tip ground with cumin seeds in rice washed water is given at early morning in empty stomach for foul smell of urine in children.  Bark decoction is recommended for phlegm, biliousness, worms, breathing problems and diarrhoea.  *Tender shoot tip and leaf decoction is used for gas trouble, gastric ulcer and bleeding (over dose may result in constipation).  *Root and leaf decoction expels worms.

Etymology: Gudda nerale (hill black plum), Bilikuntala and Boldukuntala (white Syzygium caryophyllatum) are due to its restriction to the hills and white fruits resembling that of Syzygium caryophyllatum.

Note: Ripe fruits are edible.
845. *Tabernaemontana divaricata* (L.) R.Br. (Plate 143 A)

Syn: *Tabernaemontana coronaria* (Jacq.) Willd.; *Ervatamia coronaria* (Jacq.) Stapf.; *Ervatamia divaricata* (L.) Burkill

Family: Apocynaceae

Vernacular Name: San: Nandivrksah, Nandyavartah  
Eng: East Indian rosebay, Crepe jasmine  
Kan: Nandibattalu, Nandibattlu  
Mal: Kattampale, Nandiyarvattom  
Tulu: Nadibattal

Habit: Shrub.

Habitat: Grown in gardens.

Status: Common.


Uses: Flower ground with cumin seeds is poured into the eyes for eye irritation and conjunctivitis. Flower or leaf juice alone is poured into the eyes in case of dust in eye. *Root paste with lime juice is applied externally and two spoon extract is taken internally for herpes. *Root paste is applied for toothache. Root extract is consumed to expel intestinal worms. *Leaf paste with salt is applied for mastitis in cattle. *Leaf and raw rice seeds paste is applied around the furuncles for pus release. Root decoction is taken for polio. Bark decoction is used for biliousness. Bark paste is applied for septic wounds and ulcers. *Leaf or bark paste is applied for hardened tumours or tubercles on the skin. *Root paste with raw rice seeds is applied for 3 – 6 days for infectious swellings, septic furuncles and ulcers. Two drops of flower juice is used as eye drop twice a day in case of conjunctivitis. *Tender shoot tip tambuli* is useful for increased body heat, swellings and digestive disorders in pregnant
women. *Root paste (stored in earthen pot for a day) along with raw rice is applied for septic swellings and furuncles. *The water in which its flowers are soaked overnight is used to wash eyes in case of redness in eye, burning sensation and water release from the eyes. Root paste is applied for septic wounds and poisonous bites. Leaf paste is applied for skin diseases, to expel maggots and gum diseases. *Paste of one handful leaf and one spoon cumin seeds is applied for furuncles. *Extract of flower and tender shoot tip ground in breast milk is poured into the eyes in case of glaucoma. Flower and leaf along with raw rice seeds ground and applied around the furuncles for pus release and easy heal. *About 5 spoon extract of its root and Flueggea leucopyrus root (in equal quantity) ground with lime juice are given to women after 2 hrs of delivery to prevent infections (this is continued for ten days). *Root extract with lime juice is used both externally and internally for herpes.

Etymology: Nandivrksah (delightful tree), Nandibattalu, Nandibattlu and Nadibattal (delightful bowl) are due to its attractive salver-shaped flowers.

Note: Flowers are used to worship lord Shiva. It is much used for eye diseases and swellings.

846. Tabernaemontana heyneana Wall. (Plate 143 B)

Syn: Tabernaemontana alternifolia L.; Ervatamia heyneana (Wall.) Cooke

Family: Apocynaceae

Vernacular Name: San: Kampillakah  
      Kan: Maddarasa  
      Mal: Kundalappala, Kunninpala, Koonampala, Kampippala  
      Tulu: Kokkekaayi

Habit: Small tree.

Habitat: Disturbed forests.

Status: Common.

Uses: *Leaf paste with salt is applied in case of mastitis in cattle. *Three drops of its bark extract with salt is poured in to the throat for three days to get cure from tonsillitis. *Bark decoction is recommended for jaundice. *Leaf paste with milk is applied for chronic herpess. *Small bark piece cooked with rice is taken to normalize body functions. Leaf paste is applied for pain and tenderness of rheumatism. *Leaf paste with raw rice seeds is applied for lymph node enlargement. Leaf paste with rice washed water is applied for mastitis, tonsillitis and mumps. Bark paste is externally applied for tonsillitis. *Paste prepared from its leaves, which of *Allophylus cobbe, Pavetta tomentosa and Indigofera tinctoria is applied for three days in case of erysipelas and eczema. Leaf paste is applied for poisonous bites and rheumatism. *Bark is chewed (kept in mouth for half an hour and then gargled with water) for tonsillitis, pharyngitis and laryngitis. *Leaf paste with cumin seeds is applied for mastitis in cattle. *Leaf paste is applied for ulcers due to burn. *Half ounce extract of its bark, garlic, salt, hot water and honey is held at throat for some times before swallowing for tonsillitis. Latex is applied for whitlow, cuts and wounds. *Leaf (dried in sunlight and fried) powder is applied for scabies. *Bark extract is taken once in the morning for five days in case of intestinal worms. *About 20 drops of latex poured into half lemon is given to eat once in the morning for jaundice. *Decoction of its stem bark and Trachyspermum ammi seeds powder is recommended for diarrhoea in cattle. *Bark, Zanthoxylum rhetza bark, Tabernaemontana divaricata root and Capsicum frutescens fruit ground with lime juice is consumed for throat pain and phlegm.

Etymology: Maddarasa (king of medicines) and Kokkekaayi (hook fruit) are due to its diverse therapeutic efficacy and characteristic beaked fruits.

Note: It is sued in the preparation of Jivantyadi yamaka, Vindu ghrrtta and Abhram (101) (Sivarajan & Balachandran, 1996).
847. *Tacca leontopetaloides* (L.) O. Ktze (Plate 143 C)


Family: Taccaceae

Vernacular Name: San: Devakanda  
Eng: African arrowroot, Fiji arrowroot, East Indian arrowroot  
Kan: Handigadde, Devakanda  
Mal: Kattuchena  
Tulu: Kattukene

Habit: Erect herb.

Habitat: Among bushes.

Status: Occasional.

Description: Erect herb, with globose rootstock. Leaves 3-partite; segments variously and unequally pinnate; petiole terete. Scape longer than the petiole. Flowers pedicelled, drooping; involucral bracts oblong-lanceolate, greenish, striped with purple; inner bracts filiform, numerous, very much longer than the involucral bracts. Perianth subglobose, greenish; lobes 6, margined with purple. Stamens 6. Fruit subglobose berry, 6-ribbed, yellow.

Uses: *Cooked whole plant or corm is eaten for piles.

Etymology: Devakanda (god’s tuber), Handigadde (pig tuber), Kattuchena and Kattukene (wild *Amorphophallus*) are due to its characteristic tubers and close affinity with *Amorphophallus*.

Note: Much valued drug for piles.

848. *Tagetes erecta* L. (Plate 143 D)

Family: Asteraceae

Vernacular Name: San: Jhandu, Sthulapushpa  
Eng: Mari gold  
Kan: Chendumallige
Mal: Chendumalli  
Tulu: Chendumallige

Habit: Erect herb.

Habitat: Grown in gardens.

Status: Common.

Description: Erect herb. Leaves pinnate; leaflets lanceolate, gland-dotted. Heads heterogamous, solitary on swollen peduncles; involucral bracts uniseriate, with oil glands. Ray florets yellow to orange, pistillate; ligules broad, 3-lobed. Disc florets infundibuliform, 5-lobed. Stamens 5. Fruit linear, blackish achene; pappus of 3 – 10 unequal scales.

Uses: Flower decoction is used as a germicidal agent in the treatment of cuts and wounds.

Etymology: Sthulapushpa (thick flower), Chendumallige and Chendumalli (ball jasmine) are due to its characteristic thick and much used flowers.

Note: This is often planted in between Capsicum plants to repel insect pests. Plant extract is known for its insecticidal, pesticidal and nematicidal activities.

849. *Talinum triangulare* (Jacq.) Willd. (Plate 143 E)

Syn: Portulaca triangularis Jacq.

Family: Portulacaceae

Vernacular Name: Eng: Ceylon spinach, Sweetheart, Surinam purslane  
Kan: Nelabasale  
Mal: Ceylon cheera  
Tulu: Nelabasale

Habit: Succulent herb.

Habitat: Cultivated in gardens.
Status: Frequent. Exotic.

Description: Succulent herb. Leaves simple, elliptic to obovate. Flowers in terminal panicles. Sepals 2. Petals 5, red-purple, obovate. Stamens numerous. Fruit globose, 3-valved capsule, yellow or pinkish.

Uses: *It is nutritious but decreases appetite for food. *Whole plant tambuli is hot in nature and is useful for mouth ulcers (it is not recommended for women immediately after delivery, old and those who suffer from rheumatism. This should be used before Yugadi*).

Etymology: Nelabasale (ground spinach) is due to its herbaceous nature, succulent plant body and use as leafy vegetable.

Note: Much used as leafy vegetable. It is one of the important ingredients of Suskamulaka taila, Kumaryasava, Dhanvantara ghṛta, Sukumara ghṛta and Punarnavadyarista (Sharma et al., 1998).

850. Tamarindus indica L. (Plate 143 F)

Family: Caesalpiniaceae

Vernacular Name: San: Amlavrksha, Chincha, Tindidika, Tintrini
Eng: Tamarind tree, Sampalok, Indian date
Kan: Hunase hannu, Hunase huli
Mal: Kolpuli, Valampuli
Tulu: Oteppuli

Habit: Large tree.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Large evergreen tree. Leaves paripinnate; leaflets oblong, glabrous. Flowers in racemes at the ends of branches; bracts and bracteoles ovate-oblong, coloured, caducous. Sepals 4, reddish outside. Petals: upper 3 well-developed,
obovate-elliptic, yellow with red stripes, lower 2 minute. Stamens monadelphous, 3 perfect. Fruit linear-oblong, incurved, 3 – 10-seeded, pendulous pod, with brittle epicarp, pulpy mesocarp and leathery septate endocarp.

Uses: *Leaf decoction is poured over the body parts to relieve rheumatic pain. Fruit pulp juice is recommended for biliousness. *Steam of boiled fruit juice is given for pain. *Fried seeds (by rubbing the portion where it germinates with a stone) are placed over the poisonous bites (after poison absorption, the seeds fall off and it is repeated several times). *Paste prepared by mixing its leaf juice with cow dung ash in soil is applied for mumps. *Leaf juice, *Leucas aspera* leaf juice and lime paste is used for mumps. *Fruit pulp heated with salt is pressed over twisted ankle. Oil prepared using its leaf juice is applied for rheumatism. *Leaf fried with gingelly oil (tied in a cloth) is pressed over the body for rheumatism. *Leaf decoction is taken internally for biliousness and jaundice while externally to wash septic wounds and burning eyes. Fruit pulp is used for sound fall, constipation and indigestion. Seed paste with water is applied for vitiated ulcers and wounds. Fruit extract is a cardiac tonic. *Oil prepared by boiling its leaf veins in coconut oil is applied over the head for cold in children. *Extract of preserved fruit pulp ground with salt and *Litsea coriacea* bark in rice cooked water is heated in an earthen pot and is poured in the form of dhara while their paste is applied externally for ankle twist, sprain and blackening or hardening of veins. Fruit pulp paste is applied for nervine pain. Oil prepared using bark or leaf juice is applied for rheumatism. *Bath with leaf decoction helps to relieve body weakness. Fruit juice relieves thirst and biliousness. *Root bark extract with butter milk is consumed to induce menstruation. Paste of fruit pulp, *Citrus aurantium* dried fruit powder and salt is applied for hardened blood clots due to bruises. *The supernatant liquid of its bark ash dissolved in water is given to drink in case of urine block and burning during urination. *Fruit pulp is applied (at one hour intervals) for pus release from chronic carbuncles and swellings. Bark ash is used for phlegm and rheumatism. Fruit juice with sugar is used for biliousness and as a thirst quencher. Leaf decoction is recommended as a blood purifier for pain due to rheumatism and for skin diseases. *Dried bark extract or paste is applied for piles. Inner bark decoction is recommended for digestive
disorders. *Dried bark powder is applied for bruised wounds and bone fracture in cattle. *Leaf, mustard seeds and salt ground in rice washed water is applied for mastitis in cattle. *Ground bark boiled in coconut oil is applied for blackening the brownish hairs. *10 – 12 year old fruit pulp extract is applied over the head for twelve days in case of sleeplessness. *Cleaned root bark decoction is taken with milk and sugarcandy powder for six days before menses and six days after menses in case of menstrual disorders. *Leaf juice boiled with gingelly oil (1:2) and a little Vernonia anthelmintica seed powder is applied all over the body before bath of women after delivery. *Seed and turmeric paste is applied for eczema. *Leaves along and puvan* banana stem juice ground and applied all over the body for foul body odour. *A cloth coated with its leaf vein (cooked in milk) paste is used as eye pad at night for conjunctivitis. *Dry bark ash is taken with hot water for chronic stomachache. *Root, Syzygium cumini shoot tip, Oroxyllum indicum bark, Canthium coromandelicum flower and Punica granatum flower ground with butter milk is consumed for blood dysentery. *Curd (prepared by mixing its leaf juice and milk), butter and pacche karpura* ground in a copper vessel is applied for furuncles and carbuncles on the fingers. *Root (towards north is collected using stone) crushed in milk with garlic and pepper (seven each) is consumed at morning in empty stomach for stomachache during menses (repeated every month during menses for conception). Oil prepared by boiling old fruit juice with gingelly oil is applied for bruises. *Extract of old fruit pulp and old jaggery (in equal quantity) in tender coconut water is taken internally for burning during urination. *Fruit pulp is chewed followed by intake of buttermilk mixed with a little fried asafoetida and rock salt for allergy caused by Colocasia esculenta. *Fruit pulp ground with sour butter milk is applied around the furuncle or boils for pus release and easy heal. *Fruit pulp, salt, dried and preserved Citrus reticulata fruit rind, Asystasia dalzelliana stem and pepper seeds are crushed together, ground, heated and applied for bruises, ankle twist and sprains.

Etymology: Amlavrksha (acidic tree), Valampuli (sword acidic fruit) and Oteppuli (hollow acidic fruit) are due to its acidic fruits which are sickle shaped and with brittle, loose epicarp.
Note: Fruit juice mixed with a little salt becomes a good drink for thirst during summer. It is used in the preparation of *Cincadi lehya*, *Pancamla taila*, *Hinguvacadi churna*, *Sankha dravaka*, *Sankha vati*, *Astanga lavana* and *Kottamcukkadi taila*. Tartaric, citric, malic, acetic acids, tamarindin and potassium tartarate are the active constituents with refrigerant, carminative and digestive actions (Dey, 1994; Kapoor, 1990; Sharma *et al*., 1998; Sivarajan & Balachandran, 1996).

851. *Tamilnadia uliginosa* (Retz.) Tirveng. & Sastre (Plate 144 A)

Syn: *Randia uliginosa* (Retz.) DC.; *Catunaregam uliginosa* (Retz.) Sivar.; *Xeromphis uliginosa* (Retz.) Mahesh

Family: Rubiaceae

Vernacular Name: Eng: Tamilnadia  
Kan: Ollekaare, Adkale, Adkabale  
Mal: Punnankara, Pindichakka  
Tulu: Adkabaare, Adkare

Habit: Small tree.

Habitat: Laterite hill slopes.

Status: Occasional.

Description: Small tree, with spines at the end of short shoots. Leaves simple, obovate or oblanceolate, clustered at the ends of terminal or axillary suppressed branchlets. Flowers large, white, solitary. Calyx broadly tubular; lobes 5 – 8, short, rounded. Corolla rotate; petals 5 – 8. Stamens 5, inserted at the mouth of the corolla-tube. Fruit ovoid, smooth berry, yellow when ripe.

Uses: *Root paste is applied externally and decoction is taken internally for ulcers in the penis or genitals. *Oil prepared using its bark juice is applied over the head for running nose and rhinitis. Fruit is rich in iron, beneficial for anaemia and digestive disorders. Fruit or bark extract is consumed for blood dysentery. *Fruit paste is applied for mouth ulcers. *Dried fruit powder or its paste is applied for wounds and ulcers. *Root extract with buttermilk is taken for dysentery and diarrhoea. *Fruit
(boiled after the removal of seeds) ground in buttermilk or lime juice is applied for black marks, pimples and colour change in the face. *Leaf ground with lime juice is applied to the centre of the head for giddiness, dysentery, diarrhoea in pregnant women, rheumatism and skin diseases. Fruit, leaf and root paste or decoction is used for swellings. *Fruit and bark of *Ficus racemosa cooked with rice is eaten for diabetes. *Root extract is recommended with milk for foul smell of urine in children.

Etymology: Ollekaare (good *Canthium*), Adkabale, Adkabaare (laterite hill banana) and Adkare (laterite hill *Canthium*) are due to its habit sharing close affinity with *Canthium*, restriction to laterite plains and much used fruits.

Note: Fruit is used as vegetable and believed to have properties similar to that of banana.

852. *Tarenna asiatica* (L.) O. Ktze (Plate 144 B)

Syn: *Rondeletia asiatica* L.; *Chomelia asiatica* (L.) O. Ktze.

Family: Rubiaceae

Vernacular Name:  Kan: Pavatike, Pavate  
                Mal: Kuppipoovu  
                Tulu: Pavate

Habit: Large shrub.

Habitat: Disturbed forests.

Status: Occasional.


Uses: *Leaf and fruit powder paste with milk is applied for fungal infections of the feet.

Etymology: Pavate (*Pavetta*) is due to its close affinity with *Pavetta*.

Note: Occasionally it is used as a substitute for *Pavetta indica*. 

986
853. *Tecoma stans* (L.) HBK *(Plate 144 C)*

Syn: *Bignonia stans* L.; *Stenolobium stans* (L.) D. Don

Family: Bignoniaceae

Vernacular Name: Eng: Yellow bells, Trumpet flower, Yellow elder
Kan: Haladee hoo, Kolave hoo, Shanmukha karaveera
Mal: Manja arali
Tulu: Shanmukha karaveero

Habit: Small tree.

Habitat: Grown in gardens.

Status: Common. Exotic.


Uses: *Root decoction is recommended for urinary disorders, intestinal worms, gastritis and as digestive tonic.* *Root paste is applied externally for rat and scorpion bites.*

Etymology: Haladee hoo (yellow flower), Kolave hoo (tubular flower), Manja arali (yellow *Nerium*) and Shanmukha karaveera (Shanmukha’s *Nerium*) are due to its tubular-ventricose yellow flowers resembling that of *Nerium*.

Note: Flowers are used for garlands.

854. *Tectona grandis* L. f. *(Plate 144 D)*

Family: Verbenaceae

Vernacular Name: San: Kharacchada, Mahapatra, Saka, Shakakhya
Eng: Teak
Habit: Large tree.

Habitat: Planted for timber.

Status: Common.

Description: Large deciduous tree, with 4-angled branchlets. Leaves simple, elliptic or obovate, coriaceous, stellately grey-tomentose beneath. Flowers in terminal large panicked cymes. Calyx campanulate, stellately-tomentose; lobes 5. Corolla white; lobes 5, obovate-elliptic. Stamens 5 – 6. Fruit drupe, densely tomentose with light brown or ochraceous hairs, enclosed in the inflated, bladder-like, crumpled and reticulately-veined accrescent calyx.

Uses: *Oil prepared from its tender shoot tips and that of *Caesalpinia pulcherrima* or cumin seeds is applied for burns and wounds. *Leaf paste mixed with honey is applied for ulcers, burns and bruises. *Flower paste with honey is applied for swellings. *Fresh leaf and fruit extract is applied for mouth ulcers and itches in the body. Seed and flower decoctions are diuretic. *Tender shoot tip boiled with human hairs in coconut oil is applied for burns. Leaf paste is applied for allergies. *Crushed tender shoot tip heated in coconut oil is applied over the head and chest for phlegm in small children. Tender shoot tip extract is used as a blood purifier. *Tender shoot tip powder mixed with *Eclipta prostrata* shoot tip powder, *Lawsonia inermis* shoot tip powder, tea powder (1 tsp) and coffee powder (1 tsp) are boiled with coconut oil is applied for 2 – 3 months to blacken the hairs. *Hair oil prepared from its tender shoot tip, *Psoralea corylifolia* seeds and *Eclipta prostrata* shoot tip is used for hair fall. *Tender shoot tip pieces mixed with equal quantity of onion pieces are boiled in oil and applied for burns. *Paste prepared by grinding one handful leaf with ½ spoon salt is heated with coconut oil and applied for burns.

Etymology: Mahapatra (large leaved) and Jathitha maro (superior breed tree) are due to its large leaves and valuable timber of superior quality.
Note: Tectoquinone is the active constituent and is used in the preparation of Ayaskrti (Sharma et al., 1998).

855. Tephrosia purpurea (L.) Pers. (Plate 144 E)

Syn: Tephrosia hamiltonii Drumm. ex Dunn.

Family: Papilionaceae

Vernacular Name: San: Sarapunkha, Sarapunkhah
    Eng: Wild indigo, Purple Tephrosia
    Kan: Adavi neeli, Koggigida, Vajraneeli
    Mal: Kattamari, Kolinnil, Kozhingil
    Tulu: Kattuneeli

Habit: Undershrub.

Habitat: Open places and along roadsides.

Status: Common. Weed.

Description: Erect undershrub. Leaves imparipinnate; leaflets elliptic-oblong to obovate-oblong, glabrescent beneath. Flowers in many-flowered leaf-opposed racemes. Calyx 5-lobed. Corolla reddish-purple or pink; petals 5. Stamens 9 + 1. Fruit linear-oblong, slightly curved, mucronate, appressed-pubescent pod.

Uses: *Whole plant paste is applied to heal cuts and wounds. *Mastication of its roots gives strength to the teeth and gums. *Root or whole plant decoction is taken for six months in case of chronic spleen disorders. Root is used as tooth brush for toothache, gum swelling and thrush in tongue. Root decoction is recommended for indigestion and its extract to arrest vomiting. *Root juice mixed with honey is applied for pimples. *Paste of root boiled in coconut milk is used for leprosy. Whole plant or root decoction is consumed for urinary disorders. Root paste is applied for skin diseases. Root decoction is used as a liver tonic. *Crushed root ground in gingelly oil is applied over the head for hair fall. *Root extract mixed with honey is applied for pus release and quick heal of wounds.
Etymology: Adavi neeli, Kattamari, Kattuneeli (wild indigo) and Vajraneeli (diamond indigo) are due to its wild nature, strong roots and close affinity with *Indigofera tinctoria*.

Note: It is used in the preparation of *Aragvadhadi kashaya*, *Virataradi kashaya* and *Grahanyantaka ghṛta*. Tephrosin, deguelin, isotopehrlosin, rotenone, osyritin, lanceolatine A, rutin, purpurin A & B are the active constituents with cordial and blood purifier properties (Kapoor, 1990; Sivarajan & Balachandran, 1996). It is often used as a substitute for *Indigofera tinctoria*.

856. *Tephrosia tinctoria* Pers. (Plate 144 F)

Family: Papilionaceae

Vernacular Name: San: Sarapunkha, Sarapunkhah
   Eng: Wild indigo, Purple Tephrosia
   Kan: Adavi neeli, Koggigida, Vajraneeli
   Mal: Kattamari, Kolinnil, Kozhingil
   Tulu: Kattuneeli

Habit: Undershrub.

Habitat: Among bushes in laterite hills.

Status: Occasional.

Description: Undershrub, with angled branches and yellowish brown pubescence. Leaves imparipinnate, very variable; leaflets elliptic-oblong, golden-brown to silvery-tomentose beneath, terminal largest. Flowers in leaf-opposed racemes. Calyx pubescent, 5-lobed. Corolla pink to reddish-orange; petals 5. Stamens 9 + 1. Fruit linear-oblong, pubescent pod.

Uses: Same as *Tephrosia purpurea*.

Etymology: Same as *Tephrosia purpurea*.

Note: It is used in synonymous with *Tephrosia purpurea*. 
857. *Terminalia bellirica* (Gaertn.) Roxb. (Plate 145 A)

Family: Combretaceae

Vernacular Name: San: Bibhitaka, Vibhitaka  
Eng: Bedda nut tree, Belliric myrobalan  
Kan: Taremare, Shanthimara  
Mal: Thanni, Thannikka  
Tulu: Shanthi

Habit: Tall tree.

Habitat: Forests.

Status: Common.

Description: Tall deciduous tree, often with buttressed base. Leaves simple, ovate- 
obovate or broadly elliptic, narrowed into the petiole, clustered at the ends of 
branchlets. Flowers pale yellowish-green, scented, in axillary spikes. Calyx 5-lobed. 
Petals absent. Stamens 10, in 2 series. Fruit subglobose, obscurely 5-ridged, 
minutely brown-tomentose drupe.

Uses: *Fruit paste is applied over the eyes for eye pain. Fruit rind decoction is 
recommended for piles, skin diseases, blood dysentery and worms. Seed extract with 
honey is taken for eye diseases. Seed decoction is used for dysentery, piles, leprosy 
and cough (overdose is toxic). *Bark *rasam* and its decoction are consumed for 
dysentery. *Oil extracted from the seeds is applied for hair fall and rheumatism. 
Seed decoction increases appetite. Fruit decoction is a cooling agent. *Bark ground 
with coconut milk is applied for allergy caused by food or medicine. *Bark 
decoction is used for blood dysentery and as antidote for allergy caused by 
*Anacardium, Semecarpus and Holigarna. *Bark, *Syzygium caryophyllatum* bark, 
*Syzygium cumini* bark and *Pterocarpus marsupium* bark decoction with coriander is 
given for dysentery in cattle. Fruit rind ground with cumin seeds are taken for 
leucorrhoea. *Fruit (cooked in goat urine and dried) powder is taken with honey for 
breathing problems, bronchitis and asthma. *Bark paste with rice washed water is 
applied externally for ulcers due to *Holigarna arnottiana* allergy.
Etymology: Shanthimara (soothing or alleviating tree) and Shanthi (soothing or alleviating) are due to its soothing action on the digestive tract and property to alleviate a vast variety of diseases.

Note: Leaf is used as plate for eating food. Kernels are edible. It is used in the preparation of Triphaladi churna, Triphaladi taila, Dasamularista, Parantyadi taila, Triphaladi ghrta, Bibhitaka taila, Talisadi churna, Lavangadi vati, Sudarsana churna, Agnitundi vati, Sanjivani vati, Karanjadi yoga, Khadirarista, Gokshuradi guggulu, Chandraprabha vati and Vidangadi lehya. Ellagic acid and gallic acid are the major constituents (Dey, 1994; Kapoor, 1990; Sivarajan & Balachandran, 1996).

858. Terminalia catappa L. (Plate 145 B)

Family: Combretaceae

Vernacular Name: San: Desabadama, Kshudrabadama, Tailaphala
Eng: Indian almond tree, Tropical almond, Java almond
Kan: Kaadu badami, Oora badami
Mal: Badam, Nattu badam
Tulu: Kattubadam

Habit: Large tree.

Habitat: Planted as avenue tree.

Status: Common.

Description: Large deciduous tree. Leaves simple, clustered at the ends of branchlets, obovate or oblanceolate, with 2 glands at the base of leaf-blade. Flowers greenish-white, in axillary spikes. Calyx 5-lobed. Petals absent. Stamens 10, in 2 series. Fruit ellipsoid, compressed, 2-ridged drupe.

Uses: *Bark powder is used as tooth powder in case of gum diseases, mouth ulcers and thrush in tongue. Leaf juice is taken for biliousness. *Leaves cooked with rice are eaten for gastritis. *Tender shoot tip and seed paste is applied for leprosy and
septic wounds. *Leaf juice mixed with rice is consumed for biliousness and headache. *Seed paste with curd is applied for tinea versicolor.

Etymology: Kshudrabadam, Kaadu badami, Kattubadam (wild almond), Oora badami and Nattu badam (village badam) are due to its use as a substitute for almond and their common occurrence.

Note: Kernels are edible. Often used as a substitute for almond.

859. **Terminalia chebula** Retz. (Plate 145 C)

Family: Combretaceae

Vernacular Name: San: Abhaya, Haritaki
            Eng: Gallnut, Black myrobalan, Chebulic myrobalan
            Kan: Alalekaayi, Anilekaayi, Anile
            Mal: Kadukka, Pulicakku
            Tulu: Anile, Aldekaayi

Habit: Medium-sized tree.

Habitat: Laterite hills and plains.

Status: Occasional.


Uses: Fruit decoction is recommended to normalize the excretory system, for rheumatism and piles. Fruit paste is applied for carbuncles. Fruit paste is applied over the eyes and stomach for eye and stomach pain. Fruit extract in hot water is taken for constipation, also used to wash ulcers and wounds. *Fruit stored in honey for 48 days is used as a tonic. Fruit rind decoction is recommended for urinary diseases, dysentery and bronchitis while fruit paste is applied to clean wounds. Fruit extract is used for piles, eye pain and urinary disorders. *Dried fruit powder paste
with catechu powder and butter is applied for septic wounds and ulcers. Fruit powder with that of *Terminalia bellirica* and *Phyllanthus emblica* is rubbed on the head for cold and headache while extract is used internally for correcting the excretory system. Fruit paste is applied for swellings. *Fruit powder is used to rub the body during bath to get relief from foul body odour. Fruit rind or bark decoction is consumed for rheumatism. Fruit rind powder dissolved in hot milk is taken at bedtime for headache. *Cotton dipped in its fruit rind, *Terminalia bellirica* and *Phyllanthus emblica* fruit powder dissolved in water is pressed over the eyes for burning sensation in eyes. *Triphala* powder mixed with honey is used for *amlapitta*. Fruit rind decoction with jaggery or *triphala* powder in hot water is used at night for constipation. *Fruit rind powder and jaggery are used before food for indigestion. Fruit rind powder is taken with hot water as a liver tonic. Fruit decoction is used as a wash for piles. *Fruit, *Terminalia bellirica* fruit, *Zingiber officinale* rhizome, *Tinospora cordifolia* and *Merremia turpethum* stem decoction is used for fever and to normalize the digestive system. *Fruit rind powder is taken with honey and ghee at morning in empty stomach for under developed brain in children. *Fruit powder soaked overnight in cow urine is drunk (after sieving) at morning for mental imbalance or CNS disorders (overdose results in purgation and buttermilk or curd is the antidote). *Fruit, borax, long pepper and pepper decoction is recommended for loss of appetite due to phlegm. Fruit extract with honey is used for cough. *Gargle with fruit decoction is recommended for dry cough. *Fruit and dried grapes boiled in water are recommended for gastritis while fruit, long pepper and black salt powder mixed with curd for gas trouble and indigestion. Fruit (seed removed) and rock salt decoction is used for diarrhoea. *Fruit, dried *Aloe vera* juice, *Merremia turpethum* and milk or fruit, cumin, dried gooseberry, *Rubia cordifolia*, ginger and *Glycyrrhiza glabra* rhizome powder decoction is used for leucoderma due to biliousness. *Fruit, *Murraya koenigii* leaf juice, onion juice are mixed and consumed for leucoderma due to phlegm. *Fruit powder and gooseberry (seed removed) powder dissolved in hot milk is consumed for jaundice. Fruit (seed removed) extract with milk or honey is given at night and morning for gastritis. *Fruit rind powder paste with ghee or butter is applied for cracks in the heel. *Fruit
rind, *Hemidesmus indicus* root, *Azadirachta indica* root or leaf, *Hydnocarpus pentandra* fruit (in equal quantity) decoction is used for rashes, scabies and herpes. *Fruit ground with fresh turmeric in an iron vessel is applied for whitlow. *Fruit paste with water is applied all over the body before bath for over sweating. Fruit rind, rock salt, ginger, borax extract in hot water is used for malabsorption in children. Fruit powder is taken with sugar and honey for giddiness. *Fruit powder dissolved in coconut milk is consumed for all types of dysentery. *Fruit, *Calotropis gigantea* root, ginger, *Pongamia pinnata* bark, *Heliotropium indicum, Moringa pterygosperma* bark and salt (in equal quantity) ground in cow urine is heated and applied for lymph node swellings. *Fruit, fruits of *Terminalia bellirica, Phyllanthus emblica, Hemidesmus indicus* root, *Sida rhombifolia* root, *Ficus racemosa, Ficus microcarpa, Ficus religiosa* and *Ficus benghalensis* bark decoction is taken with ghee at morning and with honey at night for leucorrhoea. *Fruit rind, long pepper and sugarcandy (in equal quantity) powder mixed with butter is recommended twice daily for 7 – 14 days in case of piles. Fruit powder mixed with jaggery is used twice daily for 2 – 3 weeks in case of piles. *10 gm fruit powder is taken with castor oil (3 tsp) daily in the morning for a week in case of polio. *Fruit rind decoction is consumed with ginger juice and castor oil (8: ¼: ½) twice daily for rheumatism. Fruit powder is used with jaggery for piles. *Fruit, belliric myrobalan, embelic myrobalan (triphala∗) and turmeric (1:9) ground with lime juice is applied externally for tinea versicolor. *Heated fruit rind powder ground with gingelly oil or Streblus asper fruit extract is applied for septic ulcers and wounds. *Fruit rind, belliric myrobalan, embelic myrobalan and *Madhuca neriifolia* ground with cheese is applied for cracks in the lips. *Fruit powder is eaten with betel leaf juice for three days to remove foul body odour. *Fruit, *Plumbago zeylanica* root and ginger decoction with borax powder or fruit, *Aegle marmelos* root, *Boerhavia diffusa* root, *Ruta graveolens* root, *Pongamia pinnata* fibre, long pepper, *Piper longum* root, *Piper chaba* root, *Plumbago zeylanica* root and ginger decoction by adding rock salt powder or fruit powder mixed with sour buttermilk and a little rock salt is recommended for gulma∗. *200 fruits are boiled in cow urine (until urine evaporates completely) and powder of two fruits is taken with honey (daily) for piles, spleen
disorders and *gulma*. *Fruit and Cyperus rotundus* rhizome (in equal quantity) soaked in butter milk for 24 hours are used twice a day in empty stomach for 3 – 6 days in a month to prevent repeated attack of indigestion and diarrhoea.

Etymology: Abhaya (peace or safe) arose as its fruits are known for normalizing the body systems and functions.

Note: Fruit yields an ink which is used in elections. Fruit powder is given to the sages due to its testicle shrinking property. It is used in the preparation of *Abhayarista, Triphaladi churna, Agastya rasayana, Dasamula haritaki, Chandraprabha vati, Danti haritaki, Gokshuradi guggulu, Haritakadi kvatha, Khadirarista, Karanjadi yoga, Pathyadi kvatha, Pathyadi churna, Sanjivani vati, Sudarsana churna, Vidangadi lepa* and *Laghu visagarva taila*. Chebulinic acid and gallic acid are the major constituents (Dey, 1994; Kapoor, 1990; Sivarajan & Balachandran, 1996).

**860. Terminalia cuneata** Roth. (Plate 145 D)


Family: Combretaceae

Vernacular Name: San: Arjuna, Svetavahah, Viravrksha

   Eng: Arjun, White murdah

   Kan: Arjuna, Thorematthi, Holematthi, Bilimatthi

   Mal: Attumaruthu, Neermaruthu, Vellamaruthu

   Tulu: Arjuno, Sude maruvo

Habit: Large tree.

Habitat: Along streams, also planted as avenue tree.

Status: Occasional.

Description: Large evergreen tree, often butressed at base, with smooth white bark, flaking off in pieces. Leaves simple, oblong or oblanceolate, thick-coriaceous; petiole with 2 glands close to the base of leaf blade. Flowers pale yellow, in axillary

Uses: Bark decoction is the best cardiac tonic and highly recommended for nervous debility. It also helps to reduce high blood pressure. Bark decoction is also recommended for chest pain.

Etymology: Thorematthi, Holematthi, Attumaruthu, Sude maruvo (river murdah), Neermaruthu (water murdah), Bilimatthi and Vellamaruthu (white murdah) are due to its white bark and riparian habitat.

Note: Bark is rich in calcium and lime is often extracted from it. It is one of the major ingredients of Arjunarista, Kukubhadi churna, Arjuna ghṛta, Parthadyarista and Arjuna twak churna. Arjunine, arjunetin, arjunolic acid and leukodelphinidin are the active components (Dey, 1994; Kapoor, 1990; Sharma et al., 1998).

861. Terminalia elliptica Willd. (Plate 145 E)

Syn: Terminalia crenulata Roth.; Terminalia coriacea (Roxb.) Wight & Arn.; Terminalia tomentosa (Roxb. ex DC.) Wight & Arn.

Family: Combretaceae

Vernacular Name: San: Chagakarnah
Eng: Black murdah, Indian laurel
Kan: Karimatthi, Banapu, Banpu
Mal: Karimaruthu, Matthi
Tulu: Banpu

Habit: Large tree.

Habitat: Forests.

Status: Common.

Description: Large deciduous tree, with thick, dark-coloured, deeply fissured bark. Leaves simple, elliptic or obovate-oblong, narrowed at base. Flowers small,

Uses: *Paste prepared from its bark decoction is applied for vitiated wounds and ulcers. *Bark decoction is used for six days as a best source of absorbable calcium for heart problems and arthritic complaints. Bark decoction mixed with milk is taken for chest pain. *Bark decoction is used internally and paste is applied externally for rabid dog bite. Bark decoction gives strength to the bones.

Etymology: Karimatthi and Karimaruthu (black murdah) are due to its dark-coloured bark.

Note: It is a cardiac tonic and is used as a substitute for *Terminalia cuneata*. Bark ashes are dissolved in water and the residue is used as a substitute for lime in pan. Over use of lime prepared from its bark causes mouth ulcers. Wood is much valued timber.

862. *Terminalia paniculata* Roth. (Plate 145 F)

Family: Combretaceae

Vernacular Name:  San: Asvakarnah  
Eng: Flowering murdah  
Kan: Matthi, Maruva  
Mal: Maruthu, Manjamaruthu, Pullamaruthu  
Tulu: Maruva, Maruvo

Habit: Large tree.

Habitat: Forests.

Status: Common.

Description: Large deciduous tree. Leaves simple, elliptic or elliptic-oblong, with 1 – 2 glands at the base of the midrib. Flowers small, greenish-yellow, in large spreading panicles. Calyx 5-lobed. Petals absent. Stamens 10, in 2 series. Fruit brick-red coloured drupe, with 3 unequal wings.
Uses: Bark decoction is recommended for rheumatism, body weakness and is a cardiac tonic. *Leaf or bark paste is the antidote for allergy caused by Holigarna arnottiana. *Two ounce of its flower juice mixed with Cocculus hirsutus root extract is used for cholera. *The gummy substance (obtained by scratching the leaf with a knife) is applied to arrest bleeding and quick heal of cuts and wounds. *Tender shoot tip, that of Madhuca neriifolia, Osbeckia muralis, Oxalis corniculata, Psidium guajava and cumin seeds are packed inside a banana leaf, given a coating with soil and cooked over the charcoal. After cooking these are ground with sweet curd and consumed for recto anal prolapse. *3 – 5 tender shoot tips packed inside a banana leaf is covered with soil, burnt, ground and given for diarrhoea in small children. Bark decoction is taken for rheumatism. *Gargle with bark or leaf decoction is recommended for toothache. Bark extract is consumed for chest pain and heart problems. *Bark decoction is consumed for saw scaled viper bite. *Juice of leaf ground in a copper vessel is applied for ulcers in the penis.

Etymology: Maruva (belonging to drier regions) arose as this tree usually grows in comparatively dry soil.

Note: Wood is a valuable timber. Tender shoot is used as vegetable.

863. *Theobroma cacao* L. (Plate 146 A)

Family: Sterculiaceae

Vernacular Name: Eng: Cocco, Cacao, Cocoa tree

Kan: Kokko

Mal: Kokko

Tulu: Kokko

Habit: Small tree.

Habitat: Cultivated.

Status: Common. Exotic.

Description: Small evergreen tree. Leaves simple, elliptic-oblong or obovate-oblong. Flowers in clusters, on cushions on the trunk and older branches. Calyx deeply 5-
cleft; lobes oblong-lanceolate. Petals 5, yellowish or purplish, hooded. Stamens 10, in two whorls. Fruit oblong-ellipsoid or fusiform, ridged, yellow, purplish or brown berry, with thick and hard walls. Seeds ovoid, variously flattened, surrounded by white pulp.

Uses: *Mucilaginous juice from the fruits is used as a nutritive tonic. *Leaf is fed to the cattle to increase lactation.

Note: Seeds are the source of cocoa. Fruit pulp is edible.

864. *Thespesia lampas* (Cav.) Dalz. & Gibs. (Plate 146 B)

Syn: *Hibiscus lampas* Cav.

Family: Malvaceae

Vernacular Name: San: Vanakarpasah
    Kan: Adavi bende, Kaadu hatthi
    Mal: Kattuparuthi
    Tulu: Kattuparuthi

Habit: Shrub.

Habitat: Forests and plains.

Status: Occasional.


Uses: *Leaf and bark paste is applied for septic wounds and ulcers. *Oil prepared using its fruit juice is used as ear drop for pus release from the ear and earache. Whole plant decoction is recommended for rheumatism. *Bark powder (3 tsp)
mixed with toddy palm jaggery (10 – 15 gm) is taken at every three hours for 5 – 10 days in case of urticaria.

Etymology: Vanakarpasah, Kaadu hatthi, Kattuparuthi (wild cotton) and Adavi bende (wild okra) are due to its wild nature, affinity with cotton and fruits sharing resemblance with that of okra.

Note: Quercetin and protocatechuic acid are the active constituents with CNS depressant action (Jain et al., 1991).

865. *Thespesia populnea* (L.) Soland ex Correa (Plate 146 C)

Syn: *Hibiscus populneus* L.

Family: Malvaceae

Vernacular Name: San: Kapitanah, Nandivrksa, Phalisha
Eng: Bendy tree, Cork tree, Indian tulip tree
Kan: Hoovarase, Hoovarasi
Mal: Pooparutthi, Poovarasu
Tulu: Pooparutthi

Habit: Small tree.

Habitat: Along sea-coast and estuaries.

Status: Frequent.

Description: Small tree; young parts covered with brown, peltate scales. Leaves simple, orbicular to ovate, shiny, often with domatia in their axils. Flowers solitary, axillary. Epicalyx segments 3 – 5. Calyx minutely 5-toothed. Corolla large, yellow with a purple centre, fading to purplish-pink. Stamens monadelphous. Fruit globose, depressed, peltate-scaly capsule, with yellow sap.

Uses: *Leaf is used to brush teeth and twigs are used as tooth brush in case of toothache. Bark decoction is recommended for skin diseases. *Fruit and bark decoction is much used to wash for septic wounds and ulcers. Bark decoction is
taken for jaundice. *Bark heated with rock salt is given with butter milk in empty stomach for a week from the first day of menses as a contraceptive. Leaf paste with water is applied externally and bark decoction is used as wash for urinary disorders, digestive problems and ulcers in the genitals of children. *Seed boiled in coconut oil is applied for vitiated ulcers. Bark extract is used for skin diseases, diabetes, vaginal diseases, rheumatoid arthritis, bone fracture and as a blood purifier. *Bark extract with butter milk is advised for jaundice. *Bark ground with its own leaf juice is heated after adding coconut oil and applied for warts, itches and boils in children. *Bark cooked water is used as dhara* for skin diseases and septic wounds.

Etymology: Hoovarase, Poovarasu (flowering peepul tree) and Pooparutthi (flowering cotton) are due to its attractive flowers, leaves resembling that of Ficus religiosa and close affinity with cotton plant.

Note: Wood is used for making rafters of the door. It is sued in the preparation of Aranyatulasyadi kera, Nyagrodhadi kvatha, Nyagrodhadi churna and Yastimadhukadi taila. Sesquiterpenoidal quinines are the active constituents (Sharma et al., 1998; Sivarajan & Balachandran, 1996).

866. Thevetia peruviana (Pers.) Merr. (Plate 146 D)

Syn: Thevetia neriifolia Juss ex Steud.; Cascabela thevetia (L.) Lippold

Family: Apocynaceae

Vernacular Name: San: Karaveerah
    Eng: Yellow oleander, Lucky nut tree
    Kan: Kasikanagilu, Karaveera
    Mal: Manja arali, Pachchaarali
    Tulu: Karaveero

Habit: Small tree.

Habitat: Grown in gardens.

Status: Common. Exotic and poisonous.
Description: Small tree. Leaves simple, linear-lanceolate, tapering at the ends, margins revolute. Flowers yellow, reddish or creamy-white, in terminal few-flowered cymes. Calyx 5-lobed, glandular within; lobes triangular-lanceolate. Corolla cylindrical in the lower third, funnel-shaped above; lobes 5. Stamens 5. Fruit broadly turbinate, slightly compressed drupe.

Uses: *Paste of its root (growing towards north) ground with rice washed water is applied for breast swelling and related fever. Root paste is applied for all types of swellings. *Bark or leaf paste is used as a wound healer. *Oil prepared from plant juice is applied for rheumatism and bleeding piles.

Etymology: Kasikanagilu (ornamental or hybrid *Nerium*) and Manja arali (yellow *Nerium*) are due to its yellow flowers, close affinity with *Nerium* and ornamental nature.

Note: It is highly toxic. It is used in the preparation of *Malatyadi taila* and *Mustamrtadi churna* (Sivarajan & Balachandran, 1996).

867. *Thottea siliquosa* (Lam.) Ding Hou. (Plate 146 E)

Syn: *Apama siliquosa* Lam.

Family: Aristolochiaceae

Vernacular Name: Kan: Chakranike

Mal: Alpam, Karelvegam, Kuttivayana

Tulu: Chakrani beru

Habit: Subshrub.

Habitat: Along forest edges in upper hills.

Status: Frequent.

Description: Subshrub. Leaves simple, oblong-lanceate, 3 – 5-nerved from base, coriaceous. Flowers in axillary 1 – 3-flowered cymes. Perianth deep purple; lobes 3,
broadly elliptic, divided to the base. Stamens 9, in 3 whorls. Fruit 4-angled, long, pubescent capsule.

Uses: *Paste prepared from its root, which of *Aristolochia indica* and *Rauvolfia serpentina* is applied for poisonous bites. Root extract is recommended for diarrhoea and dysentery. *Upper portion of vertically growing root is ground with one day old water and given for vomiting while lower portion for dysentery and both sides for vomiting and dysentery (this should be used in very limited dose). Root extract is taken for stomachache. Whole plant decoction is consumed for rheumatism. *Root decoction is recommended for menstrual irregularities. Root and fruit decoction is advised for dysentery. *Root extract with lime juice is taken by mixing with honey for cholera. *Crushed fruit heated with coconut oil is applied for scabies. *Leaf and of *Senna tora* leaf are crushed, heated in a copper vessel after adding coconut oil and is applied twice a day for poisonous bites. *Root extract with milk is given to drink in the morning for nine days in case of anaemia in pregnant women.

Note: Much used drug for digestive tract disorders.

868. *Thunbergia fragrans* Roxb. (Plate 146 F)

Syn: *Thunbergia fragrans* Roxb. var. *laevis* (Nees) Clarke

Family: Acanthaceae

Vernacular Name: San: Indrapushpa
   Eng: White Thunbergia
   Kan: Hegala balli, Indrapushpa
   Mal: Noorvan-valli
   Tulu: Pugelu ballu

Habit: Twining herb.

Habitat: Along hedges.

Status: Occasional.
Description: Slender twining herb. Leaves simple, ovate to ovate-deltoid, generally with a pair of basal lobe on either side. Flowers solitary, axillary, long-pedicellate; bracteoles ovate, foliaceous. Calyx 12 – 16-toothed. Corolla funnel-shaped, white; limb 5-lobed. Stamens didynamous. Fruit ovoid capsule, with flat beak.

Uses: *Oil prepared by boiling its plant juice in coconut oil is applied for rheumatism and arthritis. *Whole plant paste is applied for tiger spider bite and wounds on the shoulder of cattle.

Etymology: Hegala balli and Pugelu ballu (shoulder vine) are due to its therapeutic efficacy against shoulder wounds.

Note: Much known for its wound healing and pain reliever properties.

869. *Thunbergia grandiflora* (Roxb. ex Rottl.) Roxb. *(Plate 147 A)*

Family: Acanthaceae

Vernacular Name: Eng: Bengal trumpet, Blue trumpet vine

Kan: Indrapushpa, Dodda hegala balli

Tulu: Malla pugelu ballu

Habit: Woody twiner.

Habitat: Planted in gardens.

Status: Common.

Description: Woody twiner. Leaves simple, deltoid to ovate-lanceolate, often angular or lobed. Flowers large, in dense hanging racemes; bracteoles foliaceous, falcate-elliptic. Calyx reduced to a rim. Corolla large, bell-shaped, light or dark blue or white; limb 5-lobed. Stamens didynamous. Fruit ovoid capsule, with ensiform beak.

Uses: *Leaf or root decoction is used as a pain reliever and for stomachache. *Leaf paste with ghee is given to eat for bone setting.
Etymology: Dodda hegala balli and Malla pugelu ballu (larger shoulder vine) are due to its close resemblance with *Thunbergia fragrans*.

Note: Much known for its wound healing and pain reliever properties.

**870. *Thunbergia mysorensis* (Wight) Anders (Plate 147 B)**

Syn: *Hexacentris mysorensis* Wight

Family: Acanthaceae

Vernacular Name: Eng: Clock vine  
Kan: Kamanabillu balli  
Tulu: Kamanabillu ballu

Habit: Stout twiner.

Habitat: Evergreen forests.

Status: Frequent.

Description: Stout twiner. Leaves simple, ovate or oblong-lanceolate, thin coriaceous. Flowers in terminal, pendant racemes; bracteoles reddish-brown, ovate-oblong. Calyx reduced to a circular rim. Corolla-tube ventricose, yellow; lobes 5. Stamens didynamous; filaments bearded. Fruit globose capsule.

Uses: *Leaf paste with ghee is taken internally for quick healing in case of bone fracture.*

Etymology: Kamanabillu balli and Kamanabillu ballu (rainbow vine) are due to its colourful flowers.

Note: Much valued drug for the traditional bone setters.

**871. Tinospora cordifolia** (Willd.) Miers (Plate 147 C)

Syn: *Cocculus cordifolius* (Willd.) DC.

Family: Menispermaceae

Vernacular Name: San: Amrta, Guduchi, Jivantika, Madhuparni
Eng: Moon creeper, Tinospora
Kan: Amrtaballi
Mal: Amrthu, Amrtavalli, Chitamruthu
Tulu: Amrtaballu

Habit: Climbing shrub.

Habitat: Along hedges, sometimes cultivated.

Status: Frequent.

Description: Succulent climbing shrub, with corky lenticellate bark and long filiform aerial roots. Leaves simple, ovate-cordate, 7-nerved. Flowers small, unisexual, yellow in racemes, axillary or from the old wood; male fascicled; female solitary. Sepals 6, in 2 whorls. Petals 6, thick, spathulate, each embracing a stamen in male. Stamens 6. Fruit ovoid drupe, orange-red when ripe.

Uses: *Whole plant decoction with pepper seeds and Ocimum tenuiflorum leaves is used for cold, fever, raktavata* and flue. Plant juice is given to drink in case of joint pain, knee joint pain and rheumatism. Whole plant decoction is recommended for diabetes and joint pain. *Stem and Protasparagus racemosus tuber decoction with milk is used as a general health tonic. *Plant, chebulic myrobalan, ginger, pepper, onion and Glycyrrhiza glabra rhizome decoction is taken for cough. Plant extract is consumed with milk for leucorrhoea and chronic ulcers. *Plant, Sida rhombifolia root and Cedrus deodara heart wood (4: 6: 2) decoction is taken with sugar to for abdominal spasm (in children up to the age of six). Stem juice is used for rheumatism and weakening of joints and bones. Leaf juice is recommended for poisonous bites. *Decoction of plant (growing over Azadirachta indica) is recommended for recurrent fever. *Plant, Andrographis paniculata, ginger, pepper and Cymbopogon citratus leaf decoction is advised for all kinds of fever. Plant decoction has pain and gas reliever property. *Whole plant, Azadirachta indica leaves, Protasparagus racemosus tuber, Hemidesmus indicus root, gingelly and fenugreek seeds decoction is used for fever, malaria and chikungunia. *Plant, Hybanthus enneaspermus and gingelly seeds decoction or gruel is taken as a health
tonic to increase longevity. *Whole plant, *Andrographis paniculata, Cymbopogon citratus, Picrorrhiza kurroa* seed, *Piper longum* fruit and dried ginger decoction is used for fever. *Stem juice mixed with cumin, cardamom and honey is consumed for jaundice. Stem juice is used with honey for hyperacidity.

*Plant paste with milk is applied over the head for insanity and mental disorders. Plant decoction is used as a tonic to increase resistance. It is also used as breast milk purifier and nerve tonic. *Stem (15 gm) ground with pepper (1/2 spoon) in a cup of heated then cooled water is recommended for a week in case of chronic phlegm. *Tambuli prepared from leaf or tender shoot tip is useful for tridoshas, fever, body pain and leucorrhoea. Stem and pepper ground in water is taken for phlegm. Crushed stem is soaked in hot water for three hours and resulting extract is consumed with honey for all kinds of vomiting, fever, rheumatism, heart problems, blood disorders and breathing problems. Plant ash is used for diabetes. Plant and pepper seed decoction is used with honey for fever. *Plant decoction with *Vetiveria zizanioides* root and dried grapes is also used for fever. *Plant decoction with *Pterocarpus santalinus* heart wood and pepper powder or its decoction with *Pterocarpus santalinus, Vetiveria zizanioides* and dried grapes is advised with honey for typhoid and chronic fever.*Whole plant decoction with *Senna angustifolia* is used for fever with constipation while with *Cinnamomum verum* for thirst, with ajowan for stomach disorders, with *Justicia adhatoda* leaf for cough, with *Terminalia chebula* fruit for stomachache, with *Kaempferia galanga* for vomiting, with *Nardostachys jatamansi* for hiccough, with *Terminalia bellerica* for biliousness, with ginger or with *Cyperus rotundus, Hedyotis corymbosa, Vetiveria zizanioides*, ginger and *Curcuma amada* rhizome powder for indigestion, loss of appetite, headache and sleeplessness during fever. *Stem decoction with ginger, *Swertia corymbosa, Caesalpinia bonduc* root or that with *triphala* powder, *Glycyrrhiza glabra* rhizome powder and honey is advised for repeated flue attack.

*Whole plant, *Justicia adhatoda and *Glycyrrhiza glabra* decoction with goat's milk or with *Withania somnifera* and *Solanum virginianum* decoction in goat’s milk or with dried *Phyllanthus emblica* fruit and long pepper decoction or with ginger, long pepper, pepper and *Glycyrrhiza glabra* decoction or with *Withania somnifera,*
Phoenix dactylifera fruit, grape, long pepper, goat's milk and goat's ghee lehyam* is recommended for tuberculosis. *Stem decoction with Embelia ribes seeds is recommended for fever due to convulsion. *Its decoction with Evolvulus alsinoides, pepper, ginger and Ocimum tenuiflorum leaves or with pepper, turmeric and Glycyrrhiza glabra decoction is taken with honey for flue. *Stem decoction with turmeric, pepper, Glycyrrhiza glabra and Senna angustifolia is consumed with milk at bed time for running nose and burning sensation in the eyes. *Stem decoction with Hemidesmus indicus, Glycyrrhiza glabra and Rubia cordifolia in milk or that with turmeric, Glycyrrhiza glabra and pepper is used for chest pain. *Stem, turmeric, jaggery, Momordica charantia fruit and Syzygium cumini bark (50 gm each) decoction is consumed for diabetes. Whole plant decoction is useful for urinary disorders. *Stem decoction with cumin seeds is recommended for joint pain. *Stem decoction is recommended during the 5th month of pregnancy as a health tonic. *Stem and Gmelina arborea root decoction is taken with sugar and honey for fever during pregnancy. Whole plant decoction is recommended for vomiting during fever. *Extract of stem pieces soaked overnight in water is taken on the next morning for 2 – 3 weeks in case of leucorrhoea. *Stem extract with sugar is advised twice a day for 2 – 3 weeks in case of menorrhagia. *Whole plant, Solanum lasiocarpum and ginger (in equal quantity) powder decoction is taken twice a day during menses for menstrual disorders. *Whole plant, Hedyotis corymbosa, Cyperus rotundus, Vetiveria zizanioides, Coriandrum sativum and Tragia involucrata root decoction is used for 6 – 7 days in case of menstrual disorders. Plant decoction is recommended for 2 – 3 weeks in case of rheumatoid arthritis. *Whole plant, Terminalia chebula fruit rind, Terminalia bellirica fruit rind and dried gooseberry (in equal quantity) are boiled in water, reduced by adding a little metallic oxide and used for intellect and bodily development. *Leaf and Adiantum philippense whole plant cooked in milk are ground with cheese and applied with honey for blisters or carbuncles due to diabetes. Flower juice is taken with sugar for dysmenorrhea. Stem juice is given repeatedly for weakened neck in cattle. *Stem, Terminalia chebula fruit, dried ginger, pepper seeds and Glycyrrhiza glabra rhizome (in equal quantity) decoction is heated after adding white onion pieces and jaggery.
This is used 3 – 4 times a day for chronic cough. Whole plant decoction is recommended for leucorrhoea.

Etymology: Amrta (immortal), Amrtaballi, Amrtavalli, Amrataballu (immortal vine) and Jivantika (one which gives life) are due to its therapeutic efficacy against a vast variety of diseases and tonic action.

Note: It is used in the preparation of Amrtarista, Dhanvantara taila, Laghu rasnadi kashaya, Brhat marma gutika, Guduchyadi churna, Guduchyadi kvatha, Guduchi lehya, Sudarsana churna, Sanjivani vati, Guduchi taila, Pippalimuladi kvatha, Amrtottara kvatha, Amrtottara churna, Guduchi satva, Amrtastaka kvatha, Rasnasaptaka kvatha, Yogaraja guggulu and Kaisora guggulu. It has berberine, giloin, gilenin, gilosterol, tinosporine and giloinin as the active constituents (Dey, 1994; Kapoor, 1990; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

872. Tinospora sinensis (Lour.) Merr. (Plate 147 D)

Syn: Tinospora malabarica (Lam.) Hook. f. & Thoms.; Tinospora tomentosa (Coleb.) Hook. f. & Thoms.

Family: Menispermaceae

Vernacular Name: San: Amrta, Vatsadani
Eng: Wild Tinospora
Kan: Kaadu amrtaballi
Mal: Kattamruthu
Tulu: Kattu amrataballu

Habit: Climbing shrub.

Habitat: Along hedges.

Status: Frequent.

Description: Large climbing shrub, with grey, papery bark and pubescent branchlets. Leaves simple, broadly ovate, cordate, white-tomentose beneath. Flowers small,

Uses: Stem juice is taken for fever. *Residue of crushed plant soaked in water is taken for dry cough and urinary disorders. Plant cooked with the rice is given to strengthen the bull. *Plant paste is applied externally and gruel with rice is given internally during the treatment of shoulder dislocation in bull. *Plant extract is recommended for malnutrition in children.

Etymology: Kaadu amrtballi, Kattu amrtballu and Kattamruthu (wild Tinospora) are due to its wild nature and close affinity with Tinospora cordifolia.

Note: It is used as a substitute for Tinospora cordifolia.

873. Toddalia asiatica (L.) Lam. (Plate 147 E)

Syn: Toddalia aculeata (Smith) Pers.; Toddalia asiatica (L.) Lam. var. floribunda (Wall.) Kurz.

Family: Rutaceae

Vernacular Name: San: Dahana, Kanchana
Eng: Forest pepper, Lopez root
Kan: Kaadumenasu, Ghattada kaadumenasu
Mal: Kanthamullu, Karamullu, Kakkathodali
Tulu: Kattukare, Kattumunchi

Habit: Scandent shrub.

Habitat: Upper ghats of evergreen forests.

Status: Frequent.

Description: Scandent shrub, armed with recurved prickles. Leaves 3-foliolate; leaflets elliptic-ovovate, glabrous. Flowers white, unisexual, in axillary and terminal panicles. Calyx short, 5-lobed. Petals 5. Stamens 5; filaments filiform; pistillode 4-partite. Fruit subglobose, pitted berry, yellow when ripe.
Uses: Root bark decoction is recommended for fever, weakness and gas trouble. Paste of fruits (fried in oil) is applied externally for rheumatism. Root decoction with salt is used as gargle for toothache. Leaf decoction is taken for upset stomach and fever.

Etymology: Kaadumenasu, Kattumunchi (wild pepper) and Ghattada kaadumenasu (wild pepper of ghats) are due to its restriction to the ghats, pungency and resemblance of fruits with that of pepper.

Note: Coumarins are the active constituents (Chaudhri, 1996). It is usually used as a substitute for *Piper nigrum* and *Piper cubeba*. Fruits are used as condiments.

874. *Toona ciliata* Roem. (Plate 147 F)

Syn: *Cedrela toona* Roxb. ex Rottl. & Willd.

Family: Meliaceae

Vernacular Name: Eng: Red cedar, Australian red cedar, Indian mahogany
Kan: Oodamara, Gandhagarige, Garige, Nandivrksa
Mal: Arana, Chandanavembu, Mathagiri vembu, Vembu
Tulu: Garige

Habit: Large tree.

Habitat: Evergreen forests.

Status: Occasional.

Description: Large tree, with dark brown bark. Leaves imparipinnate; leaflets ovate-lanceate, base oblique, chartaceous. Flowers small, in terminal or subterminal panicles. Calyx 5-lobed. Petals 5, white, ciliate along margins. Stamens 4 – 6. Fruit ellipsoid, septicidal capsule.

Uses: *Bark decoction is recommended for digestive disorders.*

Etymology: Oodamara (brown tree) arose from its dark brown bark.

Note: Much used for digestive disorders.
875. *Torenia bicolor* Dalz. (Plate 148 A)

Family: Scrophulariaceae

Vernacular Name: Kan: Kaage hoo  
Mal: Kakkapoovu  
Tulu: Kakke poo

Habit: Procumbent herb.

Habitat: Wet low lands.

Status: Frequent. Weed.


Uses: *Whole plant paste is applied for itches, rashes and other skin diseases. *Leaf decoction is recommended for gonorrhoea.

Etymology: Kaage hoo, Kakkapoovu and Kakke poo (crow flower) are due to its dark purple corolla.

Note: Much used for skin diseases.

876. *Tragia involucrata* L. (Plate 148 B)

Family: Euphorbiaceae

Vernacular Name: San: Duralabha, Dusparsa, Kasaghni  
Eng: Indian stinging nettle  
Kan: Urusanige, Balli urusanige, Turuchana balli  
Mal: Choriyanam, Kodithoova  
Tulu: Ballu aakire

Habit: Twining herb.
Habitat: Wastelands and along hedges.

Status: Common. Weed.

Description: Slender twining herb with stinging hairs. Leaves simple, ovate-lanceolate, hispid. Flowers monoecious, minute, in terminal or leaf-opposed racemes; males in the upper part, minute; females few, below, strigosely hispid. Perianth in male 3 – 5-lobed; in female 6-lobed; lobes pinnatifid, enlarged, hardened and stellately spreading in fruit. Stamens 3. Fruit hispid capsule of 3, 2-valved cocci.

Uses: Root decoction is recommended for fever and it has the property to induce perspiration. *Root decoction is taken for 30 days for complete cure from erysipelas. *Root decoction is used with honey for DUB. *Fruit is pressed over the forehead to get relief from headache. Whole plant decoction is recommended for fever, dry cough, asthma, bleeding piles, worms and shortage in urine. Root decoction is consumed as a blood purifier for allergy, jaundice, asthma, bleeding piles and skin eruptions. *Root extract is advised with sugar for bleeding piles, to expel guinea worms and to arrest vomiting. *Root ground with cumin seeds and raw rice is fed to cattle to increase lactation. Root juice is taken with milk and sugar for fever as well as scabies. *Tender shoot tip tambuli* is consumed to expel intestinal worms. *Root piece paste with ghee is applied all over the body for malabsorption in children. *Stem or root extract in tender coconut water is consumed for eczema and erysipelas. *Fruit is pasted over the nerve on the side of forehead for immediate relief from migraine. Root decoction is recommended for burning during urination, leucorrhoea and raktavata*. *Root paste itself is the antidote for its allergy. *Roties* prepared using its root is used for urticaria. *Leaf, salt and impure sodium chloride paste is applied for 1 – 2 days in case of bleeding piles. *One handful leaf ground with raw rice is applied for furuncles. *Leaf and red ant egg paste boiled with coconut oil is applied for ringworm. *Fried leaf ground with cheese is applied for chronic ulcers. *Root paste with honey is taken in small doses for breathing problems and asthma in children. *Lehyam* prepared by mixing its root, roots of Caesalpinia mimosoides, Justicia adhatoda and Aegle marmelos decoction with cumin seeds, ginger, Glycyrrhiza glabra rhizome, Nelumbo nucifera stamens, clove,
mace, nutmeg, ox bile, jaggery and sugarcandy is used for cold, cough and breathing problems.

Etymology: Duralabha (difficult to hold), Dusparsa (difficult to touch), Turuchana balli (itchy vine), Ballu urusanige, Ballu aakire (itchy Laportea) and Choriyanam (one which causes itch) are due to its twining habit, presence of stinging hairs and property to cause itch just like Laportea.

Note: It is used in the preparation of Duralabharista, Dasamularista, Vidaryadi kvatha, Vidaryadi churna, Vidaryadi ghṛta and Rasnadi kashaya. It is much known for its diuretic and CNS depressant actions (Jain et al., 1991; Sharma et al., 1998; Sivarajan & Balachandran, 1996). Tender shoot is used as vegetable.

877. *Trema orientalis* (L.) Blume (Plate 148 C)

Syn: *Celtis orientalis* L.

Family: Ulmaceae

Vernacular Name: San: Jivani

Eng: Charcoal tree, Gun powder tree, Oriental nettle,
Oriental Trema

Kan: Kiruhaale, Gorkal mara, Nuga mara

Mal: Amapotti, Pottamaram. Ratthi, Nugamaram

Tulu: Nugamaro

Habit: Small tree.

Habitat: Forest clearings.

Status: Frequent.

Uses: *Root bark and leaf decoction is taken internally for fits.

Etymology: Nuga mara, Nugamaram and Nugamaro (yoke tree) arose as its wood is much used for yokes.

Note: Light weight tree, much used for agricultural implements.

878. *Trewia nudiflora* L. (Plate 148 D)

Syn: *Trewia polycarpa* Benth.

Family: Euphorbiaceae

Vernacular Name:  
San: Karahata, Kurangaha, Pindara  
Kan: Kaadu kumbalamara  
Mal: Malamkumbil, Naikumbil, Pambarakumbil  
Tulu: Kattu kumbudamaro

Habit: Large tree.

Habitat: Along streams and roadsides.

Status: Frequent.

Description: Large deciduous tree. Leaves simple, broadly ovate to orbicular, 3 – 5-ribbed at base. Flowers dioecious, minute, appearing before the leaves; male in short slender racemes; female in many-flowered drooping racemes. Perianth 3 – 5-lobed. Stamens numerous. Fruit globose to ovoid, densely grey-tomentose, fleshy drupe.

Uses: *Root decoction is recommended for swellings and its paste is applied externally for rheumatism and arthritis.

Etymology: Kaadu kumbalamara, Kattu kumbudamaro (wild *Gmelina arborea*) and Naikumbil (inferior or dog *Gmelina arborea*) are due to its resemblance with *Gmelina arborea*.

Note: Occasionally used as an adulterant for *Gmelina arborea*. 
879. *Trianthema portulacastrum* L. (Plate 148 E)

Syn: *Trianthema monogyna* L.

Family: Aizoaceae

Vernacular Name: San: Sveta punarnava, Shveta punarnava  
Eng: Giant pig weed, Horse purslane  
Kan: Bilikomme  
Mal: Pasalikeera  
Tulu: Boldukomme

Habit: Prostrate herb.

Habitat: Along roadsides and waste places.

Status: Occasional. Weed.

Description: Prostrate, somewhat fleshy herb. Leaves simple, one of a pair much smaller than other, obovate; petiole expanded into a sheathing membranous base. Flowers small, axillary, sheathed by the base of the petiole. Calyx 5-lobed; lobes petaloid, ovate-lanceolate, white or pinkish. Petals absent. Stamens 10 – 25. Fruit small capsule, concealed in the petiolar pouch.

Uses: *Root paste is applied for eye diseases. Whole plant or root decoction is recommended for dropsy and urinary disorders. Plant decoction is a tonic, diuretic and blood purifier.*

Etymology: Sveta punarnava, Shveta punarnava, Bilikomme and Boldukomme (white *Boerhavia*) are due to its whitish plant body and close affinity with *Boerhavia diffusa*.

Note: Plant is nutritious and is used as green vegetable. It is used as a substitute for *Boerhavia diffusa*. It is one of the major ingredients of *Dhanvantara kulambu, Punarnavasava, Kumaryasava, Chyvanaprasha and Vastyaamayantaka ghrta* (Sivarajan & Balachandran, 1996).
880. *Tribulus terrestris* L. (Plate 148 F)

Family: Zygophyllaceae

Vernacular Name: San: Bahukantaka, Gokshura, Trikantaka, Sva dukantaka  
Eng: Land caltrops, Puncture vine, Devil’s thorn  
Kan: Neggila mullu, Neggilu mullu  
Mal: Njerinjil  
Tulu: Neggilu mullu

Habit: Prostrate herb.

Habitat: Wastelands and roadsides of higher elevation.

Status: Occasional. Weed.

Description: Prostrate to procumbent silky herb. Leaves paripinnate; leaflets unequal, oblong, muricata. Flowers golden yellow, solitary, axillary. Sepals 5. Petals 5, obovate. Stamens 10, in 2 series, subtended by 5 glandular scales. Fruit 5-angled schizocarp, with 5 woody cocci, each with a pair of unequal, sharp, recurved spines.

Uses: Seed or fruit decoction is used for urinary tract infections, oedema and urinary stones. Seed decoction is also recommended for urine block and habitual abortion. It is a tonic and has aphrodisiac property. *Fruit or plant ash is applied for swellings and rheumatism.*  
*Leaf extract is taken to expel worms.*  
*Fruit and *Solanum melongena* root decoction with milk is consumed for back pain and disc problems.*  
Seed decoction with coriander seeds is advised for kidney and bladder stones. Seed extract is recommended for diabetes. *Seeds and *Hordeum vulgare* seeds decoction is used thrice a day for urine block. Seed decoction is given to increase urine flow after snake bite. *Seed, *Erythrina variegata* bark, *Adenanthera pavonina* root and *Pongamia pinnata* bark decoction is used for abdominal spasm.*  
*Fruit, *Boerhavia diffusa, Hygrophila schulli, Homonoia reparia* plants and *Hordeum vulgare* seeds (in equal quantity) decoction is used for six days for smooth urine flow in children. *Seed, coriander and *Musa paradisiaca* rhizome decoction with milk is taken for diseases during pregnancy.*  
*Seed decoction with *Sida rhombifolia* root is consumed
for urinary disorders during pregnancy. *Seed, *Capparis floribunda* fruit, *Lepidagathis prostrata* spines and dried ginger decoction is taken with honey twice a day for venereal diseases. *Fruit, triphala* and long pepper powder (5:3:1) mixed with honey is used as household remedy for gonorrhoea, dropsy, fistula, syphilis and foul ulcers. About 200 ml of its fruit (50 gm) decoction is consumed twice a day for burning during urination and renal calculi.

Etymology: Bahukantaka (many spines), Neggilu mullu and Neggila mullu (inward bent spines) are due to its characteristic fruits with many recurved spines.

Note: It is one of the important ingredients of *Dasamularista, Brhatyadi kashaya, Himasagara taila, Vastymayantaka ghṛta, Gokshuradi kvatha, Gokshuradi guggulu, Gokshuradi avaleha, Gokshuradi churna, Sahacaradi taila, Dasamula kvatha, Dasamula churna, Draksadi churna, Abhayarista, Rasna saptaka kvatha* and *Brhat varunadi kvatha*. It has harman and harmine as active constituents (Dey, 1994; Kapoor, 1990; Sharma et al., 1998; Sivarajan & Balachandran, 1996).

881. *Trichopus zeylanicus* Gaertn. ssp. *travancoricus* (Bedd.) Burkill ex Narayanan (Plate 149 A)

Syn: *Trichopus zeylanicus* sensu Hook. f.

Family: Trichopodaceae

Vernacular Name: Kan: Arogyappacche
Mal: Arogyappacha
Tulu: Arogyappacche

Habit: Erect herb.

Habitat: Grown in gardens.

Status: Occasional.

Description: Erect perennial herb, with nodose rhizome. Leaves radical, simple, ovate-lanceolate to broadly triangular-ovate, base deeply cordate with a wide sinus. Flowers small, in 4 – 5-flowered fascicles at the base of the leaves. Perianth
campanulate, dark-brown; lobes 6, lanceolate. Stamens 6. Fruit indehiscent, triquetrous.

Uses: Whole plant extract with milk is used as a general tonic.

Etymology: Arogyappacche and Arogyappacha (health giving herb) are due to its use as health tonic.

Note: Much used as general health tonic.

882. *Trichosanthes anguina* L. (Plate 149 B)

Family: Cucurbitaceae

Vernacular Name: San: Ahiphala, Dirghaphala, Chichunda, Patola  
Eng: Snake gourd  
Kan: Padavala, Padavala kaayi  
Mal: Padavalam  
Tulu: Pattlakkayi

Habit: Slender climber.

Habitat: Cultivated.

Status: Common.

Description: Slender annual climber. Leaves simple, orbicular-reniform, usually 3 – 5-lobed, denticulate, puberulous. Flowers monoecious, white; male in axillary racemes; female solitary. Calyx tubular, dilated above; lobes 5. Petals 5, fimbriate along margin. Stamens 3. Fruit elongate-cylindric, variously curved or coiled, often with white strips along the length.

Uses: Fruit juice (in limited dose) is useful for gas trouble (over dose can cause gastritis). *Oil prepared from its leaf juice is applied for skin diseases and rheumatism. *Whole plant paste is also applied for rheumatism. Fruit extract is recommended for dysentery.
Etymology: Ahiphala (snake fruit) and Dirghaphala (long fruit) are due to its characteristic fruits.

Note: Fruit is much valued vegetable.

883. *Trichosanthes cucumerina* L. (Plate 149 C)

Family: Cucurbitaceae

Vernacular Name: San: Patola, Patolah, Katupatola, Tiktaka
   Eng: Wild snake gourd
   Kan: Kahipadavala, Kahipadavalu
   Mal: Kattupadavalam, Kayppanpadavalam, Patolam
   Tulu: Kattu pattlakkayi

Habit: Climbing herb.

Habitat: Along hedges and waste places.

Status: Occasional.

Description: Climbing herb, with glabrescent, sparsely hispid branchlets. Leaves simple, orbicular-reniform or broadly ovate, angular or 3 – 5-lobed, puberulous. Flowers dioecious, white; male in axillary racemes; female solitary. Calyx tubular, dilated above; lobes 5. Petals 5, fimbriate along margin. Stamens 3. Fruit ovoid-fusiform, beaked at apex.

Uses: *Whole plant decoction is taken to expel worms. It is also used as a blood purifier and emetic agent. *Fruit paste is applied for easy heal of swellings. Stem decoction is recommended to expel phlegm. *Leaf juice is consumed to arrest vomiting. *Root juice mixed with dried fruit powder is taken as a purgative. *Seed extract is recommended for fever and to expel worms. Tender shoot or dried fruit decoction increases digestive power. Fruit extract is an emetic agent and used for biliousness. Stem juice is applied for swellings. Root juice is a purgative agent. *Plant paste is applied externally of allergies and rheumatism. *Leaf ground with butter is applied to the centre of the head to arrest bleeding from the nose or ear due
to *raktapitta* (bleeding stops within 15 minutes). Plant paste is used as a wound healer. *Leaf juice mixed with honey is applied for alopecia totalis.*

Etymology: Katupatola, Kahipadavala, Kayppanpadavalam (bitter snake gourd), Tikta (bitter), Kattupadavalam and Kattu pattlakkayi (wild snake gourd) are due to its wild nature and bitter fruits sharing close affinity with that of snake gourd.

Note: Leaf is used in the preparation of a variety of *bhasma*. It is used in the preparation of *Gulgulutiktaka kashaya, Mahatiktaka ghrtta* and *Vajraka kashaya* (Sivarajan & Balachandran, 1996).

**884. Trichosanthes tricuspidata** Lour. var. *tricuspidata* (Plate 149 D)


Family: Cucurbitaceae

Vernacular Name: San: Kakanasa, Indravaruni
                Kan: Kagethonde, Kagemari
                Mal: Kakkathondi, Kozhikudalam
                Tulu: Kakke manoli, Kakkathondi

Habit: Large climber.

Habitat: Near habitations and disturbed ground.

Status: Frequent.

Description: Large climber, with lapidate branchlets and branched tendrils. Leaves simple, polymorphic, ovate or suborbicular, deeply 5 – 7-lobed, puberulous. Flowers dioecious, white with green tinge; male in axillary racemes; female solitary. Calyx 5-lobed; lobes lanceolate. Petals 5, white, ovate. Stamens 3. Fruit globose with hard rind, red when ripe; seeds elliptic, black.

Uses: *Oil prepared by frying its fruit in coconut oil is poured into the ear for earache. *Root decoction or root as such is recommended for digestive disorders in
cattle. *Oil prepared from the seeds is used as nasya* for earache. Whole plant decoction is consumed as a blood purifier, tonic and for urinary diseases (due to diuretic property). *Bath with whole plant decoction is recommended for rheumatism. *Plant and Clerodendrum serratum leaf decoction is used to wash septic wounds and ulcers in the feet. Plant paste is applied for skin diseases. *Root paste is applied for viper bite. *Oil prepared using its fruit juice is applied over the head for dandruff and poisonous bites.

Etymology: Kakanasa (crow nose), Kakkathondi, Kagethonde, Kakke manoli (crow Coccinia) and Kagemari (crow killer) are due to its elliptic seeds, habit resembling that of Coccinia and fruits which are poisonous to the crows.

Note: It is used in the preparation of Abhayarista, Mahatiktaka kashaya, Manasamitra vataka, Cavikasava and Madhuyasyadi taila (Sivarajan & Balachandran, 1996).

885. Tridax procumbens L. (Plate 149 E)

Family: Asteraceae

Vernacular Name: San: Jayanti
   Eng: Coat-button, Mexican daisy
   Kan: Gabbu shyavanthige, Nela shyavanthige
   Mal: Kurikootti cheera, Muriyampachila, Odiyancheera
   Tulu: Nelasevanthige

Habit: Procumbent herb.

Habitat: Open places.

Status: Common. Exotic and weed.

Description: Procumbent herb, with pilose, creeping and ascending stem. Leaves simple, ovate or lanceolate, margins inciso-dentate or trilobed, hirsute. Heads heterogamous, solitary on long, hirsute peduncle; involucral bracts ovate, densely hirsute. Ray florets few, yellow, female; ligule obovate-oblong, deeply 2 – 3-lobed.
Disc florets tubular-campanulate, yellow, 5-lobed. Stamens 5. Fruit turbinate, black, sparsely sericeous achene.

Uses: Plant decoction is used for leucorrhoea. *Leaf juice or paste is applied as a wound healer over cuts and wounds. It is also used to arrest bleeding from cuts. *Whole plant decoction is taken with honey for diarrhoea and throat irritation. Root decoction is consumed to arrest diarrhoea, for fever and pain. *Whole plant decoction boiled with gingelly oil is applied for rheumatism.

Etymology: Gabbu shyavanthige (bad smelling Chrysanthemum), Nela shyavanthige, Nelasevanthige (ground Chrysanthemum) and Muriyampachila (leaf for wounds) are due to its procumbent habit, strong smell, slight resemblance with Chrysanthemum and wound healing property.

Note: Much known for its wound healing property.

**886. Triumfetta rhomboidea** Jacq. (Plate 149 F)

Syn: *Triumfetta angulata* Lam.; *Triumfetta trilocularis* Roxb.

Family: Tiliaceae

Vernacular Name: San: Jhinjhirita, Jhinjharita
Eng: Bur weed
Kan: Katturki, Punta purale
Mal: Oorpam
Tulu: Katturki

Habit: Undershrub.

Habitat: Wastelands and roadsides.

Status: Common. Weed.

Description: Undershrub, with slender, pubescent branches. Leaves simple, variable; lower leaves 3 – 5-lobed, pubescent; upper leaves lanceolate. Flowers yellow, in dense terminal and leaf-opposed cymes. Sepals 5, mucronate. Petals 5, glandular at
base. Stamens 8 – 15, inserted on the glandular torus. Fruit globose capsule, with hooked bristles.

Uses: *Root decoction is taken for dysentery while its paste is applied for ulcers and boils. Leaf juice is consumed for diarrhoea. *Whole plant paste is applied for itches and leprosy.

Etymology: Katturki (wild *Urena*) arose from its fruits which show resemblance with that of *Urena lobata*.

Note: It is usually used as a substitute for *Urena lobata* and adulterant for *Sida* complex.

**887. Turnera subulata** Smith in Nees. *(Plate 150 A)*

Syn: *Turnera ulmifolia* L. var. *elegans* (Otto) Urban

Family: Turneraceae

Vernacular Name: Eng: Sundrops
  Kan: Mayanamallige
  Mal: Cheravathali
  Tulu: Menamallige

Habit: Undershrub.

Habitat: Grown in gardens, also as escape in wastelands.

Status: Frequent. Exotic and weed.


Uses: Same as *Turnera ulmifolia*. 
Etymology: Mayanamallige and Menamallige (waxy jasmine) are due to its attractive flowers and sticky plant body.

Note: Grown as ornamental plant.

888. *Turnera ulmifolia* L. (Plate 150 B)


Family: Turneraceae

Vernacular Name: Eng: Sundrops, Yellow alder
Kan: Mayanamallige
Mal: Cheravathali
Tulu: Menamallige

Habit: Undershrub.

Habitat: Grown in gardens, also as escape in wastelands.

Status: Frequent. Exotic.

Description: Much branched undershrub. Leaves simple, ovate, elliptic or ovate-lanceolate, hairy beneath; petioles with a pair of distal glands. Flowers solitary, axillary; bracteoles linear-lanceolate. Calyx deeply 5-lobed. Petals 5, yellow. Stamens 5. Fruit globose, loculicidal capsule.

Uses: Whole plant extract is used as a health tonic.

Etymology: Mayanamallige and Menamallige (waxy jasmine) are due to its attractive flowers and sticky plant body.

Note: Grown as ornamental plant.

889. *Tylophora fasciculata* Buch.-Ham. ex Wight & Arn. (Plate 150 C)

Family: Asclepiadaceae

Vernacular Name: San: Gocandana
Kan: Bana karugala, Nelakarugala, Nelagamate
Tulu: Bana karugalo, Nela karugalo
Habit: Undershrub.

Habitat: Among grasses in laterite hills.

Status: Occasional.

Description: Slender creeping or twining undershrub, with fasciculated tuberous roots. Leaves simple, ovate-lanceolate, coriaceous, pubescent on the nerves below. Flowers small, chocolate-brown, in lateral umbellate cymes. Calyx 5-lobed. Corolla rotate; lobes 5. Corona single. Pollinia single in each anther-sac. Fruit ovate or spindle shaped follicle.

Uses: *Raw fruits are nutritious, useful for biliousness.

Etymology: Nelakarugala and Nela karugalo (ground Solena) are due to its edible fruits which resemble that of Solena amplexicaulis and produced at ground level.

Note: Fruits are edible (should be eaten immediately after plucking to avoid bitter taste).

890. *Tylophora indica* (Burm. f.) Merr var. *indica* (Plate 150 D)

Syn: *Tylophora asthmatica* (L. f.) Wight & Arn.

Family: Asclepiadaceae

Vernacular Name: San: Arkaparni, Lataksiri, Shwasaghni

Eng: Emetic swallow wort, Indian ipecacuanha

Kan: Aadumuttada balli, Kirumanji balli, Ballihale

Mal: Vallippala

Tulu: Ballupale

Habit: Twining herb.

Habitat: Open places and along hedges.

Status: Frequent.

Description: Twining herb, with watery sap and fasciculate roots. Leaves simple,
elliptic to ovate, cordate at base, pubescent beneath. Flowers small, in lateral umbellate cymes. Calyx 5-lobed; lobes ovate or lanceolate. Corolla rotate, greenish-yellow outside, purplish within. Corona single. Pollinia single in each anther-sac. Fruit fusiform, divaricate follicles.

Uses: Root extract is taken in limited dose as a laxative agent. Leaf powder is recommended (in small dose) for diarrhoea, dysentery and asthma (over dose results in vomiting). *3 – 10 leaves ground in milk are advised in three cycles for asthma. Leaf or root extract is an emetic agent. Dried leaf powder induces vomiting, used for cough. *Dried leaf powder mixed with opium is recommended for dysentery and blood dysentery. Leaf juice is consumed for asthma, bronchitis and cough. Whole plant decoction is advised to expel phlegm, for asthma and bronchitis. Crushed root decoction with milk is used for asthma. *Hot paste of leaf with ghee is applied for swellings inside the stomach. *After applying ghee over the ear lobe, its heated leaf is pressed for earache, ear block due to cold and running nose. Plant juice is recommended for jaundice, food poisoning, dysentery and throat pain (over dose may cause vomiting and a mixture of sugar and milk is the antidote). *Root and leaf crushed with milk is given to drink in case of food poisoning (poison gets expelled through vomiting). *About 10 ml of its leaf decoction is taken twice a day for diabetes. Root juice is advised with milk for phlegm.

Etymology: Lataksiri (milky vine), Aadumuttada balli (vine not touched by goat), Ballihale, Vallippala and Ballupale (lateciferous vine) are due to its twining nature, presence of watery sap and is not eaten by the goats.

Note: Much valued drug for respiratory tract diseases.

891. *Tylophora tetrapetala* (Dennst.) Suresh in Nicolson *et al.* var. *tetrapetala* (Plate 150 E)

Syn: *Tylophora tenuis* Blume.; *Asclepias tetrapetala* Dennst.

Family: Asclepiadaceae

Vernacular Name: Kan: Puriballi
Mal: Nanjaippan, Parparam
Tulu: Puriballu

Habit: Twining herb.

Habitat: Along hedges.

Status: Occasional.


Uses: *Plant paste is a wound healer and is applied to expel maggots from the septic wounds.

Etymology: Puriballi and Puriballu (worm vine) arose as this plant is used to remove worms or maggots from the septic wounds.

Note: Much known for its wound healing property.

892. *Uraria rufescens* (DC.) Schindler (Plate 150 F)

Syn: *Desmodium rufescens* DC.; *Uraria hamosa* (Roxb.) Sw.

Family: Papilionaceae

Vernacular Name: San: Prsniparni, Salaparni, Saliparni
    Kan: Moovile, Antu bele gida
    Mal: Moovila, Muvila
    Tulu: Moojire

Habit: Under shrub.

Habitat: Along forest edges.

Status: Occasional. Weed.

Description: Under shrubs with straggling branches. Leaves 3-foliolate; leaflets
unequal; terminal elliptic to obovate; lateral elliptic-oblong, ciliate, pubescent, chartaceous. Flowers in axillary and terminal panicle or racemes. Calyx 2-lipped. Petals 5, pinkish-rose. Stamens 9 + 1. Fruit folded up and included within the calyx, sticky pubescent pod.

Uses: Same as *Pseudarthria viscida*.

Etymology: Moovile, Moovila, and Moojire (three leaves) are due to the trifoliolate leaves. Antu bele gida (sticky fruit herb) arose due to the sticky pods.

Note: It is used as synonymous to or as substitute for *Pseudarthria viscida*. It is a major ingredient of *Dasamularista* and *Sudarshana churna* (Dey, 1994).

**893. Urena lobata** L. ssp. *lobata* (Plate 151 A)

Family: Malvaceae

Vernacular Name: San: Atibala, Nagabala

Eng: Aramina fibre, Guaxima, Congo jute

Kan: Kadu thutti, Otte, Dodda bende

Mal: Kuruvachedi, Uthiram, Uram, Vattooram

Tulu: Boldu urki

Habit: Under shrub.

Habitat: Along roadsides and wastelands.

Status: Occasional. Weed.

Description: Erect under shrub. Leaves simple, ovate to orbicular, shallowly lobed, densely stellate hairy. Flowers solitary or in axillary clusters of 2 – 3. Epicalyx segments linear to lanceolate. Calyx campanulate, 5-lobed; lobes ovate. Petals 5, pink with purple centre. Staminal column antheriferous in upper half. Fruit globose schizocarp, with 5 glochidiate mericarps and cupular epicalyx.

Uses: Root decoction is given for rheumatism. *Root bark and coriander seed decoction is used for asthma. *Plant paste or oil prepared using plant juice is applied for three days in case of burns. *Plant paste or mucilage is used for bone setting in
case of bone fracture. Root decoction is used for biliousness, phlegm and rheumatic problems in children. *Root decoction is used as *dhara* for septic wounds. *Decoction prepared from its root, barks of *Madhuca neriifolia*, *Ficus religiosa* and *Ficus racemosa* is used twice a day with milk for six days from 4th day of menses for three months in case of stomachache during menses. Root decoction is used for rheumatism, back pain and as nervine tonic.

Etymology: Kaadu thutti (wild mulberry) is due to the wild nature and resemblance of leaf with that of mulberry. Dodda bende (larger okra) is due to its similarity with okra plant. Atibala (larger bala) indicate its affinity with *Sida* complex and it is one of the sources of bala (*Sida* spp.).

Note: Used in Ayurvedic formulations like *Ksirabala*, *Dhanvantara taila*, *Balarista*, *Rasnadi kashaya* and *Asvagandhadi lehya* (Sivarajan & Balachandran, 1996). It has similar properties as that of *Sida rhombifolia*.

**894. *Urena lobata* ssp. *sinuata* (L.) Borss. (Plate 151 B)**

Syn: *Urena sinuata* L.

Family: Malvaceae

Vernacular Name: San: Atibala, Nagabala  
Eng: Aramina fibre, Guaxima, Congo jute  
Kan: Kadu thutti, Bekkina hejje gida  
Mal: Uthiram, Uram  
Tulu: Boldu urki

Habit: Under shrub.

Habitat: Wastelands and along roadside.

Status: Common. Weed.

Description: Erect under shrub. Leaves simple, ovate to orbicular, deeply lobed, densely stellate hairy. Flowers solitary or in axillary clusters of 2 – 3. Epicalyx segments linear to lanceolate. Calyx campanulate, 5-lobed; lobes ovate. Petals 5,
pink with purple centre. Staminal column antheriferous in upper half. Fruit globose schizocarp, with 5 glochidiate mericarps and spreading epicalyx.

Uses: *Oil prepared from the leaf juice is used as hair oil. *Root decoction with milk is given for cough. *Crushed bark boiled in milk is given at night after food by adding honey for dry cough, breathing problem and weakness. *Above decoction is given with sugarcandy, while leaf paste with rice washed water is applied for bone pain and weak bones. Root and bark decoction is used for biliousness, thirst, fever, urinary diseases, rheumatism, sound fall and breathing problems.

Etymology: Kaadu thutti (wild mulberry) is due to the wild nature and resemblance of leaf with that of mulberry. Bekkina hejje gida (cat footprint plant) is due to the resemblance of leaf with cat’s footprint.

Note: Used in Ayurvedic formulations like Ksirabala, Dhanvantara taila, Balarista, Rasnadi kashaya and Asvagandhadi lehya (Sivarajan & Balachandran, 1996).

895. *Urginea indica* (Roxb.) Kunth (Plate 151 C)

Syn: Drimia indica (Roxb.) Jessop.; Scilla indica Roxb.; Scilla coromandeliana Roxb.; Urginea coromandeliana Hook. f.

Family: Liliaceae

Vernacular Name: San: Vana palandu

Eng: White squil, Sea onion, Indian squil

Kan: Bili eerulli, Nari eerulli, Kaadu eerulli

Mal: Kanthanga, Kattulli, Vishamangi

Tulu: Kattu neerulli, Boggulli

Habit: Bulbous herb.

Habitat: Moist sandy areas.

Status: Occasional.

Description: Perennial herbs, with white, ovoid, tunicated bulbs. Leaves linear-lanceolate, flat, sub-bifarious. Scape erect. Flowers brownish-white, in lax racemes
Fruit ellipsoid capsule.

Uses: *Burnt bulb paste is applied externally for burning sensation in heel and sole.
*Bulb paste is also applied for corns. Its use decreases appetite.

Etymology: Kaadu eerulli, Kattu neerulli and Kattulli (wild onion) came due to the
similarity of bulb to that of onion, while Bili eerulli (white onion) indicate its colour.

Note: Bulb has scillarin A, scillarin B, lauric acid, arachidic acid, myristic acid,
palmitic acid, oleic acid, linoleic acid, ricinoleic acid. It is much used in silver
preparations (Dey, 1994; Kapoor, 1990; Chaudhri, 1996). Bulb is also used in
magical rituals.

896. *Utricularia reticulata* Smith (Plate 151 D)

Family: Lentibulariaceae

Vernacular Name: San: Seethasru

Kan: Seethasru

Mal: Seethasru

Habit: Small herb.

Habitat: Paddy fields and wet areas.

Status: Common.

Description: Small terrestrial herb. Leaves linear, in basal rosette; traps subglobose.
Scapes twining, 10 – 12 flowered. Calyx deeply divided into two; lobes ovate, much
enlarged and decurrent in fruit. Corolla large, bluish-purple; upper lip broadly
ovovate; lower suborbicular, gibbous at base; spur slightly curved. Stamens 2,
included. Fruit ovoid, capsule.

Uses: *Whole plant decoction is recommended internally for urinary tract infections.
*Plant paste is applied externally to heal wounds.

Note: Flowers are used for *Atthapookkalam*, the traditional floral design during
*Onam*. 
**897. Uvaria narum** (Dunal) Wall. (Plate 151 E)

Family: Annonaceae

Vernacular Name: San: Nilavalli, Vallisakhotah  
Kan: Kariballi, Karibilu, Pandilu, Unnaminni gida  
Mal: Narumpanal, Koorilvalli, Kooril  
Tulu: Kari maderi, Pandil

Habit: Scandent shrub.

Habitat: Along hedges and thickets.

Status: Common.


Uses: Root paste is applied for erysipelas. *Leaf paste is applied all over the body to prevent honey bee stings or to ward off honey bees. Leaf extract is given for rheumatism. Root decoction is used for jaundice, septic fever and biliousness. *Root crushed vertically in water is given in very small dose for constipation. *Root decoction is given internally while paste on head for insanity and other mental problems. *Leaf juice is swallowed or its decoction is used for acidity and mouth ulcers. *Root or leaf is chewed for getting relief from toothache. Root or whole plant paste or decoction is applied for rheumatism. *Root paste with lime juice is applied for scabies and boils. *Oil prepared using root juice is applied to kill lice. Leaf extract is given with sugar for breathing difficulty. *Seed paste with water is applied for ringworm. Root extract in cool water is applied for ringworm. *Root extract in cool water is given (5 drops) for constipation in small children. *Its root, *Ficus asperrima root, *Ziziphus rugosa root and *Salacia chinensis root ground in lime juice or rice washed water is applied on tongue twice a day for black thrush. Plant decoction is given to purify blood. *Paste prepared from its root, that of
Salacia chinensis, bark of Croton laevigatus and sandalwood with tender coconut husk juice is applied for herpes and urticaria.

Etymology: Kariballi and Karibilu (black climber) is due to the dark black stem. Kari maderi (black Loesneriella arnottiana) is due to the resemblance with Loesneriella arnottiana and black coloured stem.

Note: Leaf is made into a paste and applied all over the body to ward off honey bees, during honey collection. It is used in basketry just like Loesneriella.

898. Vanda tessellata (Roxb.) Hook (Plate 151 F)

Syn: Epidendrum tessellatum Roxb.; Vanda roxburghii R. Br.

Family: Orchidaceae

Vernacular Name: San: Rasna, Vriksharuha, Dronagandhika
   Eng: Ichenumon plant
   Kan: Marabaale, Badanike
   Mal: Maravazha, Arathamaravazha
   Tulu: Marabaare

Habit: Herb.

Habitat: Moist deciduous forests and plains.

Status: Rare.


Uses: *Leaves are recommended for indigestion and food poisoning in cattle. Whole plant decoction is given for rheumatism. *Heated leaf (plant growing on tamarind tree) juice is poured into ear for earache.

Etymology: Name Marabaale (tree plantain) is due to its epiphytic nature and stout stem fully covered with leaf sheaths giving the appearance of a plantain.
Note: Used for preparations like Rasnasaptaka kvatha, Rasna guggulu, Mahamasa taila, Madhyama-narayana taila, Maharasnadi kvatha, Rasna dasamula kvatha, Laghu visgarva taila, Rasnapanchaka kvatha and Kukuvadi churna (Dey, 1994). Glycosides, tannin and saponins present in it are responsible for its nervine tonic property and make it useful for rheumatism (Kapoor, 1990). Both Alpinia galanga and Vanda tessellata are used as the source of the drug, rasna.

899. Vateria indica L. (Plate 152 A)

Syn: Vateria malabarica Blume

Family: Dipterocarpaceae

Vernacular Name: San: Ajakarnah, Dhupa, Sarjaka, Salah
Eng: White dammar, Dhupa fat, Malabar tallow
Kan: Dhoopada mara, Bili dhoopa, Maddi dhoopa, Bili guggulu
Mal: Vellappayin, Vella kunturukkam
Tulu: Chandolike, Chandalike, Tandolike

Habit: Large tree.

Habitat: Evergreen and semi evergreen forests, also in sacred groves.

Status: Common.


Uses: Oil prepared from its gum resin is used for burns. *An ointment prepared from its seed oil and coconut oil is applied for rheumatism, swellings and ulcers. *Oil extracted from gum or gum paste with butter is applied for rheumatic pain and athlete’s foot. Gum boiled in coconut oil is applied for arthritis and rheumatic swellings. *Fruit ground in water is given for vomiting. Oil extracted from the fruit is applied for rheumatism. *Bark decoction is used for backache (it is anti aphrodisiac). Gum resin paste with coconut oil is applied for eczema. *Its resin,
rock salt, *Saussurea lappa* seeds and white mustard seeds are ground with water and applied for itching in scrotum. *Resin, rock salt and honey paste with ghee is applied for burning sensation in legs. Resin is applied to remove white marks caused by burn. *Gum resin mixed with equal quantity of coconut oil is heated and applied in order to remove burnt marks.

Etymology: Bili dhoopa, Vella kunturukkam (white dammar) are due to the white colour of the exudates. Bili guggulu (white guggul) is due to the resemblance with the guggul (dark coloured gum resin from *Commiphora* spp.) and whitish colour.

Note: Ingredient of *Kacchuradi churna, Kacchuradi lepa, Pinda taila* and *Lavangadi churna* (Sharma et al., 1998). Oil extracted from the seeds is used for cooking. Gum is used as an adhesive in pesticide sprays. Gum resin is used for fumigation to repel flies and mosquitoes.

900. *Ventilago denticulata* Willd. (Plate 152 B)

Syn: *Ventilago calculata* Tul.

Family: Rhamnaceae

Vernacular Name: San: Raktavalli

Eng: Red creeper

Kan: Surati chakke, Ithala beelu, Kuriyadi

Mal: Marapettykody

Tulu: Kemputha beru

Habit: Climbing shrub.

Habitat: Open forests.

Status: Occasional.


Uses: *Stem bark decoction is used internally for malaria. *Oil prepared from the root is applied externally for sprains and body pain.
Etymology: Kemputha beru (red root) arose as it gives red colour to the oil in which it was kept.

Note: Usually used in the absence of Ventilago maderaspatana.

901. Ventilago maderaspatana Gaertn. (Plate 152 C)

Family: Rhamnaceae

Vernacular Name: San: Dineshavalli, Raktavalli, Tamravalli
   Eng: Red creeper
   Kan: Poppli, Ithala beelu, Pappali, Kempu beru
   Mal: Vembada, Marapettykody
   Tulu: Ithaballu, Kemputha beru

Habit: Large climber.

Habitat: Open forests and sacred groves.

Status: Occasional.


Uses: Oil prepared from this plant is used for bathing the small children. *Root paste is applied for dandruff and herpes. *Root along with sandal wood, red sandal wood, Ixora coccinea root and milk are boiled in coconut oil and massaged over the body of small children for proper growth and development. Crushed root is kept in coconut oil in sunlight, and resulting oil is smeared over the body of children before bath to prevent skin diseases. Root extract is given internally for blood purification, digestive problems, weakness and paste externally for itches. *Paste of root fried in ghee is applied for rashes or swellings due to allergy. *Juice extracted by crushing its root with leaf of Cardiospermum halicacabum is boiled with coconut oil and applied for scabies. Plant paste is applied for allergies, urticaria, rashes and
swellings. *Root bark along with Calotropis gigantea root bark, Cassia fistula root bark, turmeric and nalpamara* bark are made into a decoction. To this decoction, paste of these plants is added, heated with gingelly oil and is applied for contagious skin disease.

Etymology: The roots when preserved in coconut oil, give characteristic red colour to it, hence the names Kempu beru and Kemputha beru (red root).

Note: Much valued for the treatment of diseases of children. Plant extract or the whole plant is used along with the black gram during the preparation of iddis* to make the iddis* larger.

902. Vernonia anthelmintica (L.) O. Ktze. (Plate 152 D)

Syn: Centratherum anthelminticum (L.) Gamble

Family: Asteraceae

Vernacular Name: San: Aranyajiraka, Atavijirakah, Somaraji, Vakuchi
Eng: Purple fleabane
Kan: Kalajeerige, Kaadujeerige
Mal: Kalajeerakam, Kattujeerakam, Karinjeerakam
Tulu: Kaalu jeerige, Kaljeerdari

Habit: Erect herb.

Habitat: Waste places near houses.

Status: Occasional.

Description: Erect stout herb, with striate, pubescent stem. Leaves simple, elliptic or oblanceolate, pubescent. Heads homogamous, subcorymbose, many-flowered. Involucral bracts 4 – 5 seriate; outer linear, herbaceous, hairy; intermediate ones oblong with spathulate appendage; inner linear-oblong, tipped with purple. Florets purple. Corolla tubular-campanulate, 5-lobed. Stamens 5. Fruit10-ribbed, black achene, pubescent on the ribs and glandular in groves.

Uses: Seed decoction is recommended after delivery for drastic uterine contraction. *Seed oil paste is used for chronic skin diseases. Seed decoction is given for syphilis, skin diseases, worms and liver problems. *Seed decoction with jaggery (30
– 50 ml) is given for three days after delivery for indigestion and infection. *Plant or seed paste is applied for killing lice, while its oil on head for headache. Seed decoction is given for gas trouble after delivery, also for rheumatism, stomachache and cough. Used along with other drugs for snake bite. *Seed paste is applied for hair fall, septic wounds, allergies and skin diseases. Oil extracted from seeds is applied for rheumatism. *One spoon of extract of crushed seed ground in Cocos nucifera toddy is consumed internally and sprinkled over head for jaundice. *Equal parts of its seed and fenugreek seeds are fried, powdered, given in tender coconut water for indigestion, constipation and loss of appetite in cattle. Seed powder along with buttermilk is taken for hiccough. *Seed along with gingelly seed are made into powder, mixed with pineapple juice and is recommended to regulate menses. *Seeds along with Alpinia galanga, Glycyrrhiza glabra rhizomes and long pepper seeds are ground and mixed with honey. This mixture is used for asthma. Seed powder dissolved in water is given in empty stomach to expel intestinal worms. *Seeds along with that of Hyoscyamus niger, dried turmeric and 10 pepper seeds are fried, powdered, made into decoction and is given by adding gingelly oil for infections after delivery in ladies. *Seed powder in neem bark decoction is recommended after adding honey for malaria. *Seed and cumin powder decoction is given for a period of 10 days to ladies after delivery.

Etymology: Kaadu jeerige and Kattujeerakam (wild cumin) clearly indicate the wild nature of the plant and resemblance of seeds to that of cumin. Karinjeerakam (black cumin) is due to the dark coloured seeds.

Note: Active constituents are stigmastadienol, stigmasterol, stigmastatrienol acetate, elmenolide and vernodalol (Jain et al., 1991). It is famous for its drastic uterine contractor property.

903. Vernonia cinerea (L.) Less. (Plate 152 E)

Family: Asteraceae

Vernacular Name: San: Sahadevi, Devika
Eng: Ash-colour fleabane, Vernonia
Habit: Erect herb.

Habitat: Weed in wastelands and gardens.

Status: Common.

Description: Erect herb, with pubescent stem. Leaves simple, ovate to lanceolate, pubescent. Heads homogamous, in terminal corymbs. Involucral bracts linear-lanceolate, pubescent. Florets pink or lilac. Corolla tubular-campanulate, 5-lobed. Stamens 5. Fruit obscurely 4 – 5 angular, dark brown or blackish achene, with white pappus hairs.

Uses: Oil prepared from plant juice is used as hair oil (has cooling effect), as it helps in the proper growth and colour of the hair, also prevents hair fall. Whole plant or root decoction is given for fever. *Plant juice is poured into the eyes in case of eye infection and eye diseases. *Its seed paste with lime juice is used to kill lice. *A cloth dipped in this plant juice 7 to 12 times is dried, then the same cloth is dipped in ghee and burnt into ashes. This ash is applied as anjana* for eye diseases. Plant juice is applied for conjunctivitis. *Plant juice is applied externally for pimples. Plant decoction is a blood purifier, removes toxins that entered with food and is useful for fever in children. One handful of whole plant is crushed, boiled in two cup of water and is given three times a day for two weeks in case of repeated attack of fever, mouth ulcer, gastric ulcer and fever. *Whole plant soaked in earthen pot with 4 – 5 Momordica charantia leaves is ground into paste and applied for scabies and skin colour changes. Whole plant decoction is given for two weeks for recurrent fever, mouth ulcers, gastric ulcers and weakness. *Seed extract is used as wormicidal agent. *Plant is smoked near the bed of children for their health. White flower variety is used in fever and urinary disorders while bluish in havanas*. *Whole plant juice is applied all over the body to decrease body temperature. *Plant juice mixed with honey is used as anjana* for conjunctivitis, water release and swelling in
eyes. Its leaves along with that of Leea asiatica are ground and applied for chronic ulcers and wounds. *Whole plant along with leaf of Hibiscus hispidissimus are made into a paste and applied for cataract.

Etymology: Kare hindi soppu (black fodder leaf) is due to the dark coloured plant body. Aerva lanata is known as Bili hindi soppu (white fodder leaf) due to its whitish pubescent stem and leaves.

Note: Ingredient of Candrakala rasa and Almottadi kashaya. Saponins, sapogenins, flavonoids, amyrin acetate, lupeol, β-amyрин, β-sitosterol, stigmasterol and α-spinasterol are the active components (Kapoor, 1990; Sharma et al., 1998). It is one among the Dasapushpas*. This plant is used in tantric* rites during Brahmakalasha*. Plant is used in hawanas*. Tender shoot is used as vegetable.

904. Vetiveria zizanioides (L.) Nash. (Plate 152 F)

Syn: Phalaris zizanioides L.; Andropogon squarrosus sensu Hook. f.

Family: Poaceae

Vernacular Name: San: Haripriya, Dahaharana, Lamajjaka, Shitamulaka,
Sugandhimulah, Usira
Eng: Cuscus grass, Khas-khas, Khus-khus, Vetiver
Kan: Madivala, Mudivala, Lavancha, Lamancha
Mal: Ramaccham, Vettiver
Tulu: Ramaccho, Ramaccha, Mudyala

Habit: Perennial grass.

Habitat: Bunds of paddy fields, also widely cultivated.

Status: Common.

Description: Densely tufted perennial grass. Leaves linear-lanceolate, folded towards base; sheaths compressed. Flowers in panicles; branches verticillate, spreading at anthesis. Sessile spikelets: lanceolate, bisexual, with a shortly bearded callus. Glumes equal, coriaceous; lower spinulose; upper boat-shaped, keeled,

Uses: Root decoction is a blood purifier. *Its decoction with *Scoparia dulcis* and *Cyperus rotundus* is prescribed for shivering during fever. Syrup prepared from its roots has cooling effect, causes sweating and is used for fever. Root decoction relieves thirst, causes perspiration, increases urine and purifies blood. *Root powder is applied over stomach for preventing miscarriage in pregnant women. Root decoction is recommended for sinusitis. Root powder is used for biliousness. *Root paste with milk is applied for itches. Root decoction is recommended for cold, urinary disorders, burning urination and discoloration of urine (colour change of urine). This is also used for rheumatism, ulcers and to expel phlegm. *Root powder paste is applied over forehead for headache. Root decoction is diuretic and is used for fever and biliousness. Root decoction is given for 1 – 3 days for vomiting due to biliousness, fever and poisonous affections. *This decoction is also given with coriander, cardamom and sugarcandy as thirst quencher. *Root extract with rice washed water is given with sugarcandy for insect bite. *Root paste with rice washed water is applied for wounds. *Root along with that of *Glycyrrhiza glabra* is made into a decoction and is used with sugarcandy and milk for cough due to biliousness. *Root powder along with white rock, sugar powder and rice washed water or along with sandal wood, *Cyperus rotundus* and *Hedyotis corymbosa* decoction is used for raktapitta*. *Root paste with old ghee or paste with jaggery, guggul*, rock salt, saffron rock, bee wax and *Catunaregam spinosa* fruit in ghee is applied for cracks in feet. Root paste with old ghee is applied for cracks in heel. *Root along with *Aloe vera, Plectranthus amboinicus* leaf, *Breynia vitis-idaea* leaf, triphala* and *Embelia ribes* seeds (all in equal quantity) are powdered. 6 gm of this powder is taken with equal quantity of sugar and ghee in the morning for five days for erysipelas, eczema and other types of skin diseases. *Root, coriander, and *Nigella sativa* seeds are cooked in water. Next day they are ground with same water and are given by adding
milk and sugar for foul smell of sweat. *Root along with *Tinospora cordifolia* stem, ginger, red sandal wood and lotus rhizome boiled in water are given thrice a day for fever in pregnant women. Root extract with water is used as cooling agent and thirst quencher. *Root powder boiled with coconut oil is applied for bruised swellings.

Etymology: Dahaharana (thirst quencher) is due to the thirst quenching property of its roots. Sugandhimulah (fragrant root) clearly indicate sweet smell of the roots. Shitamulaka (cooling root) arose as the roots are known for their cooling property.

Note: Ingredient of *Usiradi kvatha, Usiradi churna, Usiradya taila, Usirasava, Sudarshana churna, Sarva jwarahara lehya, Yogaraja guggulu, Sadanga kvatha, Sadanga churna* and *Pippalyasava*. Vetivone, ketone and β-vetivone are the active constituents (Dey, 1994; Sharma *et al.*, 1998). Roots are well known for their cooling, diuretic and blood purifying properties. Root has insecticidal property and is placed between clothes to repel insets.

**905. Vigna dalzelliana** (Kuntze) Verdc. *(Plate 153 A)*

Syn: *Phaseolus dalzellii* Cooke

Family: Papilionaceae

Vernacular Name: San: Masaparni
Eng: Wild black gram
Kan: Kaaduddu
Mal: Kattulunnu
Tulu: Kaatturdu

Habit: Twining herb.

Habitat: Along hedges.

Status: Common.

Description: Slender twining or creeping herb; stem filiform. Leaves 3-foliolate; leaflets ovate or rhomboid-ovate, entire or slightly lobed, membranous, pubescent. Flowers in capitulate 2 – 6 flowered racemes. Calyx campanulate, 5-lobed, glabrous; teeth shorter than the tube. Petals yellow, exerted; standard orbicular, auricled at
base; wings obovate; keel incurved. Stamens 9 + 1. Fruit subcylindric, glabrous, 8 – 10 seeded pod.

Uses: Seed is a best tonic, has cooling effect and is given for weakness. Seed decoction is given for rheumatism. *Seeds are fried or ground, eaten for sexual vigour and for impotency. Seed decoction is used for biliousness. *Whole plant ground in fresh milk is taken at morning or whole plant decoction along with milk and sugar is given at night after food for loss of memory, weakness, sleeplessness and seminal weakness. *Whole plant along with leaf of *Moringa pterygosperma* and cumin seeds are ground and made into decoction. This decoction is used at night after food, while plant paste with water is applied externally for swelling of hands and legs due to anaemia. *Whole plant decoction is recommended for tridoshas*, tuberculosis, vatarakta*, dysentery and to increase lactation. But this may increase phlegm.

Etymology: Kaaduddu, Kattulunnu and Kaatturdu (wild black gram) clearly point out its resemblance with black gram plant and also the wild nature.

Note: Ingredient of *Dhanvantara kashaya*, *Dhanvantararista*, *Bala taila*, *Cyavanaprasa lehya* and *Vidaryadyasava* (Sivarajan & Balachandran, 1996). Well known tonic drug.

**906. Vigna mungo** (L.) Hepper (Plate 153 B)

Syn: *Phaseolus mungo* L.

Family: Papilionaceae

Vernacular Name: San: Masah, Masaparni

Eng: Black gram, Urad, Urd

Kan: Uddu

Mal: Ulunnu

Tulu: Urdu

Habit: Spreading herb.

Habitat: Widely cultivated in paddy fields.
Status: Common.

Description: Diffusely spreading herb, with hirsute stem. Leaves 3-foliolate; leaflets elliptic-ovate or oblong-lanceolate. Flowers in capitate 6 – 8 flowered racemes; peduncles hirsute. Calyx campanulate, 5-lobed, glabrous; teeth shorter than the tube. Petals yellow, exerted; standard orbicular, auricled at base; wings obovate; keel incurved. Stamens 9 + 1. Fruit subcylindric, hirsute, pod. Seeds blackish, with hard testa.

Uses: *Seed at the sprouting stage is given to improve sperm count and its quality. *The appam prepared from it is given for bleeding due to increased body heat. *Seeds boiled with coconut oil is applied to expel ticks and also for relieving pain in cattle. Oil extracted from the seeds is applied for rheumatism. *Seeds are aphrodisiac and increases sexual vigour (it is advised not to be used by bachelors). *Seeds along with castor oil and egg white are ground and is applied followed by cold water dhara for body pain in cattle. *Black type seeds are ground with milk and given by adding ghee for bleeding during pregnancy.

Note: Ingredient of Dhanvantara kashaya, Dhanvantararista, Bala taila, Mahamasa taila, Cyavanaprasha lehya and Vidaryadyasava (Dey, 1994; Sivarajan & Balachandran, 1996). Seeds are aphrodisiac and tonic.

907. Vigna pilosa Baker (Plate 153 C)

Family: Papilionaceae

Vernacular Name: San: Mudgaparni
   Eng: Wild green gram
   Kan: Kaaduhesaru
   Mal: Kattucherupayar, Kattupayar
   Tulu: Kaattupadenji

Habit: Climbing herb.

Habitat: Moist semi evergreen forests.
Status: Rare.


Uses: Seed is a best tonic, has cooling effect and its decoction is given to increase body weight and for gas trouble. *Root is made into a paste with sandalwood and is applied over eyes for eye diseases. *Whole plant soup is given for long period weakness as a tonic. Plant decoction is given for gas trouble and loss of control of urination. *Root paste with sugar, sandalwood powder and butter is applied for conjunctivitis and burning sensation in eyes. Seed decoction is used for rheumatism. *Seed powder is rubbed over the body during bath for scabies. *Whole plant ground in milk is given for increasing the semen, sperms and lactation. It relieves biliousness and is tonic.

Etymology: Kaaduhesaru, Kattucherupayar and Kaattupadenji (wild green gram) arose due to its resemblance with green gram plant and wild nature.

Note: Ingredient of Dhanvantara kulambu, Vidaryadi lehya, Mahakalyanaka ghṛta, Mahamasa taila and Amṛtaprasa ghṛta (Sivarajan & Balachandran, 1996). Seeds are tonic and aphrodisiac.


Syn: *Phaseolus radiatus* L.

Family: Papilionaceae

Vernacular Name: San: Mudgah, Mudgaparni
Eng: Green gram, Golden gram
Kan: Heasaru, Pacchehesaru
Mal: Cerupayar
Tulu: Pacche padenji, Padenji
Habit: Erect herb.

Habitat: Cultivated in paddy fields.

Status: Common.

Description: Erect herb; stem covered with long spreading hairs. Leaves 3-foliolate; leaflets elliptic, rhomboid or ovate, pilose. Flowers in capitulate racemes; peduncles hirsute. Calyx campanulate, 5-lobed; lobes ciliate. Petals yellow, exerted; standard orbicular, auricled at base; wings obovate; keel incurved. Stamens 9 + 1. Fruit cylindric, spirally dehiscent, straight, hirsute pod, with greenish seeds.

Uses: Whole plant decoction is given for weakness and arthritis. *Root paste with sandalwood and butter is applied over eyes for eye diseases. *Soup prepared from the whole plant is given as a tonic after recovery from long disease period. *Seed decoction is given with sugar for mercury poisoning. Seed decoction with milk is given for biliousness. It has cooling effect. Seed powder is rubbed while bathing for scabies. *Seeds cooked with raw rice are given to children to increase memory power. Seed is a blood purifier. *Seed powder is rubbed over the body to remove medicated oil residues. Seeds are cooked with raw rice and are used as a healthy food.

Etymology: Cerupayar (small pea) indicates that it is the smallest among the diverse peas.

Note: Used for Dhanvantara kulambu, Vidaryadi lehya, Mahakalyanaka ghrt, Mahamasata taila and Amrtaprasa ghrt (Sivarajan & Balachandran, 1996). Seeds are much valued pulse.

909. Vigna radiata (L.) Wilczek var. sublobata (Roxb.) Verdc. (Plate 153 E)

Syn: Phaseolus sublobatus Roxb.

Family: Papilionaceae

Vernacular Name: San: Masaparni
Eng: Wild black gram
Kan: Kaaduddu  
Mal: Kattulunnu  
Tulu: Kaatturdu

Habit: Climbing herb.

Habitat: Along hedges and waste lands.

Status: Common. Weed.

Description: Twining or prostrate herb; stem covered with long spreading hairs. Leaves 3-foliolate; leaflets elliptic, rhomboid or ovate, often lobed, pilose. Flowers in capitate racemes; peduncles hirsute. Calyx campanulate, 5-lobed; lobes ciliate. Petals yellow, exerted; standard orbicular, auricled at base; wings obovate; keel incurved. Stamens 9 + 1. Fruit cylindric, spirally dehiscent, straight, hirsute pod, with grey or brown seeds.

Uses: Same as *Vigna dalzelliana*.

Etymology: Kaaduddu, Kattulunnu and Kaatturdu (wild black gram) clearly point out its resemblance with black gram plant and also the wild nature.

Note: Ingredient of *Dhanvantara kashaya*, *Dhanvantararista*, *Bala taila*, *Cyavanaprasa lehya* and *Vidaryadyasava* (Sivarajan & Balachandran, 1996).


Syn: *Vigna catjang* (Burm. f.) Walp.; *Vigna sinensis* (L.) Hassk.; *Vigna cylindrica* (L.) Skeels

Family: Papilionaceae

Vernacular Name: San: Kulattha, Kulatha, Mahamasah  
Eng: Cow pea  
Kan: Alasande, Alasandi  
Mal: Payar, Vellappayar, Kottappayar  
Tulu: Althande, Lathande
Habit: Twining herb.

Habitat: Widely cultivated.

Status: Common.

Description: Suberect or twining, glabrous herb. Leaves 3-foliolate; leaflets variable, ovate-rhomboideal or lanceolate, entire or slightly lobed. Flowers in subumbellate fascicles. Calyx campanulate, 5-lobed; lobes unequal. Petals purplish, violet, white, greenish or yellowish, exerted; standard orbicular, auricled at base; wings obovate; keel straight. Stamens 9 + 1. Fruit long, glabrous pod. Seeds ovoid or rounded-oblong, variously coloured.

Uses: Fruits are used as vegetable, rich in protein. It is not easily digestible, hence cause constipation and gas trouble.

Etymology: Mahamasah (greater black gram) is due to the longer fruit and larger seeds of this plant which resembles black gram plant in morphology.

Note: Ingredient of Saptasara kvatha, Saptasara churna and Dhanvantara taila (Sharma et al., 1998). Fruits and leaves are used as vegetable.

911. Vitex altissima L. f. (Plate 154 A)

Family: Verbenaceae

Vernacular Name: Eng: Tail peacock’s foot tree, Milla, Tall chaste tree
Kan: Torenekki, Naviladi, Navuladi, Myrole
Mal: Myila, Mylellu
Tulu: Myrolu, Myrol

Habit: Large tree.

Habitat: Forests, usually along the banks of rivers.

Status: Frequent.

Description: Large trees, with 4-angled branches. Leaves trifoliolate, rarely 5-foliolate; leaflets lanceolate; petiole angular and winged, with auricles at base.

Uses: Bark decoction is given for rheumatism, swellings, fever, asthma and nervous disorders. *Bark cooked with rice is given for food poisoning. *Bark decoction is used for chronic wounds and ulcers. *Bark paste is applied for skin diseases. *Leaf ground with raw rice is made into roties which are tied into waist and also eaten for backache.

Etymology: Naviladi (peacock’s foot) is due to the resemblance of leaf to the foot of peacock. Torenekki (river chaste tree) indicate its habitat. It usually grows along the river banks.

Note: Heart wood is much valued timber. Heart wood is one of the best timbers. Wood is used in wood turning and to make doors of temples.

912. *Vitex leucoxyton* L. f. (Plate 154 B)

Family: Verbenaceae

Vernacular Name: San: Paravatapadi
   Eng: River chaste tree
   Kan: Holenekki, Holelakki
   Mal: Attunochi, Neernochi, Vellanochi
   Tulu: Tudenekki

Habit: Medium-sized tree.

Habitat: Banks of rivers.

Status: Frequent.

Description: Medium-sized deciduous tree. Leaves 3 – 5 foliolate; leaflets long-petiolute, elliptic or lanceolate. Flowers fragrant, in axillary long-stalked corymbose cymes. Calyx cupular, 5-toothed. Corolla 2-lipped, white; lower lip
distinctly larger, with purple hairs within. Stamens didynamous. Fruit ellipsoid drupe.

Uses: *Leaf paste is applied externally for leprosy. *Fruit powder is given with hot water to expel intestinal worms.

Etymology: Holenekki and Tudenekki (river chaste tree) arose due to its habitat (river banks). Vellanochi (white chaste tree) is due to the whitish bark of the tree.

913. *Vitex negundo* L. (Plate 154 C)

Family: Verbenaceae

Vernacular Name: San: Nirgundi, Indrani, Sinduvara  
Eng: Chaste tree, Five-leaved chaste tree, Negundo  
Kan: Karinekki, Karilakki, Nirgundi  
Mal: Karinochi, Nochi, Indrani  
Tulu: Karinekki, Nekki thappu

Habit: Large shrub.

Habitat: Waste lands and hedges.

Status: Common.


Uses: Plant decoction is given for gastritis. *Heated leaf is pressed for rheumatism. Oil prepared from leaves is used for rheumatism and oedema due to bruises. Heated leaf is pressed and tied for rheumatoid arthritis pain and sprains. *Root decoction is given for chronic fever and to expel worms. *Leaf decoction is used as a bath after delivery. Leaf juice is applied on scalp for proper hair growth. *Dried fruit powder is given to expel worms. Dried leaf is smoked for cough and headache. Leaf decoction is used for poor eye sight. Leaf juice is given to expel worms, digestive
and externally applied for joint pain. Heated crushed leaf is applied for rheumatoid arthritis and swellings. Oil prepared using leaf juice is applied for chronic wounds. Root decoction is recommended to expel worms, for body pain, indigestion and skin diseases. *Tender leaves along with *Leucas aspera* leaves, onion, tender leaf of *Caesalpinia crista* and pepper seeds are ground and is eaten for cough, phlegm and asthma. Flower or tender shoot tip decoction is used for over menses discharge. *Leaf ground with salt and pepper seeds into a paste is applied for bone fracture. *Leaf paste with garlic is applied for stammering. *This along with *Premna serratifolia*, *Pavetta indica* and *Briedelia scandens* (10 gm each), clove (1), garlic, cumin, mustard (5 gm) and turmeric (5 gm) are made into a paste and applied for rheumatism. Oil prepared from its leaf juice or leaf juice alone is massaged for pimplles due to dandruff. *Juice of its leaf and *Justicia adhatoda* heated in steam, mixed with onion juice and honey is recommended one day before *Amavasi* *, Sankranthi* and *Pournami* of every month for asthma. *Tender shoot tip ground with garlic is given for food absorption problem in children. *A small amount of its shoot tip and onion extract with *Leucas aspera* juice is given for fits in children. *Root juice along with *Leucas aspera* leaf juice used as *nasya* in human urine for snake bite. *100 ml of plant juice mixed with equal quantity of coconut milk is taken in the morning followed by application of *Naregamia alata* leaf paste in palm and sole, also bath with hot water after applying mustard oil all over the body. This is done for one week for venereal diseases. Five spoons of leaf decoction are taken every evening for rheumatic pain. *For the same disease, crushed root mixed with ghee of buffalo is used both externally and internally. *Root along with that of *Cynodon dactylon*, ground with lime juice is applied for eczema. *Five drops of leaf juice is used as ear drop if any insect entered the ear. Leaf paste with water is applied for ulcers in the shoulder of bull. *Tender shoot paste is applied all over the body and extract is given internally in case of nervine weakness in calves. *Leaves are used to beat the patient to ward off evil spirits. *5 – 6 tender shoot tips along with cumin seeds are steam cooked, ground with milk and is used in empty stomach in the morning for a week in case of gastritis and gastric ulcers. *Leaf juice is given internally by adding a little asafoetida for about three days in case of indigestion.
caused by fish intake. *About two spoon root extract dissolved in tender coconut water is used twice a day for a week in case of burning urination and kidney stone.

Etymology: Karinekki and Karinochi (black chaste tree) are due to the blackish nature of the plant.

Note: Used for preparations like Nirgundi kalpa, Nirgundi taila, Vacadi taila, Rasnadi taila, Jatyadi taila, Vatagajankusa rasa, Maha vatavidhvamsana rasa, Dasamula taila, Trivikrama rasa, Tribhuvanakirti rasa, Visa tinduka taila, Candanadi taila, Mahavisagarbha taila, Manasamitra vataka, Dasamularista, Sarasvatarista, Anu taila, Mahayogaraja guggulu, Vacacandanadi taila and Astavarga kashaya (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). Nonacosane, \( \eta \)-tritriacontane, \( \eta \)-hentriacontane, \( \eta \)-pentatriacontane, \( \beta \)-sitosterol, \( \rho \)-hydroxybenzoic acid are the active constituents (Sharma et al., 1998). Plant is much valued for black magic. Twigs are kept in the cow shed to avoid flies. *Leaf is used to ward off evil spirits.

**914. *Vitex trifolia* L. (Plate 154 D)**

Family: Verbenaceae

Vernacular Name: San: Sinduvara, Sidukara, Nirgundi

Eng: Arabian lilac, Three-leaved chaste tree

Kan: Karpuranekki, Maralunekki, Samudranekki

Mal: Vellanochi, Nochi

Tulu: Karpuranekki

Habit: Stout shrub.

Habitat: Sandy shores.

Status: Frequent.

Description: Stout shrub, with pubescent branchlets. Leaves 1 – 3 foliolate; leaflets sessile, ovate-oblong or ovate; terminal leaflet much larger than the lateral, tapering at the base, white-tomentose beneath. Flowers in terminal panicles. Calyx 5-toothed;

Uses: Oil prepared from the leaf juice or heated leaves are applied for rheumatic pain and skin diseases. Leaf decoction is given for sprains, twists, rheumatism and swelling. *Leaf paste with water is applied for fever. Root decoction is given for rheumatism and arthritis. *Oil prepared from the leaf decoction is applied for malnutrition in children. *Fruit decoction is given for nervous debility and mental problems. Plant extract is used for expelling cough and also for rheumatism. Leaf paste is applied as pain reliever. *Leaf and fenugreek are ground, mixed with coconut oil, heated and applied for backache, while leaf decoction is taken internally by adding castor oil for same purpose. *Leaf ground with salt, heated and applied for swelling due to shortage of blood. *Leaf extract is a wound healer, insecticidal and is used to ward off evil spirits. Plant decoction is recommended for rheumatism, worms, fever, pain, swellings, sprain, ankle twist, cold, over bleeding, pus release from ear, skin diseases and malnutrition in children. *Leaf paste is applied for swelling, while extract is used for jaundice.

Etymology: Karpuranekki (camphor chaste tree) is due to its characteristic smell. Maralunekki (sand chaste tree) and Samudranekki (sea chaste tree) are due to the habitat. It usually grows along the sandy shores.

Note: Used for preparations like Vacadi taila, Rasnadi taila, Jatyadi taila and Astavarga kashaya (Sivarajan & Balachandran, 1996).

915. Wattakaka volubilis (L. f.) Stapf (Plate 154 E)

Syn: Dregea volubilis (L. f.) Benth. ex Hook. f.; Marsdenia volubilis (L. f.) Cooke.

Family: Asclepiadaceae

Vernacular Name: San: Dugdhika
                      Eng: Green wax flower, Sneezing silk cotton, Cotton milk plant
                      Kan: Kaadahaale balli, Hegala sappu
                      Mal: Vattakakkakkodi, Kakkalankodi
                      Tulu: Pugel thappu, Pettha thajanku
Habit: Twining shrub.

Habitat: Along hedges.

Status: Common.

Description: Large twining shrub. Leaves simple, broadly ovate, cordate at base. Flowers green, in lateral umbellate cymes. Calyx 5-lobed, divided to the base. Corolla rotate; lobes triangular. Corona single, of 5 fleshy top-shaped segments attached to the upper part of the staminal column. Pollinia solitary in each anthersac. Fruit ovoid-oblong, follicle, tomentose when young, tapering to a blunt apex.

Uses: *Leaf paste is used for boils and ulcers in cattle. In humans this paste is used to remove the marks of urticaria and rashes. Leaf paste is applied for swelling due to bruises. *Leaf paste with lime juice is applied internally for sore throat. *Five leaves ground in milk are given for three days from 5th day of menses for infertility due to anomaly in egg formation. *Plant juice is heated with coconut oil and is applied for hair fall in cattle. *Plant paste is applied for lymph node enlargement. *Plant paste with lime juice is applied externally for ringworm. Leaf paste is applied for mumps and allergic skin diseases. *Plant boiled in water by adding little salt is given for fever. Plant paste is applied externally for rheumatism. *Juice of three crushed leaves is poured into eye in case of eye injury, eye pain or if some object struck into eye. *Leaf along with lime rubbed in hand is applied four times for mumps. *Root and leaf extract in milk is given for leucorrhoea. Plant paste is applied for ringworm. The mucilaginous substance of crushed leaves is applied for bruises, cuts and wounds. Whole plant crushed in water is applied for joint pain. *Root ground with fresh ginger juice is applied to the centre of head after making a wound for delirium. *Root ground with lime juice is applied externally and a small quantity used internally for throatache. *Leaf ground with pepper seeds is heated and applied for ulcers in the shoulder of bull.

Etymology: Hegala sappu and Pugel thappu (shoulder leaf) arose due to its therapeutic efficacy. Leaves are used to treat ulcers and wounds in the shoulder of cattle. Hence, the name Pettha thajanku (Cattle herb).

Note: Plant is well known for its wound healing property.
916. *Wedelia chinensis* (Osbeck.) Merr. *(Plate 154 F)*

Syn: *Wedelia calendulacea* (L.) Less.

Family: Asteraceae

Vernacular Name: San: Pitabhrngaraja, Pitabhrngarajah  
Kan: Gargari gida, Arasina garuga, Haladi garuga  
Mal: Manjakanjunni, Manjakayyunni, Kadal-kayyonni  
Tulu: Manjalu gargo

Habit: Procumbent herb.

Habitat: Marshy areas.

Status: Frequent. Weed.

Description: Procumbent herb, rooting at the lower nodes. Leaves simple, linear-oblong or oblanceolate, margins irregularly subcrenate, scabrous. Heads heterogamous, solitary on slender peduncle; involucral bracts herbaceous, oblong. Ray florets female, yellow, 8 – 12; ligules oblong, 2 – 3 lobed. Disc florets tubular-campanulate, 5-lobed, yellow. Anther-bases sagittate. Fruit achene, those of ray florets triquetrous, of disc florets compressed, rugulose; pappus a toothed membranous cup.

Uses: Plant juice is given for indigestion, while its root paste is applied for furuncles. *Oil prepared using its juice is used as hair oil. *Whole plant and salt ground in butter milk or rice cooked water is applied on legs and also taken internally for elephantiasis and other swellings. *Plant juice mixed with milk is used at night after food for reducing obesity. Plant juice is applied for natural colour of hair and growth, while it is given internally for swellings, skin diseases, wounds, headache, burning urination, menstrual and breathing problems. It is mild laxative and improves vision.

Etymology: Arasina garuga, Haladi garuga and Manjakayynnii (yellow *Eclipta*) arose as this plant is often used as a substitute for *Eclipta prostrata*.

Note: It is used in preparations like *Nilibhrngadi taila*, *Narasimha rasayana* and *Mahatraiphala ghrtta* as a substitute for *Eclipta prostrata* (Sivarajan &
Balachandran, 1996). Tannin and saponins are the major components, responsible for its wound healing activity (Chaudhri, 1996).

917. *Wedelia trilobata* (L.) A. S. Hitchc. (Plate 155 A)

Family: Asteraceae

Vernacular Name: San: Pitabhrngaraja, Pitabhrngarajah
   Kan: Gargari gida, Arasina garuga, Haladi garuga
   Mal: Manjakanjunni, Manjakayyunni, Kadal-kayyonni
   Tulu: Manjalu gargo

Habit: Prostrate herb.

Habitat: Wastelands and roadsides.

Status: Common. Exotic and weed.


Uses: Same as *Wedelia chinensis*.

Etymology: Arasina garuga, Haladi garuga and *Manjakayynni* (yellow *Eclipta*) arose as this plant is often used as a substitute for *Eclipta prostrata*.

Note: It is used in preparations like *Nilibhrngadi taila*, *Narasimha rasayana* and *Mahatraiphala ghrta* as a substitute for *Eclipta prostrata* (Sivarajan & Balachandran, 1996).

918. *Wendlandia thyrsoidea* (Roem. & Scult.) Steud. (Plate 155 B)

Syn: *Wendlandia notoniana* Wall. ex Wight & Arn.

Family: Rubiaceae
Vernacular Name: Kan: Thilige, Chendukare, Tilige
    Mal: Kuruni, Palkuttimaram, Puvu, Vellathalachedi
    Tulu: Tilige

Habit: Large shrub.

Habitat: Semi evergreen forests.

Status: Occasional.

Description: Large shrub, with pubescent branches. Leaves simple, usually ternately
    whorled, elliptic-lanceolate; stipules recurved and bifid. Flowers pale yellow, in
dense terminal pubescent pyramidal panicles. Calyx 5-lobed. Corolla tubular; lobes
5. Stamens 5, inserted on the mouth of corolla. Fruit globose capsule.

Uses: *Tender shoot tip paste is applied for burns.

Etymology: Vellathalachedi (white headed plant) arose due to its inflorescence
    which gives the appearance of a white crown on the head.

Note: Much valued in the treatment of burns.

919. *Withania somnifera* (L.) Dunal in DC. (Plate 155 C)

Syn: *Physalis somnifera* L.

Family: Solanaceae

Vernacular Name: San: Ashwagandha, Turagagandha, Vajigandha, Vajigandhika
    Eng: Burr wood, Horse root, Winter cherry
    Kan: Angara beru, Ashwagandha, Ashwagandhi, Sogadu beru,
        Hiremaddu
    Mal: Amukkuram, Amukkiram
    Tulu: Ashwagandho

Habit: Erect undershrub.

Habitat: Cultivated in gardens.
Status: Occasional.


Uses: Root paste is applied for poisonous bites. Root extract in milk has cooling effect and is a nervine tonic. *Root and leaf paste with ginger is applied for swellings of rheumatoid arthritis. Fruit powder is diuretic. Leaf decoction is used for fever. *Root powder dissolved in hot milk is used for 7 – 42 days for repeated headache. Root powder in hot milk is given with sugar as a tonic for pregnant women. *Root decoction is given by adding sugar, honey and long pepper powder to increase resistance. *Root along with fenugreek and Glycyrrhiza glabra rhizome is made into a decoction and is used at bed time for chest pain. *This along with Protasparagus racemosus, Clitoria ternatea, sugar and milk is made into a decoction and given with sugar for heart debility. *Leaf along with ginger, honey and garlic are made into a decoction and is used for recurrent fever. Root decoction with milk is given in case of cobra bite. *Root powder in milk is given from 4th day of menses for conception. *Root, Tinospora cordifolia stem, ginger, ajowan and rock salt in equal quantity are boiled in hot water and are given for venereal diseases. *Root, Symlocos cochinchinensis bark, Ipomoea mauritiana tuber are powdered and is taken in milk with sugarcandy twice a day for over bleeding during menses and leucorrhoea. *Root powder boiled with water and milk is given by adding ghee and sugarcandy for three days from the 4th day of menses for conception. *Pills made of dried and powdered root mixed with nutmeg, mace, clove, dried ginger powder, black gram powder, gingelly seed powder (in equal quantities), sugar and ghee are eaten for body strength and sexual power. *Root, Sida rhombifolia, Protasparagus racemosus, Holostemma ada-kodien and Ricinus communis roots are ground in fresh milk, heated by adding gingelly oil and are applied for dry warts.
Etymology: Ashwagandha and Ashwagandhi (smell of horse) are due to the smell of its roots, which resembles that of horse urine. Sogadu beru (root with strong smell) indicate its strong smell. Hiremaddu (greater or superior medicine) points out its therapeutic efficacy.

Note: It is used for preparations like Aswagandharista, Aswagandhadyarista, Aswagandhadi lehya, Balasvagandhalaksadi taila, Aswagandhadi churna, Aswagandha rasayana, Aswagandha ghṛta, Chyavanapraska and Mahanarayana taila (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). Nicotine, somniferiene, somniferinine, withanine, withanamine, pseudowithanine, withanolides, β-sitosterol, isopelletierine, tropine, pseudotropine, choline, anaferine, anhygrine and withanone are the major alkaloids responsible for aphrodisiac and nervine sedative properties (Kapoor, 1990; Sharma et al., 1998).

920. Woodfordia fruticosa (L.) Kurz. (Plate 155 D)

Syn: Woodfordia floribunda Salisb.

Family: Lythraceae

Vernacular Name: San: Dhataki, Tamrapushpi, Bahupushpika
                      Eng: Fire flame bush, Woodfordia
                      Kan: Kempu kumusalu, Tamrapushpi, Dhataki kusuma
                      Mal: Thathiripoovu, Thathiri
                      Tulu: Thatri

Habit: Straggling shrub.

Habitat: Cultivated in gardens.

Status: Rare.

Uses: Stamens ground with milk, given for digestive problems, gastroenteritis, spleen disorders, dysentery, diarrhoea, bleeding piles, leucorrhoea and cold. *Oil extracted from this is applied for burns. *Dried stamen powder is dissolved in water, mixed with honey, given at night after food and at morning in empty stomach for over bleeding from uterus or rectum. *Crushed flower mixed with gingelly or coconut oil is applied for boils and swellings on skin. Flower decoction is used to stop bleeding, for fever, dysentery, ovarian and menstrual disorders. It is a sleep inducer and diuretic.

Etymology: Tamrapushpi (copper coloured flowers) arose due to its scarlet flowers. Its many-flowered fascicles gave rise to the name, Bahpushpika (many flowered).

Note: It is a major ingredient of Dhatakyadi churna, Dhatakyadi taila, Laghu Gangadhara churna, Brhat Gangadhara churna, Pippalyasava, Kanakasava, Khadirarista, Parthadyarista, Asokarista, Abhayarista, Kutajarista, Khadira gutika and Laghu arimedas taila (Dey, 1994; Sivarajan & Balachandran, 1996; Sharma et al., 1998). It is mainly used for colouring and intoxicating various asava* and arista* (Dey, 1994). Tannin and glycosides are the major components of the flower (Sharma et al., 1998). Stamens are used for fermentation.

921. *Wrightia tinctoria* (Roxb.) R. Br. *(Plate 155 E)*

Family: Apocynaceae

Vernacular Name: San: Asita-kutaja, Shweta kutaja, Hyamara
Eng: Pala indigo, Sweet indrajao
Kan: Kiri kodasige, Beppale, Hallu novina gida, Danthappale
Mal: Aiyappala, Dhanthappala, Irampala, Thinnamppala,
Thondappala
Tulu: Enjiruppale, Koolibenetha thappu

Habit: Small tree.

Habitat: Deciduous forests and plains.

Status: Rare.
Description: Small deciduous tree. Leaves simple, elliptic-lanceolate, puberulous beneath. Flowers in axillary and terminal, lax spreading cymes. Calyx 5-lobed, with glandular scales alternating with the lobes within; lobes obtuse. Corolla creamy white, salver shaped; throat with 1 – 2 series of fimbriate scales; lobes oblong. Stamens 5, inserted at the top of the corolla-tube. Fruit long, cylindrical follicles, cohering at the apex.

Uses: Leaf paste is filled into dental cavities for toothache and cavities. Leaf paste in coconut oil is applied for skin diseases. *Leaf extract or paste in virgin coconut oil is applied for psoriasis. Leaf is chewed for toothache. *Bark cooked with rice or its decoction is given for purification of breast milk. Leaf paste is applied for almost all types of skin diseases. *Leaf paste with tender coconut husk juice is applied 5 – 6 times a day for septic wound and ulcers in feet. Root extract or decoction is used for abscesses and rheumatism. Leaf paste is applied for swellings. *Seeds boiled in milk are given for blood dysentery and piles. Its decoction is used for indigestion, fever and digestive disorders. *Root extract in rice cooked water is applied for tonsillitis, rheumatism and toothache.

Etymology: Hallu novina gida and Koolibenetha thappu (toothache leaf) clearly indicate its therapeutic efficacy in the treatment of toothache. Danthappale and Danthappala (lateciferous tree for teeth problems) arose due to its use for dental problems and presence of milky latex.


922. **Xanthosoma sagittifolium** (L.) Schott (Plate 155 F)

Syn: *Arum sagittifolium* L.; *Caladium sagittifolium* (L.) Vent.

Family: Araceae

Vernacular Name: Eng: Giant taro

Kan: Govekesu, Mundikesu
Mal: Palchembu  
Tulu: Mundichevu

Habit: Large herb.

Habitat: Cultivated in home gardens.

Status: Common. Exotic.

Description: Large herb, with milky sap and thick stem. Leaves long-petioled, sagittate-ovate. Spathe with an ovoid to oblong, convolute, green, persistent tube and a boat-shaped, cream-coloured limb; spadix pistillate below, male above and a constricted sterile area in between. Male flowers: stamens 4 – 6, united into synandria. Female flowers: ovaries 2 – 4 celled; ovules many. Usually fruits are not found.

Uses: *Petiole ground along with dough for dosa, such dosa is eaten for scabies and furuncles.  *Inserting the finger into the hole made in its petiole provide relief from whitlow. Petiole juice or paste is also applied for whitlow.  *Leaf petiole cooked with rice is given for dropsy or oedema of cattle and dog.  Corm paste is applied on head for insanity.  *Petiole cooked with rice is given for food poisoning.  *Dosa prepared from its petiole and rice (1:10) is eaten for chronic ring worm, recurrent furuncles and other skin diseases.  Plant paste is applied for skin diseases and all types of itches.  Dosa prepared using its petiole is eaten for skin diseases, warts and swellings in arms and legs after fever (dosa is prepared by grinding 1 part of petiole with 6 parts raw rice and kept overnight.  If allergic reactions were found then rock salt in butter milk is given as antidote).  *Six inch long petiole after the removal of outer skin is ground, boiled in sour butter milk and is given for vomiting due to asthma.  Severe vomiting may occur for a brief period after its use.  *The gruel of petiole cooked with rice is recommended for three days in case of biliousness.

Etymology: Mundikesu (taro resembling Alocasia) arose due to its large size and close resemblance with both Alocasia and Colocasia. Govekesu (Goa taro) is the clear indicator of its exotic nature.

Note: Rhizome and leaves are used as vegetable.
923. *Xenostegia tridentata* (L.) Austin & Staples ssp. *hastata* (Desr.) Panigrahi & Murti (Plate 156 A)

Syn: *Convolvulus hastatus* Desr.; *Merremia tridentata* (L.) Hall. f. ssp. *hastata* (Desr.) Ooststr.; *Merremia hastata* (Desr.) Hall. f.

Family: Convolvulaceae

Vernacular Name: San: Prasarani  
Kan: Prasarini, Prasarani, Ilikivi balli, Ilikivi soppu  
Mal: Cheruvayela, Prasarani  
Tulu: Neikkulovu

Habit: Trailing herb.

Habitat: Along hedges and bushes.

Status: Common.

Description: Slender trailing herb. Leaves simple, linear to lanceolate, hastate at base. Flowers creamy yellow, with a dark throat, in axillary peduncles. Calyx 5-lobed; lobes ovate-acuminate, with recurved tips. Corolla funnel-shaped, pale yellow with a purple eye. Stamens 5. Fruit ovoid, 2-celled, capsule, with a thin papery pericarp.

Uses: Whole plant decoction is used for rheumatism and arthritis. *Root ground with *Sesamum orientale* plant ash is made into a pill; it is ground in castor oil and kept over tongue for immediate delivery and expulsion of placenta. *Oil prepared from plant juice is used for burns. Whole plant paste is applied for varicose vein, burning due to inflammation, urticaria, and rashes. *Plant extract in tender coconut water is recommended for urine block, mostly due to blockage by stones. Oil prepared from this plant is externally used for rheumatism. *Plant juice is used as eye drop for eye pain and eye infections. *Whole plant is crushed and boiled in gingelly oil is applied for burns. *Plant extract in tender coconut water is given for burning urination. Plant paste is applied for septic wounds, ulcers, skin diseases and fungal infections. *Whole plant decoction is given internally and its paste with water
is applied externally for hardened blood clots. *Aerial part of plant is made into decoction with milk and used at night with sugar for burning sensation and weakness in body. Plant decoction is used for herpes, urticaria, paralysis, burning sensation, spasm, sleeplessness, diarrhoea, infections after delivery, furuncles and skin diseases of children. *Whole plant juice along with *Caesalpinia mimosoides* juice, *Haldina cordifolia* shoot tip juice and black cumin seeds are boiled and are applied for burns. *This plant ground with cumin seeds and the juice is used as eye drop in case of eye injuries. Oil prepared using plant juice with gingelly oil and cumin seeds are poured into ear in case of ear block.

Etymology: Prasarani (spreading) arose as it spreads over the hedges and bushes. Ilikivi balli (rat ear climber) is due to its leaf base which resembles the ear of rat.

Note: Ingredient of *Prasaranyadi kashaya*, *Prasaranyadi taila*, *Prabhanjana taila* and *Balarista* (Sivarajan & Balachandran, 1996). Root should be collected after *Tula Sankramana* during *Chithra nakshatra*. Used in black magic also.

**924. Xenostegia tridentata** (L.) Austin & Staples ssp. *tridentata* (Plate 156 B)

Syn: *Convolvulus tridentatus* L.; *Merremia tridentata* (L.) Hall. f.

Family: Convolvulaceae

Vernacular Name: San: Prasarani
   Kan: Prasrani, Prasrani, Ilikivi balli, Ilikivi soppu
   Mal: Thalaneeli, Prasarani
   Tulu: Neikkulovu

Habit: Trailing herb.

Habitat: Along hedges and bushes.

Status: Common. Weed.

Uses: Same as *Xenostegia tridentata* ssp. *hastata*.

Etymology: Prasarani (spreading) arose as it spreads over the hedges and bushes. Ilikivi balli (rat ear climber) is due to its leaf base which resembles the ear of rat.

Note: Ingredient of *Prasaranyadi kashaya*, *Prasaranyadi taila*, *Prabhanjana taila* and *Balarista* (Sivarajan & Balachandran, 1996).

925. *Xylia xylocarpa* (Roxb.) Taub. (Plate 156 C)

Syn: *Mimosa xylocarpa* Roxb., *Xylia dolabriformis* Benth.

Family: Mimosaceae

Vernacular Name:  
San: Simshapa  
Eng: Ironwood, Pyinkado  
Kan: Arasutega, Irul, Jambe mara, Chiruve  
Mal: Irul, Irumullu, Kadaram  
Tulu: Chirve, Thiruve, Thirve

Habit: Large tree.

Habitat: Moist deciduous forests.

Status: Common.

Description: Large deciduous tree. Leaves bipinnate; leaflets 4 pairs, elliptic-oblong, thin-coriaceous; petiole with a solitary apical gland; rachis with glands opposite to all pinnae. Flower-heads usually in racemes. Calyx 5-toothed. Corolla yellowish; petals 5, slightly connate at base. Stamens 10. Fruit falcate, woody, flat pod.

Uses: *Seed oil is applied for rheumatism. *Heart wood decoction is used for diabetes and urinary disorders.  *Bark decoction is used as *dhara* or body part is immersed in it in case of bone fracture.  *It is used as bath for three days in case of skin diseases, also for rheumatism, urinary stones, worms and gastritis.

Note: A much valued timber.
926. Zanonia indica L. (Plate 156 D)

Family: Cucurbitaceae

Vernacular Name: San: Chirpota, Cirpota, Dirghapatra, Kuntali, Tiktaka
   Kan: Kuntali, Kandadi balli
   Mal: Peenarvalli
   Tulu: Kandadi booru

Habit: Robust climber.

Habitat: Seen near streams.

Status: Rare.

Description: Robust climbing herb, with bifid tendril. Leaves simple, ovate-oblong, coriaceous, 3-nerved from a slightly cordate base. Flowers small, pale green, dioecious; male in lax pendulous panicles; female in racemes. Calyx 3-lobed; lobes oblong. Corolla rotate, 5-partite. Stamens 5, free. Fruit pendent, cylindric, somewhat trigonous capsule, with truncate and broadly 3-valved apex. Seeds large, pendulous, oblong, pale-yellow, surrounded by a large membranous wing.

Uses: Plant juice is taken internally and its paste is applied externally for viper bite. *Whole plant cooked with rice is given to cattle which has eaten poison.

Etymology: Dirghapatra (long leaf) is due to its long or large leaves. Kandadi balli and Kandadi booru (viper wine) are due to its therapeutic efficacy as it is used for viper bite.

Note: Plant is much valued for the treatment of viper bite.

927. Zanthoxylum ovalifolium Wight (Plate 156 E)

Family: Rutaceae

Vernacular Name: Kan: Aremaapala, Aremadalu, Aremadala, Kaadumenasu
   Mal: Kaattumulaku
   Tulu: Aremaapalo
Habit: Large shrub.

Habitat: Dry rocky places.

Status: Common.


Uses: *Leaf decoction is used as a bath to kill lice. Fruit decoction is used for biliousness. *Bark decoction is given internally while paste externally for rabid dog bites. Leaf decoction is used to kill lice.

Etymology: Aremaapala (half Citrus) is due to its small fruits with smell of Citrus. Kaadumenasu (wild pepper) is due to the highly pungent fruits which are used as condiment.

Note: Fruits are used as condiment. Fruit is often pickled. Leaf juice is used for the purification of mercury.

928. Zanthoxylum rhetsa (Roxb.) DC. (Plate 156 F)

Syn: Fagara rhetsa Roxb.; Fagara budrunga Roxb.; Zanthoxylum budrunga (Roxb.) DC.

Family: Rutaceae

Vernacular Name: San: Tejasvini, Tejovati, Tejovha
    Eng: Indian prickly ash tree
    Kan: Gaamate, Jummina mara, Mullumastige
    Mal: Kothumurikku, Mullilam
    Tulu: Kavati, Gaamate, Koilankotte, Kaavate, Petnoli kaayi

Habit: Large tree.

Habitat: Plains and midland forests.

Status: Common.
Description: Large tree, with corky bark of large prickles. Leaves pinnate; leaflets 5 – 17; leaflets membranous, ovate to elliptic, base very oblique. Flowers in large terminal paniculate cymes, 4-merous. Calyx 4-lobed. Petals 4, yellowish. Stamens 4 – 6. Fruit globose, rugose berry. Seeds globose, bluish-black.

Uses: *Bark or spines of stem are ground in lime juice or rice washed water and the resulting paste is applied for mumps. *Consuming 4 – 5 young fruits preserved in salt is highly useful for gastritis. Bark ground in lime juice is applied externally and also as gargle for sore throat. *Fruit decoction along with salt is used as a gargle for toothache. *Root bark along with Cinnamomum malabatrum bark and ginger are powdered, made into a thick paste with honey and is given for active bronchitis. Bark or root extract in lime juice is used for asthma. Fruit pickle is useful in indigestion and rheumatism. Bark or spine paste is applied for all types of swellings. Fruit extract increases biliousness, salivation and gargle with it is beneficial for toothache. *Bark paste with lime juice is applied for tonsillitis. *Bark powder is used as tooth powder in case of pyorrhoea and split cheek. Bark extract with salt water is used as gargle for toothache. *Bark ground in milk is given to induce menstruation. *Young fruits ground with butter milk are made into tambuli* and is recommended for piles. *Preserved fruit tambuli* is used internally in case of dysentery due to indigestion.

Etymology: Jummina mara (horripilation tree) arose due to its highly pungent fruits, which on chewing give a horripilation effect.

Note: Wood is a valued timber. Dictamine, lignone, β-sitosterol, coumarin, lupeol, linalool, limoene, skimmanine, fragaramide and fragaronine are the major active constituents (Chaudhri, 1996). Fruits are used as condiment. The Konkani use such fruits as a condiment on those days in which use of garlic is prohibited.

929. Zea mays L. (Plate 157 A)

Family: Poaceae

Vernacular Name: San: Mahakaya, Kandaja, Shikhalu, Yavanala  
Eng: Indian corn, Maize, Pop corn, Baby corn
Habit: Erect herb.

Habitat: Cultivated.

Status: Occasional. Exotic.

Description: Annual monoecious grass, with stout culm. Leaves large, sword-shaped or linear-lanceolate, curving, with prominent rib. Male spikelets binate, one pedicelled, 2-flowered. Glumes subequal, membranous. Lemmas and paleas alike, hyaline. Lodicules 2, fleshy. Stamens 3. Female spikelets 2-flowered, lower reduced to an empty lemma. Glumes broad, fleshy. Lemmas resembling glumes; paleas short, broad; lower sometimes absent. Lodicules absent. Styles long, 2-fid at apex. Fruit flattened caryopsis, with convex or indented top and more or less narrowed base.

Uses: Seeds being low in calorie are advised for diabetes. It has low starch content also.

Etymology: Govina jola (cow corn) and Mekke jola (fodder corn) arose as its leaves and grains are used as fodder for cattle.

Note: Grains are much valued food for both human and cattle.

**930. *Zingiber cernuum* Dalz. (Plate 157 B)**

Syn: *Zingiber nimmonii* Dalz.

Family: Zingiberaceae

Vernacular Name: Eng: Wild ginger
Kan: Kaadu shunti
Mal: Mala-inchi
Tulu: Kattusunti
Habit: Herb.

Habitat: Moist deciduous forests and plains.

Status: Frequent.

Description: Rhizomatous herb. Stem leafy; leaves elliptic-oblong. Flowers in spike, arising from rhizome, ovoid or sub-globose; bracts linear; bracteoles shorter than bracts. Calyx shortly 3-fid. Corolla tube equaling bract; lobes unequal; labellum yellowish white, with brown patches. Stamens 1. Fruit yellowish-white, smooth. Seeds red, striated with membranous aril.

Uses: Rhizome decoction is given to expel phlegm and for gastritis. *Rhizome paste is applied externally for rheumatism and fungal infection of foot. *Rhizome is used to remove poisons entered through food. *Rhizome paste is applied for skin diseases and poisonous bites.

Etymology: Kaadu shunti and Kattusunti (wild ginger) are the indicators of its wild nature. Mala-inchi (hill ginger) arose due to its habitat. It is usually confined to forests.

Note: Rhizome is known for its digestive and carminative properties.

**931. Zingiber neesanum** (Graham) Ramamoorthy (Plate 157 C)

Syn: *Zingiber macrostachyum* Dalz.

Family: Zingiberaceae

Vernacular Name: San: Vana ardraka  
Eng: Wild ginger  
Kan: Kaadu shunti  
Mal: Kattukolinchi  
Tulu: Kattusunti

Habit: Erect herb.

Habitat: Shady places of moist deciduous forests and plains.
Status: Occasional.

Description: Rhizomatous herb; rhizome short, with fleshy roots ending in globose tubers. Leaves simple, oblong-lanceolate, pubescent beneath; ligules bilobed. Spike oblong-cylindric, with large oblong pubescent sheaths; bracts obovate, green, turning reddish in fruit. Calyx obscurely 3-dentate. Corolla-lobes lanceolate, white. Labellum yellowish, marked with purple lines, obovate. Stamen 1. Fruit red, obovoid, pubescent capsule. Seeds black with white aril.

Uses: Same as *Zingiber cernuum*.

Etymology: Kaadu shunti and Kattusunti (wild ginger) are the indicators of its wild nature. Kattukolinchi (wild lesser galangal) is due to its resemblance both to ginger and lesser galangal plants.

Note: Rhizome is carminative and digestive.

932. *Zingiber officinale* Roscoe (*Plate 157 D*)

Family: Zingiberaceae

Vernacular Name: San: Ardraka, Ardrakah
Eng: Ginger, Spice ginger
Kan: Shunti
Mal: Inchi, Chukku
Tulu: Sunti

Habit: Rhizomatous herb.

Habitat: Cultivated.

Status: Common.

Description: Erect rhizomatous herb. Leaves simple, narrowly lanceolate, glabrous; ligules bilobed. Spike ovoid or oblong-cylindric, clothed with lanceolate sheaths; bracts suborbicular, cuspidate. Calyx shortly 3-lobed. Corolla-lobes lanceolate, yellowish. Labellum dark purple, spotted with yellow, orbicular. Stamen 1. Fruit oblong capsule.
Uses: *Rhizome *tambuli* or decoction is given on 11th day after delivery. Ginger juice is taken for indigestion due to eating jack fruit. *Ginger along with root of Heliotropium indicum* is used for indigestion and throat irritation. Ground ginger and honey are recommended for throat infection. Ginger along with pepper and long pepper ground in honey is used for continuous cough. *Lehyam* prepared from its rhizome is also used for cough. Rhizome is chewed for burning sensation in stomach caused by eating jack fruit. It is an appetizer and a mild laxative. Chewing of rhizome helps to overcome cough and gastritis. *The pure juice of rhizome (the supernatant liquid) and honey (¼ tsp) is good for cough, bronchitis, chest pain, asthma, indigestion, gastritis, cold and throat infection. Rhizome decoction also has similar properties. *Dried rhizome decoction with pepper seeds is given with honey for dry cough. Fresh ginger juice mixed with honey is used for cough. Ginger juice with honey is given for asthma. *Dried ginger powder in honey is given for dry cough, while dried ginger decoction for sound fall. Rhizome juice mixed with honey is given for cold and rhinitis. *Ginger along with root of Moringa pterygosperrma and borax are made into a paste, which is used for lymph node swellings. Dried rhizome powder is made into a paste with water and applied over forehead for headache. Fresh ginger juice with honey is used for stomachache, cough and phlegm. *Rhizome extract with salt is given before food or its juice mixed with lime juice and salt is taken after food for indigestion. *Rhizome powder along with Embelia ribes and long pepper in hot water is used half an hour before food for indigestion. Rhizome powder along with pepper and long pepper seed powder (trikatu*) is given with honey for cough and phlegm. *Ginger juice mixed with Justicia adhatoda leaf juice is given for cough. *Fresh ginger juice along with lime juice, honey and rock salt is given at every 15 minutes to stop vomiting. *Rhizome juice along with fruit rind of Punica granatum and cumin seeds are made into a decoction and are used for loss of appetite due to tridoshas. *Rhizome juice along with honey and lime juice is used for loss of appetite due to biliousness, while its powder along with long pepper and pepper is given with honey for loss of appetite due to phlegm. *Rhizome juice with honey is given in early morning for vomiting in pregnant ladies. *It along with pepper, long pepper and Glycyrrhiza
*Glabra* rhizome powder are mixed with honey and given for cough due to phlegm. *It along with rock salt is given in hot water or butter milk for diarrhoea. *It along with cumin and coriander powder are cooked with rice and given with butter milk for malnutrition in children. *Rhizome powder mixed with ajowan powder is given in hot water for stomachache due to indigestion. For the same purpose, rhizome along with long pepper, pepper, cumin, *Nigella sativa* seeds, coriander, asafoetida and rock salt powder fried in ghee is also used. *Ginger along with ajowan powder is added to milk, the butter milk prepared from it is given for constipation due to piles. Rhizome juice along with honey, lime juice, pepper powder and jaggery is used for liver and bone disorders. *Ginger powder dissolved in hot milk is taken daily for rheumatism, joint pain and backache, also as preventive of these problems. Crushed rhizome is chewed with sugar for throat irritation. *Rhizome decoction with jaggery is given for stomachache. *Ginger along with garlic, cumin and pepper are made into a decoction and is given for dysentery. *Rhizome along with pepper and *Acorus calamus* rhizome (1:2:3) are ground and is given for phlegm and cough in children. Ginger along with long pepper, pepper, cumin and cardamom in equal quantity are mixed with equal sugar, powdered and given with honey for asthma. *Ginger, pepper, long pepper and *Acorus calamus* rhizome in equal quantity are powdered, mixed with honey and given for cough due to phlegm. Rhizome along with *Ricinus communis* root and cumin seeds in equal quantity are made into decoction and are used for abdominal spasm. *Rhizome and pepper ground in milk or curd is given for DUB and menstrual problems. *Rhizome, *Aegle marmelos* root and *Sida rhombifolia* root are made into decoction and are given two times a day for fever due to biliousness. *Rhizome and *Embelia ribes* decoction is given twice a day for 4 – 5 days for flue. *Ginger, sandal wood and *Vetiveria zizanioides* root powder in equal quantity are made into decoction and are given two times a day for fever due to biliousness. *Rhizome and *Embelia ribes* decoction is given twice a day for 4 – 5 days for flue. *Ginger, sandal wood and *Vetiveria zizanioides* root powder in equal quantity are made into decoction and are given two times a day for fever due to biliousness.
seeds are ground, made into decoction and is given by adding jaggery twice a day for one week in case of menstrual disorders. *Ginger and Acorus calamus rhizome covered with gold is rubbed and the extract is given with honey for memory and intellect development in children. *Ginger and Moringa pterygosperma root paste with borax extract is applied for lymph node swelling or tumours. *Ginger, jaggery, pepper, long pepper, triphala*, Embelia ribes, gingelly seeds, Ricinus communis and Plumbago zeylanica root in equal quantity are crushed and made into small pills. These are given with honey for piles. *Ginger paste with Eclipta prostrata juice is applied for swelling in neck. *Rhizome, pepper, asafoetida, cumin, coriander seeds and turmeric powder are made into a decoction and is given with jaggery for fever (dose varies from one tsp to one ounce according to age of the patient). *Rhizome soaked in water after removing its outer skin is punctured using a pin, again soaked in water for two days and is repeated for several times. Later, it is dried, powdered, heated with sugar and is used for indigestion. Fresh or dried rhizome decoction is given for indigestion due to over eating of jackfruit.

Etymology: Ardraka (succulent) is due to its succulent rhizome.

Note: It is the major ingredient of Ardraka ghrta, Suranadi ghrta, Indukanta kashaya, Suranadi lehya, Talisaprativalaka, Visvamrta, Saubhagya sunti, Trikatu churna, Saubhagya vati, Vaisvanara churna, Ardraka khandavaleha and Sarasvatarista (Sivarajan & Balachandran, 1996; Sharma et al., 1998). Camphene, phellandrene, zingiberine, cineol, borneol, gingerol, gingerin, shogaol, zingiberol, bisabolene, gingersol, sesqui phellandrene are the components responsible for its carminative and stimulant properties (Kapoor, 1990; Sharma et al., 1998).

933. Zingiber roseum (Roxb.) Rosc. (Plate 157 E)

Syn: Amomum roseum Roxb.

Family: Zingiberaceae

Vernacular Name: San: Vana ardraka
        Eng: Wild ginger
        Kan: Kaadu shunti
Mal: Mala-inchi
Tulu: Kaattusunti

Habit: Rhizomatous herb.

Habitat: Moist deciduous forests.

Status: Rare.

Description: Tall rhizomatous herb. Leaves oblong or oblong-lanceolate, pubescent below. Flowers red or scarlet, in dense cone like spikes; bracts red, hairy. Calyx 3-lobed. Corolla tubular; labellum trilobed, midlobe oblong-cuneate, margins recurved. Stamen arching over the lip. Fruit subglobose capsule.

Uses: Same as *Zingiber cernuum* and *Zingiber neesanum*.

Etymology: Kaadu shunti and Kattusunti (wild ginger) are the indicators of its wild nature. Mala-inchi (hill ginger) arose due to its habitat. It is usually confined to forests.

Note: Rhizome is used as the substitute for *Zingiber cernuum*.

**934. Zingiber zerumbet** (L.) Smith (Plate 157 F)

Syn: *Amomum zerumbet* L.

Family: Zingiberaceae

Vernacular Name: San: Ahava, Avanti, Kolanjana
Eng: Zerumbet ginger
Kan: Agalu shunti, Kallu shunti, Kaadu shunti
Mal: Kattinchi, Kattukolinchi
Tulu: Agalsunti, Kalsunti

Habit: Rhizomatous herb.

Habitat: Naturalized in moist areas.

Status: Common.
Description: Rhizomatous herb, rhizome large, horizontal, yellow inside. Leaves oblong-lanceolate, slightly pubescent below; ligules entire. Spike ovoid or ovate-oblong, rounded at tip, clothed with slightly pubescent obtuse sheaths; bracts obovate, with rounded apex, green, becoming red in fruit. Calyx shortly 3-toothed, hyaline. Corolla-lobes ovate-lanceolate, white. Labellum yellow, suborbicular. Stamen 1. Fruit ellipsoid capsule. Seeds black.

Uses: *Rhizome is made into a paste with butter milk in a copper vessel and is applied for tinea versicolor. Preparation with salt water is also effective. *After boiling the rhizome juice, a heated white stone is placed in it and is given to women after delivery for diarrhoea, indigestion and also as a tonic for them. Rhizome juice is good for cough, bronchitis, gas trouble, lung diseases and stomachache. *Rhizome tambuli is given for gas trouble. *Rhizome along with seeds of Hyoscyamus niger, pepper and asafoetida (about the size of a black gram seed) are made into a lehyam and is taken for loss of appetite and to expel phlegm. *Rhizome extract is given as digestive during jaundice and amoebic dysentery. *Rhizome paste with honey is applied for rheumatoid arthritis. Rhizome paste is applied for dandruff. *Rhizome decoction or its tambuli is given internally, while its paste with lime juice is applied externally for skin diseases and for burning sensation in legs. *Its decoction is given to drink in case of gas trouble or swollen stomach in cattle.

Etymology: Kaadu shunti and Kattinchi (wild ginger) are the indicators of its wild nature. Kallu shunti (stone ginger) arose due to its large and hard rhizome.

Note: Rhizome is much valued in the treatment of skin diseases.

935. *Ziziphus glabrata* Heyne ex Roth. (Plate 158 A)

Syn: *Ziziphus trinerva* Roxb.

Family: Rhamnaceae

Vernacular Name: San: Vatadalla

Eng: Jagged jujube
Kan: Karukattamara, Chitiphala  
Tulu: Chuchiparandu

Habit: Small tree.

Habitat: Dry forests and planted in roadsides.

Status: Occasional.


Uses: *Leaf decoction is used as blood purifier.

Note: Ripe fruits are edible.

936. *Ziziphus mauritiana* Lam. (Plate 158 B)

Syn: *Ziziphus jujuba* (L.) Gaertn.

Family: Rhamnaceae

Vernacular Name: San: Badari, Badara, Badarah  
Eng: Jujube tree, Indian jujube, Common jujube  
Kan: Bore hannu, Elachi, Badari  
Mal: Badari, Ilantha, Lanthapazham, Perimthudali  
Tulu: Bogari, Bugari

Habit: Small tree.

Habitat: Cultivated, also runs wild on waste lands.

Status: Common.

Description: Small tree, with drooping branches and tomentose branchlets; branches armed with curved spines. Leaves simple, ovate or orbicular, dark green and shining above, white-tomentose below. Flowers in short axillary cymes, greenish-yellow.
Sepals 5, ovate. Petals 5, obovate. Stamens 5. Fruit subglobose drupe, dark-brown or orange when ripe.

Uses: *Eating raw ripe fruits is useful for mouth ulcers, stomach ulcers and gastroenteritis. *Bark cooked with rice is given to eat in case of mouth ulcers, while bark decoction is given for worms in children, stomach ulcers and some rheumatic complaints. *Leaf poultice is given over stomach in case of urine block. *Root juice is given with castor oil for upset stomach. *Spine paste with milk is applied for three days in case of pimples. *Oil prepared using leaf extract is used for herpes and scabies.

Etymology: Bore hannu (hill fruit) is due to its habitat. It is usually found in dry hills.

Note: Tannin and zizyphic acid present in it are responsible for stomachic activity (Kapoor, 1990). It is a major ingredient of Dhanvantara taila, Yavani sadava, Nyagrodhadi kvatha and Nyagrodhadi churna (Sharma et al., 1998). Ripe fruits are edible.

**937. Ziziphus oenoplia** Mill. (Plate 158 C)

Family: Rhamnaceae

Vernacular Name: San: Bahukantaka, Karkhandu
   Eng: Jackal jujube
   Kan: Barige, Parige, Surimullu, Karisurimullu
   Mal: Cheriyalantha, Cheruthudali, Churimullu, Kottapazham
   Tulu: Churimullu, Turimullu

Habit: Scandent shrub.

Habitat: Along hedges.

Status: Common.

Description: Scandent shrub; branches armed with curved spines. Leaves simple, ovate-lanceolate, very oblique at base, silky-pubescent. Flowers in short axillary

Uses: *Leaf juice is poured into eyes as a cooling agent during eye pain. *Young twig *tambuli* helps to regulate gastrointestinal system. *Young twig or leaf paste is applied for honey bee or wasp stings. *Oil prepared by boiling leaf juice and cumin seeds in coconut oil is applied for burns. *Extract of the young shoot tip ground with cumin seeds is poured into eyes for eye pain and infections. Plant decoction is used for gastritis and also as a blood purifier. Oil prepared using leaf juice is applied for burns. Tender leaf juice is digestive. *Tender shoot tip paste with turmeric is applied for wasp stings. Tender shoot tip extract is used as eye drop for eye pain and infections. *Bark cooked with rice is given for stomach ulcers. Bark paste is applied externally for swellings. *Tender leaf juice is a tonic and it increases absorption of nutrients by the body. *Tender shoot tip paste is applied for spider bite. *Its paste is applied over eye lids of new born baby in order to open the eyes, also applied for skin diseases. Shoot tip decoction is given for biliousness. *Leaf and turmeric paste is applied for tiger wasp sting. Leaf paste with water is applied over centre of the head for burning sensation in body, increased body heat and urticaria.

Etymology: Bahukantaka (many spines) clearly indicate the spiny nature of stem. Surimullu and Churimullu (knife spine) arose due to the sharp spines of this plant.

Note: Ripe fruits are edible.

938. *Ziziphus rugosa* Lam. (Plate 158 D)

Family: Rhamnaceae

Vernacular Name: San: Ghonta, Ghontaphala
                Eng: Golden silk cotton tree
                Kan: Bili churimullu, Kottemullu
                Mal: Kottamullu, Malam thudali, Thodali
                Tulu: Kottemullu
Habit: Scrambling shrub.

Habitat: Along hedges and plains.

Status: Common.

Description: Large scrambling shrub; spines solitary and recurved from a broad base. Leaves simple, broadly ovate or elliptic, base slightly oblique. Flowers densely pubescent, in pedunculate cymes, making panicles on terminal branchlets. Sepals 5, ovate. Petals 5, obovate. Disk 5-lobed, hairy. Stamens 5. Fruit globose or oblong drupe, white when ripe.

Uses: *Its bark alone or along with barks of *Ficus racemosa* and *Ficus microcarpa* are cooked with rice and is given for mouth ulcers, gastric ulcers and DUB. Eating ripe fruits is also has similar property. *Bark decoction is given for indigestion and mouth ulcers. Fruit juice provides black colour to the skin. Root cooked with rice is given for mouth ulcers and gastric ulcers. *Tender shoot tip along with that of *Ziziphus oenoplia* and *Syzygium caryophyllatum* are ground with cumin seeds, poured into opposite nose of the bull and forced them to run in case of shoulder dislocation. Bark decoction is given for acidity and gastric ulcers. *Tender shoot tip is crushed with *Ixora coccinea* flower and the juice is poured into the eye in case of eye pain. Shoot tip decoction is used for biliousness. Root bark or stem bark decoction is used for mouth ulcers. *Crushed root or stem bark tied in a cloth is cooked with raw rice and eaten with sweet butter milk for mouth ulcers, gastric ulcers and ulcers in tongue. *Root bark decoction with milk is given with sugar at night or bark cooked with rice is given at morning for over bleeding. *Fruit is a tonic, sperm count increaser and internal wound healer. *Root cooked with rice is used for one week for over bleeding during menses. *Nutmeg and *Quercus infectoria* seed are ground in its root bark extract and applied for three days in case of mouth ulcers.

Etymology: Bili churimullu (white knife spine) is due to its whitish bark. Kottemullu (hard spine) denotes its hard spines. Malam thudali (hill jujube) indicates its habitat.

Note: Ripe fruits are eaten.
939. *Ziziphus xylopyrus* (Retz.) Willd. (Plate 158 E)

Syn: *Rhamnus xylopyrus* Retz.

Family: Rhamnaceae

Vernacular Name: San: Ghonta, Ghontaphala
   Eng: Golden silk cotton tree
   Kan: Bili churimullu, Kottemullu
   Mal: Kottamullu, Malam thudali, Thodali
   Tulu: Kottemullu

Habit: Small tree.

Habitat: Dry forests.

Status: Occasional.


Uses: Same as *Ziziphus rugosa*.

Etymology: Bili churimullu (white knife spine) is due to its whitish bark. Kottemullu (hard spine) denotes its hard spines. Malam thudali (hill jujube) indicates its habitat.

Note: It is used for preparations like *Aragvadhadi kvatha* and *Aragvadhadi churna*. Fruits are rich in sucrose, citric acid, carotene, vitamin C and tannin (Sharma *et al.*, 1998). Ripe fruits are edible.

940. *Zornia diphylla* (L.) Pers. (Plate 158 F)

Syn: *Hedysarum diphyllum* L.

Family: Papilionaceae

Vernacular Name: Kan: Nellu jollu soppu, Elu potti
Mal: Murikkotti
Tulu: Elu potti

Habit: Diffuse herb.

Habitat: Among grasses in plains and lateritic hills.

Status: Common.

Description: Diffuse wiry herb, with glabrescent branchlets. Leaves 2-foliolate; leaflets broadly ovate, glabrous, obtuse. Flowers yellow, in axillary racemes. Calyx small, hyaline, membranous. Petals yellowish, clawed; standard narrow above claw. Stamens monadelphous. Fruit 2 – 5 jointed, with apically glochidiate prickles.

Uses: *Whole plant paste is applied to heal cuts, bone fracture and wounds. *Oil prepared from the plant is applied externally as a pain reliever.

Etymology: Elu potti (bone fracture) clearly indicate its therapeutic efficacy in healing bone fracture, while Murikkotti (wound healer) is due to its wound healing property.

Note: Much valued plant for traditional bone setters.

941. *Zornia gibbosa* Span. (Plate 159 A)

Syn: *Zornia gibbosa* auct. non (L.) Pers.

Family: Papilionaceae

Vernacular Name: Kan: Nellu jollu soppu, Elu potti
    Mal: Murikkotti
    Tulu: Elu potti

Habit: Diffuse herb.

Habitat: Among grasses in plains and lateritic hills.

Status: Common.
Description: Diffuse or prostrate wiry herb, with pubescent branchlets. Leaves 2-foliolate; leaflets lanceolate, sparsely pubescent, acute. Flowers yellow, in axillary racemes. Calyx small, hyaline, membranous. Petals yellowish, clawed; standard cordate; wings as long as keel. Stamens monadelphous. Fruit 2 – 5 jointed, with retrolessly scabrid prickles.

Uses: Same as *Zornia diphylla*.

Etymology: Elu potti (bone fracture) clearly indicate its therapeutic efficacy in healing bone fracture, while Murikkotti (wound healer) is due to its wound healing property.

Note: Much valued plant for traditional bone setters.

### 4.1.2 Bazaar Medicines

**942. Aconitum chasmanthum** Stapf. ex Holmes (*Plate 159 B*)

Family: Ranunculaceae

Vernacular Name: San: Amra, Visa, Sthavaravisa, Vatsanabha
  Eng: Aconite
  Kan: Vatsanabha, Vatsanabhi
  Mal: Vatsanabhi
  Tulu: Vatsanabhi

Habit: Perennial herb.

Habitat: Temperate and subalpine regions of the Himalayas.

Status: Vulnerable.

Description: Dried tuberous root usually paired, ovoid, conical, tapering downwards, wrinkled longitudinally, rough due to root scars and dark brown to blackish-brown in colour.

Uses: Purified root paste is applied externally for paralysis and leprosy. Root decoction is used in limited doses as a nervine tonic.
Etymology: Name Vatsanabhi (nipple of cow) is due to the resemblance of its root to the nipple of cow.

Note: Root should be purified by boiling with milk or cow urine before use and should be used in limited quantities. It is one of the ingredients of *Sutasekhara rasa*, *Tribhuvanakirti rasa*, *Anandabhairava rasa* and *Vatavidhvamsana rasa* (Sharma *et al.*, 1998). Roots contain aconitine, acontinine and atisine as active alkaloids, making them useful for rheumatism, sciatica, lumbago, contusion and neuralgia (Chaudhri, 1996).

**943. *Aconitum heterophyllum* Wall ex Royle (Plate 159 C)**

Family: Ranunculaceae

Vernacular Name: San: Aruna, Ghunapriya, Visa, Ativisha, Amrta  
Eng: Atis root  
Kan: Ativisha, Atibaje  
Mal: Atividayam, Ativitayam  
Tulu: Athiviso

Habit: Perennial herb.

Habitat: Subalpine and alpine regions of Western Himalayas.

Status: Vulnerable.

Description: Dried tuberous roots are ovoid, conical, tapering downwards, externally light ash-grey, internally starch white, surface wrinkled, marked with scars of fallen rootlets.

Uses: *Root extract with honey or breast milk or butter milk is given to children suffering from cold, rhinitis and running nose.*

Etymology: Name Atibaje is due to its properties similar and greater to that of Baje (*Acorus calamus*) but heavy dose has narcotic effect. It is highly poisonous if used as such, hence the name, Ativisha (acute poison). It also has the name Amrta, suggesting if used with care and correct dose it acts as a wonder drug.
Note: Root should be purified by boiling in milk or cow urine before use. It forms one of the ingredients of Sudarsana churna, Pancatikta guggulu, Pancatikta ghrt, Rodhrasava and Siva gutika (Sharma et al., 1998). Major alkaloids present in its root are aconitine, acontinine and atisine, making them useful against cough, diarrhoea, fever and indigestion (Chaudhri, 1996).

944. Allium cepa L. (Plate 159 D)

Family: Liliaceae

Vernacular Name: San: Palandu
    Eng: Onion
    Kan: Neerulli, Eerulli, Ullagadde
    Mal: Ulli, Chuvannulli, Savala
    Tulu: Neerulli, Neeroli kande

Habit: Biennial herb.

Habitat: Cultivated throughout India.

Status: Common.

Description: Bulbs are sub-globular, swollen below the middle, surrounded by papery reddish brown membranous scales, attached to a short disc-like woody stem having numerous wiry rootlets on the underside. Inner to the membranous scales are the numerous folded leaves.

Uses: *Oil prepared by boiling onion juice in coconut oil is applied for wounds and cuts. *Onion is smeared or covered with soil, burnt and is eaten with salt along with meals for piles. White variety is eaten after mastication for chronic cough. *Onion is cut into pieces, cooked with salt and Anethum sowa seed powder and is given for bleeding piles. Cooked onion is eaten along meals to stop diarrhoea. Onion juice along with honey helps in treating cough. Onion along with Anethum sowa seed powder is given along food or meal in case of bleeding piles. *Bulbs are burnt in fire, ground with honey and given for dysentery and IBS. *Bulb juice mixed with juices of Plectranthus amboinicus leaf, Ocimum tenuiflorum leaf, Justicia adhatoda
leaf and honey is used for cough in children. Bulbs fried in ghee are given for sexual vigour. Its paste is applied for pus release from furuncles and swellings. Bulbs are burnt in fire, made into paste and applied for pus release from swellings and furuncles. Bulb is cut into pieces and is rubbed all over the sole for cold in small children. Its extract corrects kidney function. *Bulb is crushed and is kept near nose when the patient lost consciousness due to fits. Onion is masticated and eaten for getting relief from burning sensation due to scorpion bite. White type bulb juice is poured into nose in case of migraine. Bulb extract is used for biliousness and piles. It increases sexual vigour and relieves pain. *Bulb juice is given with ghee or butter to remove the poison of opium or tobacco from the body. Small onion juice or paste is applied for conjunctivitis. Leaf or bulb tambuli* is useful for digestive disorders, gastric ulcers and piles. *Bulb juice (4 – 6 drops) is poured into ear in early morning, while its decoction with milk is given internally for poor eye sight. Bulb fried in coconut oil is made into paste and applied for wounds, marks, itches, insect bites and skin diseases. Its use is useful in gas trouble, pain, piles and sleeplessness. It decreases the power to concentrate on one object. *Bulb juice is given with honey in empty stomach at morning for rhinitis in children. Bulb juice is given with ghee for leucoderma due to biliousness.

*Bulb juice mixed with sugar and camphor is used for cholera. Bulb fried in ghee is made into paste and applied for piles. Outer peels of bulb are put into fire to repel insects and moths in house. *Half bulb of onion along with pepper, one tsp turmeric powder, cumin, two tsp coriander powder, ginger and jaggery are boiled and consumed with milk for cough. Heated bulb pieces are applied and tied for warts. *Crushed bulb is applied to center of head, while extract used as nasya* for high blood pressure. Bulb pieces are fried in ghee and given with rice for blood in stool of children. Bulb pieces are fried in coconut oil and applied to stop bleeding from wounds. Cut pieces are rubbed for millipede sting. For bleeding piles, juice mixed with sugar and coconut milk is used for 6 – 12 days. *Small onion fried in ghee with cumin seeds is ground and applied for carbuncles. * For high blood pressure, two spoon onion juice mixed with two spoon honey is taken at morning and night for 3 – 4 weeks. Onion juice is given with one tsp sugar at every morning
for 1 – 2 weeks in case of piles. Pieces of bulb tied in a cloth are heated in oil and is applied for bruises and cuts. *Pieces of bulb mixed with wheat flour are heated by adding a little water and crushed. This hot poultice is applied for ulcers and wounds. *In burning charcoal onion is burnt, crushed with a little turmeric, resulting hot poultice is applied for abscesses, carbuncles and boils. Onion juice is poured into nose in case of nasal blockage. *Onion pieces are kept on the sides of bed of young babies to prevent mosquito bite. Bulb pieces heated with coconut oil is applied for wounds, swelling and pain.

Etymology: Name Neerulli comes from its ability to bring out tears from eyes while handling.

Note: Even though it is highly used in folk or traditional medicine, its use in classical Ayurveda is very limited. Presence of various organic sulphur constituents, cysteine sulfoxides and sulfides in them helps to prevent rise in serum cholesterol and blood glucose, also impart aphrodisiac, cardiotonic, diuretic and expectorant properties (Anon., 1999b). Bulb juice is applied to cloths in case of discoloration due to sunlight or fire.

**945. *Allium sativum* L. (Plate 159 E)**

Family: Liliaceae

Vernacular Name: San: Rasona, Lashuna

Eng: Garlic

Kan: Bellulli

Mal: Veluthulli

Tulu: Bollulli

Habit: Biennial herb.

Habitat: Cultivated throughout India.

Status: Common.

Description: Bulbs are sub-globular, with 8 – 20 cloves (bulblets) surrounded by whitish papery membranous scales, attached to a short disc-like woody stem having
numerous wiry rootlets on the underside. Each clove is irregularly ovoid, tapering at upper end with dorsal convex surface, surrounded by two very thin papery whitish and brittle scales; having 2 – 3 yellowish green folded leaves contained within two white fleshy modified leaf bases.

Uses: *Garlic decoction is given for one day after delivery. Water in which bulblets are ground is used to wash wounds as an antiseptic which helps in quick healing. Eating daily 4 – 5 fried bulblets, followed by drinking hot water helps to overcome joint pain, water in feet and osteoarthritis. Eating garlic bulblets is useful to expel worms, for gas trouble and bleeding piles. Bulblets are fried in ghee and pressed over septic wounds and ulcers. Oil prepared using its bulblet juice is used for rheumatism as an external application. Bulblet extract in milk or water is used as digestive, also for lung diseases, weakness, fever, piles, asthma, cough and worms. Regular use of garlic is useful for *gulma*. Bulblet extract is given to expel phlegm; its paste is externally applied for pain and rheumatism. Regular use of bulblets helps to decrease obesity. For seven days the bulblets are soaked in butter milk (every day butter milk should be changed), so as to remove the smell of garlic. Garlic is made into paste with butter and salt for wounds, while with ghee for rheumatism. It is pain reliever, increases biliousness and is used for rheumatism, piles, phlegm and high blood pressure. *4 – 6 drops of oil prepared from crushed bulblets in gingelly oil is poured into ear for furuncles in cheeks. *Bulblet paste is applied for mumps, tonsillitis, goiter and lymph node swellings. If side effects like burning in skin appear, then it should be used after grinding in butter milk. Bulblet juice with honey is used for whooping cough. For same purpose its decoction with *Glycyrrhiza glabra* and milk is also recommended. Membranous scale of bulblet along with turmeric put into burning charcoal and the smoke is inhaled to expel phlegm. Regular chewing of garlic prevents or controls increase in blood pressure. Bulb is fried and kept over navel to expel intestinal worms. *Garlic outer peel, mustard seeds, salt and Capsicum fruit stalk are swirled around the face of the baby and later put into fire and the ash is applied over the face after bath to ward off evil spirits. *Crushed bulb in water is used as dhara* for bruises. *One spoon of heated bulblet ground in breast milk is given for stomach swelling in small children.*
*It along with ginger and *Vitex negundo* leaves (1:1:2) are ground, made into decoction and consumed two times a day for 2 – 3 weeks in case of vitiated rheumatoid arthritis. Ground garlic is recommended with ghee two times a day for rheumatism. *In case of paralysis or stroke, garlic is made into decoction with milk and recommended at bed time for 21 days. Bulblet juice ground with *navasagara* salt is applied for skin diseases. *4 – 5 bulblets fried in ghee are ground along with *Myristica fragrans* fruit in milk so as to dissolve it in milk and used for 5 days for indigestion, diarrhoea and stomachache. *5 – 6 fried garlic bulbles (without membranous scale) are eaten in empty stomach in the morning, followed by drinking hot water is done for 3 – 6 weeks in case of joint pain and swellings. Crushed bulblet extract with water is used for washing wounds.

Etymology: Name Bellulli (white onion) is due to its white covering and resemblance with onion.

Note: Ingredient of *Lasunadi vati, Lasunadi ghrta, Lasunadi taila* (Sharma et al., 1998). Allin, organic sulphides and phytoncide are responsible for anti-inflammatory, antibacterial, hypoglycemic, diaphoretic, diuretic, expectorant, emmenagogue and rubefacient activities of garlic. It also lowers cholesterol, blood pressure and platelet aggregation (Anon., 1999b). It has all the tastes except sour taste. Bulblets are used as condiment.

946. *Amomum subulatum* Roxb. (Plate 159 F)

Family: Zingiberaceae

Vernacular Name: San: Bhadra, Bhadraila, Sthulaela
                        Eng: Greater cardamom, Nepal cardamom
                        Kan: Dodda Yalakki, Nepali Yalakki
                        Mal: Valiya elam, Perelam
                        Tulu: Malla esri

Habit: Erect herb.

Habitat: Cultivated in higher altitudes.
Status: Common.

Description: Seeds are irregularly ovoid, with 3-flattened face covered externally with a colourless, membranous aril, spicy, pungent, brown to dark brown in colour.

Uses: Oil extracted from seeds is applied for eye inflammations. Seed decoction is used as gargle for teeth and gum problems. It is also used for liver, digestive disorders and neuralgia.

Etymology: Name Dodda yalakki (larger cardamom) comes as the size of the seeds is larger than the cardamom seeds. The name, Nepali yalakki indicates its exotic nature.

Note: It is used as a substitute for cardamom. Important formulations are Sarivadyasava, Kalyanaka ghṛta, Vastyamayantaka ghṛta and Manasamitra vataka (Sharma et al., 1998). Cineole is the major essential oil present in the seeds, giving it stomachic, stimulant properties and useful for neuralgia. Also helps to allay eyelid inflammation (Chaudhri, 1996).

947. *Anacyclus pyrethrum* DC. (Plate 160 A)

Family: Asteraceae

Vernacular Name: San: Akallaka, Akarakarabha  
Eng: Pellitory  
Kan: Akkallakara, Akalakarabha, Akkalakare  
Mal: Akikaruka, Ahravu  
Tulu: Akalkare

Habit: Herb.

Habitat: Cultivated in north eastern parts of India.

Status: Occasional.

Description: Dried roots are tough, cylindrical, tapering slightly at both ends, with a few hairy rootlets, bark easily separable, shriveled and brown in colour.
Uses: Root decoction is used as gargle for toothache, sore throat and tonsillitis. *Root powder mixed with honey is used for epilepsy and rheumatism.

Note: Ingredient of *Kumaryasava*, *Kasturyadi gutika* and *Nagavallabha rasa* (Sharma et al., 1998). Pyrethrin is the major alkaloid present in the roots, which is responsible for its cardial, stimulant, and sialagogue actions (Chaudhri, 1996). In the study area, *Spilanthes calva* is used as a substitute for this drug.

**948. Anethum graveolens** L. (Plate 160 B)

Syn: *Anethum sowa* Roxb. ex Flem.

Family: Apiaceae

Vernacular Name: San: Satapuspa, Satahva  
Eng: Indian dill  
Kan: Sabbasige, Satapushpi  
Mal: Shathakuppa  
Tulu: Chathakuppi, Tathape

Habit: Biennial herb.

Habitat: Widely cultivated in higher altitudes.

Status: Common. Exotic.

Description: Fruits are dark brown, stalk attached, broadly oval, compressed dorsally; mericarps glabrous, with 5 lighter coloured primary ridges.

Uses: Cooked seeds and roots are eaten for rheumatism and joint pain. *Seed decoction is recommended for body pain during menses and backache.

Etymology: Name Satapushpi (with 100 flowers) denotes the hundreds of flowers produced in its inflorescence.

Note: Ingredient of *Brhat phala ghṛta, Gorocanadi vati, Narayana churna* (Sharma et al., 1998). Major constituents are carvone, limonene and d-1-dillispieel; imparting the seeds carminative activity and is useful in flatulence of children. It is one of the important ingredients of gripe waters (Kapoor, 1990). Seeds are used as condiment.
949. *Angelica glauca* Edgw. (Plate 160 C)

Family: Apiaceae

Vernacular Name: San: Taskarah, Ksemakah, Coraka
Eng: Angelika
Kan: Choraka
Mal: Choraka pullu

Habit: Perennial herb.

Habitat: Western Himalayas.

Status: Frequent.

Description: Root stock yellowish to grey, rough due to deep furrows and longitudinal wrinkles, crowned with leaf base. Root grayish-brown externally, yellow porous internally, surface rough due to longitudinal furrows and wrinkles.

Uses: Root decoction is highly recommended for constipation, dyspepsia and flatulence.

Note: Ingredient of *Guducyadi modaka*, *Balasvagandhalaksadi taila*, *Mahanarayana taila* (Sharma et al., 1998). Roots contain lactones, sesquiterpenes, d-α-cadinene and umbelliprenin as major constituents, with cordial and stimulant action (Kapoor, 1990).

950. *Aquilaria agallocha* Roxb. (Plate 160 D)

Family: Thymelaeaceae

Vernacular Name: San: Agaru, Lauha, Krmija
Eng: Eagle wood
Kan: Krishna agaru, Agilu gandha
Mal: Akil, Agil
Tulu: Agil gando

Habit: Large evergreen tree.
Habitat: Northeastern India.

Status: Vulnerable.

Description: Heart wood pieces are light pale coloured. After insect attack, it becomes hard, dense dark brown to nearly black, light and elastic.

Uses: Gum resin extract is used for eye disorders.

Note: Ingredient of *Madhukasava, Mrdvikasava, Anu taila, Candanadi taila* and *Guducyadi taila* (Sharma et al., 1998). Heart wood contains sesquiterpenes and hydrocinnamic acids as active constituents, imparting carminative, cholagogue, tonic and stimulant activities (Dey, 1994).

951. *Arachis hypogea* L. (Plate 160 E)

Family: Papilionaceae

Vernacular Name: San: Bhucanakah, Bhumija, Bhusimbi
   Eng: Ground nut, Peanut
   Kan: Nelakadale, Kadlekaayi, Shenga
   Mal: Nilakadala, Kappalindi
   Tulu: Nilakadle

Habit: Annual herb.

Habitat: Cultivated as an oil crop.

Status: Common.

Description: Fruit 2 – 6 seeded pod, which is more or less constricted between seeds. Seeds sub ovoid, with a reddish papery coat.

Uses: *Seed ground with sour butter milk and is applied for ringworm.*

Etymology: It got the name Nelakadale (ground nut) as its fruits develop below the ground.

Note: Seeds are mainly used as nutritious food and edible oil is extracted from them.
952. *Berberis aristata* DC. (Plate 160 F)

Syn: *Berberis coriaria* Royle ex. Lindl.

Family: Berberidaceae

Vernacular Name: San: Katamkateri, Darvi, Daruharidra

   Eng: Indian Berberry

   Kan: Gantarishina, Kolavankae, Maradarasina

   Mal: Maramanjalu

   Tulu: Maramanjalu

Habit: Shrub.

Habitat: North Western Himalayas.

Status: Vulnerable.

Description: Dried stem pieces of variable length and thickness. Bark pale yellowish-brown, soft, deeply furrowed, xylem portion yellow in colour.

Uses: Stem decoction is used to wash foul ulcers and sores. Wood extract is recommended for fever. It has blood purifying and tonic properties.

Etymology: Name Maradarasina (tree turmeric) is due to its shrubby nature, yellowish-brown stem and yellow wood.

Note: Ingredient of *Asvagandhadyarista, Bhrngaraja taila, Khadiradi gurika, Khadirarista, Jatyadi taila* and *Triphala ghrta* (Sharma et al., 1998). Major alkaloid is the berberine, responsible for astringent, stomachic, bactericidal, anti-inflammatory, hypotensive, deobstructant actions. It is useful for piles, indolent ulcers, bacillary dysentery, amoebiasis, leishmaniasis, menorrhagia and jaundice (Chaudhri, 1996).

953. *Boswellia serrata* Roxb. ex Colebr. (Plate 161 A)

Syn: *Boswellia glabra* Roxb.

Family: Burseraceae
Vernacular Name: San: Sallaki, Shallaki, Kunduru  
   Eng: Indian olibaum  
   Kan: Chilakdupa, Maddidupa, Tallaki,  
   Mal: Gulgulu, Kungilium, Vella kunthirikkam  
   Tulu: Guggulo

Habit: Large tree.

Habitat: Mountainous tracts of Central India.

Status: Vulnerable.

Description: Exudates forms agglomerates of various shapes and sizes, brownish yellow, fragrant, brittle, waxy and translucent.

Uses: Gum resin paste with coconut oil and lime juice is applied externally for septic wounds and ulcers.

Note: Ingredient of Karpuradyarka, Jirakadi modaka, Bala taila and Bala guducyadi taila (Sharma et al., 1998). Boswellic acid is one of the major constituents, very effective for the treatment of rheumatoid arthritis, also useful for skin, nervous and many blood diseases (Chaudhri, 1996).

954. *Boswellia thurifera* Roxb. (Plate 161 B)

Family: Burseraceae

Vernacular Name: San: Sallaki, Kunduru, Dhupa  
   Eng: Indian olibaum  
   Kan: Guggula, Lobana  
   Mal: Gulgulu, Guggulu  
   Tulu: Lobano

Habit: Large tree.

Habitat: Dry hills of central and northwestern India.

Status: Vulnerable.

Description: Exudates forms oleo gum resin of various shapes and sizes, golden yellow, fragrant, brittle, waxy and translucent.
Uses: Gum resin is applied over stomach for diarrhoea and dysentery. *Gum paste with lukewarm water is applied externally for eye inflammations. Gum resin paste is applied for cuts and wounds.

Note: Ingredient of *Karpuradyarka, Jirakadi modaka, Bala taila* and *Bala guducyadi taila* (Sharma et al., 1998). Boswellic acid is one of the major constituents, very effective for the treatment of rheumatoid arthritis, also useful for skin, nervous and many blood diseases (Chaudhri, 1996). Gum resin is often used as incense in religious rituals.

**955. Brassica nigra** (L.) Koch. (Plate 161 C)

Family: Brassicaceae

Vernacular Name: San: Rajila, Raktasarshapah, Sarshapa
Eng: Black mustard
Kan: Kari sasive, Oggarane sasive
Mal: Kaduku, Karutha kaduku
Tulu: Karidasime

Habit: Annual herb.

Habitat: Cultivated throughout India.

Status: Common.

Description: Seeds are globose, larger than that of *Brassica juncea*, dark brown to black and alveolate.

Uses: Oil extracted from the seeds is applied externally for chest affections of children. Seed paste is applied externally for muscle spasm and inflammations.

Etymology: Name Karisasive (black mustard) is as its seeds are much darker than that of mustard (*Brassica juncea*) seeds.

Note: Ingredient of *Maha yogaraja guggulu, Karpasasthyadi churna, Karpasasthyadi taila, Kunkumadi taila* and *Prabhanjana taila* (Sharma et al., 1998). Allyl isothiocyanate is the major constituent, which is rubefacient to swollen joints,
counter-irritant in bronchial effections and stimulant to mucous membrane (Kapoor, 1990). Seeds are used as seasoning agent.

956. Canarium strictum Roxb. (Plate 161 D)

Family: Burseraceae

Vernacular Name: San: Mandadhupa, Raladhupa
   Eng: Black Dammar
   Kan: Kare dupa, Manda dhupa, Kari dhupa
   Mal: Karuttha kunthirikkam
   Tulu: Kari dhupo

Habit: Large tree.

Habitat: Mountainous tracts of Peninsular India.

Status: Vulnerable.

Description: Exudates form resin of various shapes and sizes, dark brown to black, bright, glassy in consistence, aromatic, brittle, easily ground to powder.

Uses: Resin paste with lime water is applied for skin diseases. *Resin powder mixed with sesame oil is applied externally for rheumatism. Gum resin is applied for chronic wounds and ulcers. Gum resin paste is applied externally as pain reliever.

Etymology: Name Kari dhupa (black dammar) is due to the black colour of the exudates.

Note: Gum resin is highly recommended for arthritis and rheumatism. It is also used for wood coating and as dhup.

957. Carum carvi L. (Plate 161 E)

Family: Apiaceae

Vernacular Name: San: Asitajiraka, Krishnajiraka
   Eng: Black caraway
   Kan: Kari jeerige, Shaha jeerige
Mal: Kari jeerakam  
Tulu: Kari jeerdari

Habit: Biennial herb.

Habitat: Northern Himalayas.

Status: Frequent.

Description: Fruits are greenish-brown, slightly curved, elongated. Mericarps separate; carpophores almost equally 5-sided, narrow, tapering to each end, glabrous.

Uses: Oil extracted from the seeds is carminative. *Seed oil mixed with castor oil is applied externally for scabies.

Etymology: Name Kari jeerige (black cumin) is due to the resemblance of its seeds to cumin (Cuminum cyminum) and black colour.

Note: Ingredient of *Jirakadyarista and Jirakadi modaka* (Sharma *et al.*, 1998). Carvone and limonene present in the seeds impart them carminative, stomachic, stimulant and lactagogue properties (Dey, 1994).

**958. Cedrus deodara** (Roxb.) Loud. *(Plate 161 F)*

Family: Pinaceae

Vernacular Name: San: Bhadradaru, Devakastha, Daru, Suradaru, Devadaru  
Eng: Deodar, Himalayan Cedar  
Kan: Devadaru, Tuppa devadaru  
Mal: Devataram  
Tulu: Devadar

Habit: Large tree.

Habitat: Northern Himalayas.

Status: Vulnerable.

Description: Heartwood is moderately hard, light yellowish-brown, aromatic, splits readily longitudinally; annual rings well marked.
Uses: Bark decoction is given for skin diseases and to expel phlegm. *Oil extracted from heart wood in earthen pot is applied for skin diseases and joint pain. *Heart wood, Barleria prionitis root and dried ginger are made into decoction and consumed by adding two drops of gingelly oil for chronic diarrhoea in children. *Seed and rock salt paste in cow dung extract is applied for bleeding piles. *Heart wood boiled in butter milk is taken internally, while its paste or oil is applied externally for backache, joint pain, joint swelling and rheumatism.

Etymology: Name Devadaru (god’s tree) indicates that this tree is a god’s gift as all parts of this tree are useful for different purposes.

Note: Ingredient of Khadirarista, Dasamularista, Devadarvarista, Candanadi churna, Sudarsana churna and Narayana taila (Sharma et al., 1998). Major constituents of the wood are p-methylacetophenone, α-himachalene, β-himachalene, himachalol and atlantone, responsible for carminative, astringent, febrifuge properties (Kapoor, 1990).

959. Cinnamomum tamala (Buch. Ham.) Nees & Eberm. (Plate 162 A)

Family: Lauraceae

Vernacular Name: San: Patra, Varanga, Tvakpatra, Tejapatra
Eng: Indian cinnamon
Kan: Tamala patra, Dalchini ele
Mal: Karuvapatta patram
Tulu: Bellanthottu ire

Habit: Evergreen tree.

Habitat: Tropical Himalayas.

Status: Vulnerable.

Description: Dried leaves are 10 – 20 × 5 – 7 cm, with 3 converging nerves from base to apex; margin entire, apex acute or acuminate, smooth, aromatic.
Uses: Dried leaf decoction is given for anorexia, bladder disorders, dryness in mouth, nausea and spermatorrhoea.

Etymology: Dalchini ele (cinnamon leaf) is due to the similarity of the leaves with that of cinnamon (Cinnamomum verum).

Note: Ingredient of Citrakadi taila, Kasisadi taila and Vajraka taila (Sharma et al., 1998). Active constituents in the leaf are cinnamic aldehyde and phlobatannine, imparting astringent, carminative and stimulant activities. It checks nausea, uterine hemorrhages and vomiting (Kapoor, 1990).

960. Commiphora myrrha (Nees) Engl. (Plate 162 B)

Syn: Balsamodendron myrrha Nees.

Family: Burseraceae

Vernacular Name: San: Gandharasa, Guggulu
    Eng: Gum guggul
    Kan: Rasagandha, Guggula
    Mal: Gulgulu, Guggulu
    Tulu: Guggulo

Habit: Large tree.

Habitat: Dry hills of Central India.

Status: Vulnerable.

Description: Exudates form vermicular pieces of brownish-yellow sticky mass.

Uses: Gum resin along with bee wax and jaggery heated with ghee is applied for cracks in lips. *Resin, jaggery, rock salt, saffron stone, bee wax, Vetiveria zizanioides root and Catunaregam spinosa fruit ground with buffalo ghee is applied for cracks in heel. Resin, pepper, Embelia ribes, mustard seeds, annabedhi*, Cyperus rotundus tuber, sulphur, Saussurea lappa seed, Euphorbia tirucalli root bark, turmeric, Coscinium fenestratum root, copper sulphate, borax and camphor in equal quantity are powdered, mixed in coconut oil and kept in sunlight. Later this
mixture is heated in an iron vessel is applied for scabies, itches and all types of wounds.

Note: Ingredient of Yogaraja guggulu, Simhanada guggulu, Kaisora guggulu, Mahayogaraja guggulu and Candraprabha vati (Sharma et al., 1998). Guggulipid is the major active constituent, having anti-inflammatory and antiarthritic activities (Chaudhri, 1996).

961. Commiphora wightii (Arn.) Bhand. (Plate 162 C)

Syn: Balsamodendron mukul Hook ex Stocks; Commiphora mukul Engl.

Family: Burseraceae

Vernacular Name: San: Pura, Kausika, Mahisaksa guggulu
   Eng: Gum gugul, Indian Bdellium
   Kan: Guggulu, Mahishaksha guggulu, Guggulu
   Mal: Gulgulu, Guggulu
   Tulu: Guggulo

Habit: Large tree.

Habitat: Dry hills of central India.

Status: Frequent. Exotic.

Description: Exudates form vermicular or stalactitic pieces of pale yellow or brown colour mass of oleo gum resin, makes milky emulsion in hot water.

Uses: Gum resin paste is used as wound healer. Other uses are similar to that of Commiphora myrrha.

Note: Ingredient of Yogaraja guggulu, Simhanada guggulu, Kaisora guggulu, Mahayogaraja guggulu and Candraprabha vati (Sharma et al., 1998). Guggulipid is the major active constituent, having anti-inflammatory and antiarthritic activities. Other alkaloids are guggul sterons Z & E, gugul sterols I – V (Chaudhri, 1996).
**962. Coriandrum sativum L. (Plate 162 D)**

Family: Apiaceae

Vernacular Name: San: Dhanya, Dhanyaka, Dhanika, Kustumbaru  
Eng: Coriander  
Kan: Kothambari, Dhaniya  
Mal: Malli, Kothambalari  
Tulu: Kotthambri, Kottamberi

Habit: Annual herb.

Habitat: Widely cultivated throughout India.

Status: Common.

Description: Fruits are globular, mericarps united by their margins, forming cremocarp. Brownish-yellow or brown, glabrous, with 10 primary ridges and 8 slightly inconspicuous secondary ridges.

Uses: Seed decoction with cumin seeds is given for weakness and backache. Leaf paste is applied as an antidote for marking nut poison. Seed decoction is given for marking nut poison. Seed decoction is recommended to increase digestion, for gastric ulcer, to induce sweat during fever, for gastritis, jaundice, hiccough, gas trouble, biliousness, vomiting, gout, rheumatism and giddiness. It has constipating property. Leaf paste is applied for carbuncles. Seed decoction corrects renal functions. Water in which its seeds were soaked overnight is used as cooling agent to eyes, for burning sensation and conjunctivitis. *Seed decoction with that of Tribulus terrestris is used for kidney stone. Seed soaked water is used as eye drop and is used 7 – 8 times a day in case of herpes, urticaria, rashes and allergies. Leaf paste is applied for lymph node swellings and tumours. *Seed powder mixed in honey is given for increasing memory power. *Seed extract in rice washed water is given for vomiting in pregnant ladies. Its seeds and cumin seeds are made into a tea and consumed for headache. Whole plant juice is given with honey for burning urination and shortage in urine production. *One handful of seed ground in water, mixed with sugarcandy is recommended for urine block. *Water in which its seeds
were kept overnight is recommended with sugarcandy in next morning for vomiting in pregnant ladies. *Tambuli* prepared from its shoot is useful for *tridoshas*, asthma and is diuretic and also poison remover. Seed boiled with ginger in water is given for indigestion. *Seeds, cumin seeds, Plectranthus amboinicus* leaf powder are made into a decoction and are given with milk and sugar for jaundice. *Ten glasses of water in which seeds and *Cyperus rotundus* tuber are soaked are given after boiling for abdominal spasm. Crushed seed decoction is taken with honey for 12 – 24 days in case of vitiated cough in children. *Seed extract with butter milk is used for vomiting during pregnancy. Crushed seeds are soaked in rice washed water and given with sugar for cough. Seed decoction with ghee is used for indigestion during pregnancy. *Its seeds, dried ginger, *Ricinus communis* root in equal quantity are made into decoction and taken twice a day for rheumatism and polio.

Note: Ingredient of *Dhanyapancaka kvatha* and *Dhanyapancaka churna* (Sharma *et al.*, 1998). Seeds contain coriandrol and pinene as active components, giving them stimulant, carminative, stomachic, diuretic and aphrodisiac properties (Kapoor, 1990). Seeds are used as condiment.

963. *Crocus sativus* L. (Plate 162 E)

Family: Iridaceae

Vernacular Name:  San: Kesara, Kasmira, Rakta, Kumkuma  
Eng: Saffron  
Kan: Kunkumakesari, Kesari  
Mal: Kunkumapuvu  
Tulu: Kesari poo

Habit: Herb.

Habitat: Cultivated in Kashmir.

Status: Vulnerable.

Description: Dried style is yellowish, with trifid stigma. Stigma dark red or reddish-brown and has fimbriate margin. Strongly aromatic.
Uses: Dried stigma and style decoction is recommended to control vomiting, breath trouble, cough and indigestion. As it is nerve stimulant, its overdose has narcotic affect. *Saffron ground in cow urine is preserved in a bottle for a week, then buried inside rice seeds for 48 days and is used given for epilepsy. Saffron, jaggery and ghee are ground and applied on head for headache. *Saffron ground with sugarcandy in ghee is used as nasya$^*$ for giddiness. Saffron powder dissolved in milk is given from 4th month of pregnancy for good complexion of the child.

Etymology: Kunkumakesari (saffron stamen) is due to the saffron colour of its stamens.

Note: Ingredient of Karpuradyarista, Kunkumadi taila and Mahanarayana taila (Sharma et al., 1998). Active constituents are $\alpha$-crocetin, $\beta$-crocetin and $\gamma$-crocetin, resulting in stimulant, aphrodisiac, stomachic, anodyne, sedative, mild narcotic and antispasmodic activities (Kapoor, 1990).

964. Cuminum cyminum L. (Plate 162 F)

Family: Apiaceae

Vernacular Name: San: Ajaji, Jiraka, Svetajiraka
Eng: Cumin seed, Cumin
Kan: Jeerige, Bili jeerige
Mal: Jeerakam
Tulu: Jeerdari

Habit: Annual herb.

Habitat: Cultivated throughout India.

Status: Common.

Description: Fruits are separated into mericarps, brown with light coloured ridges, ellipsoidal, elongated, tapering at ends and slightly compressed laterally.

Uses: Seed decoction is given after delivery for gas trouble. *Fried cumin seed is given along with ghee and honey immediately after delivery. *Fried seeds mixed
with raw seeds (1:1) made into a decoction used for gas trouble. Seed paste is applied for swellings and rheumatism. Seed decoction is given for gastritis and stomachache. Due to its slight abortive action pregnant women should use it in limited dose. Seed decoction with milk is given for rheumatism. *Seeds are ground with palm jaggery, made into small balls and eaten after nine months of pregnancy for easy delivery. Hot decoction is given with butter in case of muscle pain and ankle twist. *Seed decoction with roots of *Sida rhombifolia* and *Ricinus communis* is given by adding butter for ankle twist and sprain. *Seed decoction mixed with *ksheerabala* is given to drink in case of herpes. Fried seed powder mixed with honey is given three times a day for 15 days in case of dry cough. *Seed powder mixed in coconut milk is applied all over the body (half hour before bath) for one week in case of prickly heat. *Cumin seeds along with egg white and jaggery are made into a paste with hot liquor and applied for backache. Seeds along with ginger and salt are made into a decoction and used as a gargle for loss of appetite. *Seeds along with coriander and dried gooseberry fruits are made into a decoction and are given with sugar and milk for vomiting in pregnant women. Seeds along with rock salt is ground in hot water or buttermilk and given for diarrhoea. *Seeds, coriander and fenugreek are made into a decoction and are given with milk and jaggery for gastric stomachache. *Seeds soaked in lime water are dried in sunlight and powdered with *Embelia ribes* root bark (2:1) is given in honey for asthma and bronchitis. Seed decoction is used for stomachache. Oil prepared from its seeds is applied for ankle twist or sprain. Seeds, coriander and fenugreek are fried, powdered and two spoon of this are taken with milk at bedtime by ladies after delivery. *Seeds and coriander are made into a decoction and consumed by adding a little musk for stomachache in pregnant women. Seed powder with ghee is given for cold. *Seeds along with that of *Saussurea lappa* (1:4) are crushed, made into a decoction and used twice a day for a week in case of repeated attack of boils.

Note: Ingredient of *Jirakadyarista, Jirakadi modaka, Hingvadi churna* and *Hingvacadi churna* (Sharma et al., 1998). Cumaldehyde, pinene and cumene, form the active ingredients with cordial, carminative, stomachic and stimulant action, useful in dyspepsia (Kapoor, 1990). Seeds are used as condiment.
965. *Decalepis hamiltonii* Wight & Arn. (Plate 163 A)

Family: Periplocaceae

Vernacular Name: San: Sariva, Svetasariva  
Eng: Sarasaparilla  
Kan: Makali beru  
Mal: Kattu nannari, Mahali-kizhangu.  
Tulu: Magali beru

Habit: Climber.

Habitat: Dry hills of Peninsular India.

Status: Vulnerable.

Description: Dried root is cylindrical, fleshy, dark brown to black, with sarasaparilla like smell and taste.

Uses: Used as a substitute for *Hemidesmus indicus*.

Etymology: Kattu nannari (wild sarasaparilla) comes as it is used as a substitute for sarasaparilla (*Hemidesmus indicus*).

Note: It is often used as adulterant of *Hemidesmus indicus*.

966. *Elaeocarpus ganitrus* Roxb. ex G. Don. (Plate 163 B)

Syn: *Elaeocarpus angustifolius* Blume

Family: Elaeocarpaceae

Vernacular Name: San: Chattu, Sampangi, Rudraksha  
Kan: Rudrakshi, Rudraksha  
Mal: Rudraksham  
Tulu: Rudrakshi

Habit: Medium-sized tree.
Habitat: North western India.

Status: Vulnerable.

Description: Seeds are stony, very hard, obovoid or oval, variable in size, longitudinally grooved, tubercled, brown, divided into 5 segments.

Uses: *Ground seed is given to small children for increasing intellect and memory power. It is also used for epilepsy, nervine disorders and to expel phlegm. Seed decoction is used for liver disorders, mental disorders and CNS problems. Wearing its seeds as necklace is said to control CNS. Crushed fruit is taken with honey for cough and phlegm in children. Bark or leaf decoction is recommended for rheumatism. Seed extract with water is given to reduce high blood pressure. *Fruit extract is given to expel the poison that has entered the body. Water in which the fruit is preserved on a copper vessel overnight is consumed next day morning for high blood pressure. *Fruit, cumin, asafoetida, garlic, pepper, *Glycyrrhiza glabra* rhizome, long pepper, ginger and turmeric are ground in cow urine and made into pills. This pill extract in goat urine is used as nasya* for insanity. Fruit paste is applied for skin diseases.

Etymology: Rudraksha (Shiva’s eye) is due to the resemblance of the seeds with human eye ball.

Note: Ingredient of Gorocanadi vati, Dhanvantara gutika and Mrtasanjivani gutika (Sharma et al., 1998). In the study area Scaveola sericea seeds are used as substitute. Seeds are used in religious rituals.

967. *Ferula asafoetida* Regel. (Plate 163 C)

Family: Apiaceae

Vernacular Name: San: Ramatha, Sahasravedhi, Hingu  
Eng: Asafoetida  
Kan: Hingu, Ingu  
Mal: Kayam  
Tulu: Ing
Habit: Perennial herb.

Habitat: Found wild in Kashmir.

Status: Frequent. Exotic.

Description: Oleo resin is rounded flattened masses of agglutinated tears, dull yellowish and translucent when fresh, slowly becomes red, then reddish brown, with strong odour.

Uses: *Asafoetida and garlic are ground in butter milk and given for vomiting due to colonizing of worms in stomach. Asafoetida and garlic are ground in *Vitex negundo leaf juice into pills and are used for indigestion, colic pain and retardation of children. This gum resin is given in limited dose for gas trouble, to remove foul breath, body odour, wormicidal, nervine stimulant, for abdominal spasm and gas trouble during menses. Gum resin dissolved in butter milk is used for stomachache. Gum resin paste with rock salt is applied for pain due to bruises and for neural pain. It is fried in ghee, dissolved in butter milk and is given for *gulma*. *Fried asafoetida powder mixed with ajowan, rock salt and ghee is used for indigestion. It along with rock salt, ginger, long pepper and pepper are ground and is applied over stomach for gas trouble. *Fried asafoetida is mixed with camphor powder in hot water or honey and used for chest pain due to gastritis. This along with ginger, long pepper, pepper, cumin, black cumin, coriander and rock salt powder is given for indigestion, constipation and related chest pain. *Asafoetida is eaten with banana for stomachache due to indigestion and gastritis. For same purpose it is used by mixing with lime juice and salt. Asafoetida and salt dissolved in buttermilk is given for stomachache. *Fried asafoetida extract is poured into ear for pus release from ears. Asafoetida, cardamom, dried ginger and rock salt in equal quantity are fried in castor oil, powdered and is taken for gas trouble and malabsorption in children. Fried asafoetida, *Hyoscyamus niger seeds, Terminalia chebula fruit rind and rock salt in equal quantity are powdered and taken for all types of stomachache. *It along with rock salt fried in castor oil are ground with honey and ghee and smeared to a cloth which is kept into anus for swollen stomach. Asafoetida fried in castor oil is ground and applied for rat bite and ring worm. Asafoetida ground with rock salt is given for
immediate expulsion of died baby. *Asafoetida along with Solanum lasiocarpum root ground in honey is used for three days in case of asthma. Asafoetida ground in Leucas aspera flower juice is used as *anjana* for yellow eyes. *Fried asafoetida is ground for a week with garlic bulblets fried in ghee, in Vitex negundo leaf juice into black gram size pills and are dried in shade. 1 – 2 such pills are given in butter milk, in empty stomach, in the morning for 3 – 6 days in case of indigestion and worm infestation. Fried asafoetida and 4 – 5 garlic bulblets are ground, dissolved in butter milk and is used internally to expel intestinal worms.

Note: Ingredient of Hingvastaka churna, Hingvadi churna and Hinguvacadi churna (Sharma et al., 1998). Active components of the resin are ferulic acid, isopropyl disulphide and umbelliferone, with carminative, expectorant, antispasmodic and laxative actions. It is very useful for flatulent colic (Kapoor, 1990). Asafoetida is always used after heating and is not recommended in the raw form.

968. Foeniculum vulgare Mill. (Plate 163 D)

Syn: Anethum foeniculum L.

Family: Apiaceae

Vernacular Name: San: Misi, Madhurika, Mishreya
Eng: Fennel seeds
Kan: Badisompu, Badesompu, Dodda sompu
Mal: Kattusatakuppa, Perinjeerakam
Tulu: Malla jeerdari, Bade sompu

Habit: Perennial herb.

Habitat: Cultivated throughout India.

Status: Common. Exotic.

Description: Fruits are entire, with pedicel. Mericarps 5-sided with a wider commissural surface, tapering lightly towards base and apex, glabrous, greenish or yellowish brown, with 5 paler prominent primary ridges.

Uses: Seed decoction is given as a laxative, stimulant, appetizer, for dysentery, biliousness, headache, spleen and kidney disorders. Oil extracted from seeds is given
internally to expel hook worms.

Etymology: Perinjeerakam (larger cumin) is due to the similarity of its seeds with cumin seeds and larger size.

Note: Ingredient of Misreyarka and Pancasakara churna (Sharma et al., 1998). Anethol and D-fenchone are the major constituents, giving the seeds carminative, anti-inflammatory, antimicrobial and diuretic properties (Kapoor, 1990). Seeds are used as condiment.

969. *Fritillaria roylei* Hook. (Plate 163 E)

Family: Liliaceae

Vernacular Name: San: Sukla, Ksiravallika, Kshirakakoli
   Eng: Fritillary
   Kan: Ksheerakakoli
   Mal: Kshirakakoli

Habit: Tuberous herb.

Habitat: Himalayas.

Status: Vulnerable.

Description: Bulbs are hard, conical, translucent with slight longitudinal ridges, covered with hard membranous scales arranged in a concentric manner, surface white to creamish-yellow and starchy.

Uses: It is one of the important *medhya* drugs. Bulb decoction is used as tonic and aphrodisiac agent.

Etymology: Ksheerakakoli (milk kakoli) is due to the white colour of its bulb and resemblance with that of kakoli (*Lilium polyphyllum*).

Note: Ingredient of Dasamularista, Brhatphala ghrta, Siva gutika and Manasamitra vataka (Sharma et al., 1998). Peimine, peiminine, peimisine, peimiphine, peimidine and peimitidine are the active constituents, with antiasthmatic, antirheumatic, febrifuge, galactogogue and haemostatic properties (Dey, 1994).
970. Glycyrrhiza glabra L. (Plate 163 F)

Family: Papilionaceae

Vernacular Name: San: Yastimadhuka, Madhuyasti, Yastika, Yashti  
Eng: Liquorice  
Kan: Jestamadhu, Jyeshtamadhu, Atimadhura  
Mal: Irattimadhum  
Tulu: Erattimadhuro, Theepe kaddi

Habit: Herb.

Habitat: Cultivated in Punjab and Himalayan tracts.

Status: Vulnerable.

Description: Dried stolon is with yellowish brown or dark brown outer layer, externally longitudinally wrinkled, with faint odour and characteristic sweetish taste.

Uses: Ground rhizome in milk is given to drink to children suffering from boils and blisters. *Rhizome piece (about the size of black gram seed) is kept in mouth and chewed for gastritis. This is also beneficial for cough, sound fall and giddiness. Rhizome paste in water is applied for vitiated diabetic ulcers. Rhizome decoction is given for gastritis, cough, phlegm, whooping cough and to purify blood. Rhizome extract is given to expel phlegm and for diabetes. Oil extracted from rhizome is used for hair fall. Rhizome paste with milk is applied for furuncle and swelling due to presence of thorn or spine inside the body. Rhizome decoction is used for loss of appetite due to tridoshas*. *Rhizome powder decoction is given with grapes, dried gooseberry powder ground in ghee and milk for cough due to vata*. Rhizome powder mixed with lime juice and honey is used for irritation in the throat and dry cough. Rhizome powder mixed with milk and water is given for raktapitta*. Its powder mixed with butter is also given for raktapitta*. *Rhizome and gooseberry ground in ghee is given for stomachache. Rhizome powder decoction with milk is given for cardiac debility. Its powder and Solanum trilobatum fruit powder in hot water is given in empty stomach or its powder along with Costus speciosus rhizome
powder in hot water is given in empty stomach for asthma. 20 – 60 gm powder in honey is given as mild laxative for cold, cough, asthma and urinary disorders. Rhizome paste decoction is given with honey for cough and phlegm in children. Rhizome paste with fresh milk is applied for furuncles. *Its decoction or extract with fresh milk is used for leucorrhoea. *Rhizome along with *Rubia cordifolia and *Solanum virginianum root in equal quantity are powdered, mixed with honey, tied in a cloth and is inserted into vagina for two days to purify uterus and ovary to help in conception. Rhizome ground with *Nymphaea nouchali rhizome in milk is given for bleeding during pregnancy. *Rhizome powder in milk is given twice a day for 7 – 14 days in case of leucorrhoea. Rhizome decoction is given with equal quantity of milk for phlegm and cough in children. Rhizome decoction is recommended daily for development of intellect in children.

Etymology: Irattimadhuram (double sweet) suggests the sweetness of its rhizome.

Note: Ingredient of *Eladi gutika, *Yastimadhuka taila and *Madhuyastyadi taila (Sharma et al., 1998). Glycyrrhizin, liquiritin, isoliquiritin are the active constituents, responsible for demulcent, expectorant, laxative, anti-inflammatory and spasmolytic actions of the rhizome (Kapoor, 1990).

971. *Guizotia abyssinica* (L. f.) Cass. (Plate 164 A)

Syn: *Polymnia abyssynica* L. f.; *Verbesina sativa* Roxb. ex Sims.

Family: Asteraceae

Vernacular Name: San: Ramatilah

Eng: Niger seed, Ram til oil

Kan: Hucchellu

Mal: Prandan ellu

Tulu: Marlenme

Habit: Erect herb.

Habitat: Cultivated throughout India.

Status: Frequent.
Description: Fruits are achenes, black with white to yellow scars on the top and base, have a hard testa.

Uses: Oil extracted from the seeds is applied externally for rheumatism.

Etymology: Hucchellu (mad sesame) is due to the narcotic effect of its seeds.

Note: Seeds yield edible oil. Seeds should be used in limited dose as it has some narcotic effect.

972. **Hordeum vulgare** L. (Plate 164 B)

Syn: **Hordeum sativum** Pers.

Family: Poaceae

Vernacular Name:  
San: Dhanyaraja, Hayesta, Yava  
Eng: Barley  
Kan: Barley, Jave godhi  
Mal: Barley, Javegambu  
Tulu: Barley

Habit: Herb.

Habitat: Cultivated throughout India.

Status: Common. Exotic.

Description: Fruits are elliptic, oblong, ovoid, tapering at both ends, smooth, dorsally compressed and flattened on the sides with a shallow longitudinal furrow, pale greenish-yellow in colour.

Uses: Seeds are used as food for phlegm and rheumatism. Due to its diuretic nature, seed decoction is used for urinary disorders. *Water in which its seeds are cooked is mixed with *Musa paradisiaca* stem juice and given for urinary disorders. *Seed decoction is given during the 7th month of pregnancy.

Etymology: Jave godhi (mucilaginous wheat) is due to the similarity of its seeds with wheat seeds and as it becomes mucilaginous when in contact with water.
Note: Ingredient of *Eladya modaka, Dhanvantara ghṛta, Agasthya rasayana, Gandharvahasta taila* and *Dhanvantara taila* (Sharma *et al.*, 1998). Seed extract with water is usually used as a health drink with diuretic property. Seeds are used in religious rites. Seeds are used as nutritious food.

**973. *Hyoscyamus niger* L. (Plate 164 C)**

Family: Solanaceae

Vernacular Name: San: Khurasani yavani, Yavani, Madakarini  
Eng: Henbane  
Kan: Khurasani oma  
Mal: Khurasaanee, Paarasika, Yavaani  
Tulu: Khursani omo

Habit: Biennial herb.

Habitat: Western Himalayas.

Status: Frequent. Poisonous.

Description: Seeds are irregularly reniform or sub quadrate, dark grey, with concave surface.

Uses: Seed decoction is given for indigestion and stomachache in children. Seed decoction is given for gas trouble, vomiting, to expel worms, stomachache, dry cough, breathing problem and cough. Its powder, in small dose is given to stop diarrhoea in children and cholera. Its paste is applied for joint pain. *Seed extract is poured into nose as nasya* for hysteria in pregnant ladies. *Fried seed powder is given in hot milk to increase sexual vigour and sperms through improved digestion. *Seeds along with cumin and *Vernonia anthelmintica* seeds are made into a decoction, mixed with *Citrus medica* leaf juice and given for gas trouble in cattle. Seed powder is given to expel worms. *Seeds are ground with *Zingiber zerumbet* rhizome, pepper seeds and a small amount of asafoetida are made into a lehyam* which is used for expelling phlegm and for easy digestion. Seed decoction is recommended for bed wetting in children. Equal parts of its seed, ginger, pepper and long pepper are powdered, mixed with half quantity of *Acorus calamus* rhizome
powder and honey or ghee are given thrice a day for speech clearance. Seed and ginger decoction is used for vomiting. Seed powder is given with honey for loss of appetite due to phlegm. Fried seeds are powdered, mixed with honey and are given at morning for rhinitis, while same is given by adding pepper powder if there is cough or phlegm. Fried and crushed seeds are applied to head, arms and feet for cough. Seed decoction is given with salt for dysentery and cold. Concentrated seed decoction mixed with asafoetida fried in castor oil is given for indigestion and gas trouble in children. *Seeds along with ginger, rock salt and *Tamarindus indica* bark in equal quantity are ground in butter milk by adding equal quantity of *Terminalia chebula* fruit rind, heated and used for malnutrition in children. *Seeds are chewed with salt, juice swallowed for stomach swelling due to indigestion or gas trouble. Seed decoction is used by adding jaggery for one week for getting relief from *shitapitta*.

Etymology: Khurasani oma (inferior kind of ajowan) comes due to its intoxicating and narcotic effects.

Note: Ingredient of *Sarpagandha ghanvati* (Sharma et al., 1998). Hyoscyamine, hyoscine, scopolamine, hyoscirpin are the major alkaloids, having intoxicating, narcotic, anodyne, digestive, anthelmintic and astringent actions. It is very useful for relaxation of muscle spasm, irritable bladder, hysteria and irritable cough (Kapoor, 1990). It should be used in limited dose after purification.

974. *Inula racemosa* Hook. f. (Plate 164 D)

Family: Asteraceae

Vernacular Name: San: Kasmira, Pouskara, Pushkara

    Eng: Orris root
    Kan: Pushkaramoola
    Mal: Pushkaram
    Tulu: Pushakramoolo

Habit: Erect herb.

Habitat: Himalayas.
Status: Vulnerable.

Description: Roots are cylindrical, somewhat curved, surface rough due to longitudinal striations and cracks, brownish-grey externally, yellowish-brown internally.

Uses: Root powder and rock salt dissolved in hot water is used internally for urinary tract infections. Root decoction is used to wash septic wounds.

Etymology: Pushkaramoola (lotus root) is due to the resemblance of its roots with that of lotus. It is believed that it has properties similar to that of lotus. In the study area, *Psilanthus travancorensis* is used as substitute to this drug.


**975. Lilium polyphyllum** D. Don. *(Plate 164 E)*

Family: Liliaceae

Vernacular Name: San: Vayasoli, Kakoli

Kan: Kakoli

Mal: Kakoli

Tulu: Kakoli kande

Habit: Tuberous herb.

Habitat: Himalayas.

Status: Vulnerable.

Description: Tuberous roots are straight or curved, dark brown, occur in bunches of 4 – 15, externally rough due to longitudinal wrinkles, slightly aromatic.

Uses: It is one of the important *medhya* drugs. Tuber decoction is recommended as a health tonic for rejuvenating the body and for conception.
Note: Ingredient of Brhat asvagandha ghrta, Dasamularista, Siva gutika and Amrtaprasa ghrta (Sharma et al., 1998).

976. Linum usitatissimum L. (Plate 164 F)

Family: Linaceae

Vernacular Name: San: Uma, Ksuma
   Eng: Linseed
   Kan: Agasebeeja, Semeagase, Atasi
   Mal: Agastha, Agasi, Cheru, Charm
   Tulu: Agase nar

Habit: Erect annual herb.

Habitat: Cultivated throughout plains.

Status: Common.

Description: Seeds are small, brown, glossy with minutely pitted surface, elongated-ovoid, flattened, rounded at one end and obliquely pointed at the other.

Uses: Oil extracted from the seeds is applied externally for burns and ringworm. Seed paste is applied for rheumatism and gonorrhoea.

Note: Ingredient of Sarsapadi pralepa (Sharma et al., 1998). Seeds contain HCN-glucoside and linamarin as active constituents, with demulcent, diuretic, emollient, aphrodisiac and astringent properties (Kapoor, 1990).

977. Nardostachys jatamansi DC. (Plate 165 A)

Family: Valerianaceae

Vernacular Name: San: Mamasi, Jata, Jatamansi, Jatila
   Eng: Nardus root
   Kan: Bhootajata, Ganagilamaste, Jatamansi
   Mal: Manchi, Jatamanchi
   Tulu: Jatamansi
Habit: Erect herb.

Habitat: Alpine Himalayas.

Status: Vulnerable.

Description: Dried rhizome is dark brown, cylindrical, covered with reddish-brown fibres forming a network, brittle, internally reddish-brown, strongly aromatic.

Uses: Root decoction is given for gas trouble, ovarian disorders and DUB. *Rhizome, Clitoria ternatea and Rauvolfia serpentina root powder mixed with honey is given for insanity and other mental problems. *Root, Sida rhombifolia root, Minusops elengi bark, gooseberry and Saussurea lappa seed paste is applied for hair fall. *Rhizome, Saussurea lappa seeds, black gingelly seeds, Hemidesmus indicus root and Nelumbo nucifera rhizome ground in honey and mixed with ghee are applied to scalp for proper development of hair. Rhizome, Sida rhombifolia root, Minusops elengi bark, gooseberry and Saussurea lappa seeds ground in water are applied for hair fall.

Etymology: Bhootajata (hair of spirits) is due to the resemblance of rhizome to the thick mass of hairs of gods and spirits. Jatamansi (thick hair mass) also has similar origin.

Note: Ingredient of Jatamamsyarka (Sharma et al., 1998). Jatamansone is the active constituent, with antispasmodic, diuretic, nerve sedative, nerve stimulant, hypotensive, carminative and deobstruent actions (Chaudhri, 1996).

978. Nigella sativa L. (Plate 165 B)

Family: Ranunculaceae

Vernacular Name: San: Sthulajiraka, Upakunci, Susavi, Upakunchika
    Eng: Small fennel, Nigella seed
    Kan: Kari jeerige, Kare jeerige
    Mal: Kari jeeragam, Karinjeerakam, Kappal jeerakam
    Tulu: Karijeerdari, Kappal jeerdari

Habit: Biennial herb.
Habitat: Cultivated in northern India.
Status: Frequent.
Description: Seeds are flattened oblong, angular, rugulose tubercular, funnel shaped, black in colour.
Uses: Seed decoction is given for indigestion, running nose, worms and gas trouble. *Seed paste with gingelly oil is applied for septic wounds and ulcers. *Seed decoction with jaggery is given for stomachache in pregnant women, while that with pepper seed, turmeric and ginger is also used.
Etymology: Kari jeerige (black cumin) is due to the resemblance to the cumin seeds and black colour of the seeds.
Note: Ingredient of Narayana churna and Kankayava gutika (Sharma et al., 1998). Nigellone, carvone, d-limonene and cymene are the active constituents, with carminative, stimulant, anthelmintic and diaphoretic activities. It increases secretion of milk, useful for amenorrhoea (Kapoor, 1990).

979. Papaver somniferum L. (Plate 165 C)

Family: Papaveraceae

Vernacular Name: San: Khakhasa, Aphukam, Khasatilah
   Eng: Opium, Poppy seed
   Kan: Gasgase, Aphim, Khus khus
   Mal: Karappu, Kash kash
   Tulu: Gasgas, Kasakase

Habit: Erect herb.
Habitat: Widely cultivated in northern India.
Status: Frequent. Poisonous.
Description: Seeds small, round to reniform, dirty white, surface coarsely reticulated, larger network enclosing within.
Uses: Seeds are given as general tonic. Lehyam* made of its seeds and ghee is used for sleeplessness and as a tonic. Seeds and leaves in small doses are given as
nervine stimulant and aphrodisiac. This helps to overcome premature ejaculation. A small quantity of the mixture of opium, gold bhasma\textsuperscript{●}, pearl bhasma\textsuperscript{●}, abh rak bhasma\textsuperscript{●} and Commiphora wightii gum resin ground in honey is consumed along with milk for premature ejaculation and sexual vigour. *Plant ground in hot milk is consumed by adding sugar at evening for insanity. Plant paste with gingelly oil is applied and over it Ricinus communis leaves are tied for rheumatoid arthritis. Fruit rind powder mixed with butter and ghee is applied for bleeding piles. Opium paste with ghee and butter is also used for same purpose. *Seeds are put into boiling water and the steam is inhaled for phlegm. Fruit rind powder is given for diarrhoea. *Seed powder added to hot water is heated and the wounds are exposed to its steam for relieving the pain. *Seeds along with turmeric and green gram seeds (1:2:5) are made into decoction and is given for urinary disorders. Seed paste with fresh milk is applied for all types of skin diseases. Seed or plant extract is given for blood dysentery, typhoid, pain, sleeplessness, fever and rheumatism. Over dose is narcotic and poisonous.

Note: Ingredient of Abhayadi gutika and Abhrakadi vati (Sharma et al., 1998). Seeds contain nearly 25 alkaloids, the chief alkaloids among them are: morphine, codeine, narcotine, narceine and papaverine. These have hypnotic, narcotic, analgesic, sedative and aphrodisiac properties. It is tonic to brain, useful in cough, phthisis, weak liver, urinary diseases and severe injury (Kapoor, 1990).

980. Phoenix dactylifera L. (Plate 165 D)

Family: Arecaceae

Vernacular Name: San: Pinda Kharjura, Kharjura
               Eng: Dates, Date palm
               Kan: Kharjura, Uthatti
               Mal: Inthappazham, Inthappana
               Tulu: Kharjuro, Uttutti

Habit: Tall palm.

Habitat: Cultivated in dry areas.
Status: Occasional. Exotic.

Description: Dried fruits are oval to oblong berries, long, wrinkled, hard, reddish-brown and sweet. Pulp is fleshy, sticky, soft and viscous.

Uses: Seed paste is applied for blisters on the sides of eye. Eating its fruits is nutritious, increases sexual vigour and hemoglobin. Fruits along with grapes and sugarcandy are powdered and given for dry cough. Seed powder is used for preparing a healthy coffee. *Eating five fruits along with one glass of milk at evening is recommended for 20 days to increase lactation. *Seed paste with water or paste with sandal wood is applied for pimples. *Seed powder fried in ghee is taken for 48 days in order to increase sperm count. Seed extract or seed paste with milk is applied for boils in eye brows.

Note: Ingredient of Draksadi churna, Eladi gutika and Siva gutika (Sharma et al., 1998). Fruits are rich in vitamins and minerals, hence nutritious food.

981. **Picrorhiza scrophulariifolia** Pennel (Plate 165 E)

Syn: *Picrorhiza kurroa* Royle ex Benth.

Family: Scrophulariaceae

Vernacular Name: San: Tikta, Tiktaroehi, Katuroehi, Katukaroehi

    Eng: Hellebore

    Kan: Katuka rohini, Kattegarabu

    Mal: Katukaroehi

    Tulu: Katukaroehi, Kadgarvine

Habit: Perennial herb.

Habitat: Western Himalayas.

Status: Vulnerable.

Description: Dried rhizome is sub cylindrical, slightly curved, externally grayish-brown, surface rough due to longitudinal wrinkles and circular scars of roots, tip ends in a growing bud.
Uses: *Seeds along with that of *Vernonia anthelmintica*, *Cuminum cyminum*, rhizomes of *Zingiber officinale* and *Curcuma longa* are made into a decoction and is given for three days after delivery. Seed decoction is given specially for jaundice, bile, liver and spleen disorders. It is also used for fever, headache, repeated cold and stroke. Overdose causes diarrhoea. *Seed paste (about the size of a black gram seed) is given internally for sudden stoppage of fever in children. Paste of seeds ground with mustard seeds in water is applied over forehead after heating for cold and fever. Seed decoction is used for dropsy. *Seed powder in hot water is given for fever with shivering and sweating. *Decoction of root (fried in ghee) powder is given with milk and sugar for loss of appetite due to biliousness. *Seeds and *Boerhavia diffusa* root decoction is given with honey for leucoderma due to biliousness. Seed powder in hot water is recommended two times a day for 3 – 4 days in case of fever.

Etymology: Katukarohini (disagreeable red) is due to its highly bitter taste and dark brown colour.

Note: Ingredient of *Arogyavardhini gutika*, *Tiktaka ghṛta* and *Mahatiktaka ghṛta* (Sharma *et al.*, 1998). Picroside-1, kutkoside, kutkiol, kutkisterol are the active constituents, with stomachic, laxative, antispasmodic, antiperiodic and cholagogue properties. It is very useful for liver ailments and bronchial asthma (Kapoor, 1990).

982. *Pimpinella anisum* L. (Plate 165 F)

Family: Apiaceae

Vernacular Name: San: Svetapuspa, Anishuna

Eng: Anise

Kan: Kaadu sompu, Sompu

Mal: Bade sompu

Tulu: Sempi, Sompu

Habit: Annual herb.

Habitat: Cultivated throughout India.
Status: Common.

Description: Fruits are entire cremocarp, ovoid, greenish-yellow or greenish-brown, rough to touch due to the presence of trichomes, Primary ridges 8 – 12 in number with uniform width.

Uses: Seed decoction is given for stomachache, gas trouble and dysentery in children.

Etymology: Kaadu sompu (wild fennel) is due to its wild nature and properties similar to that of fennel seeds (Foeniculum vulgare).

Note: Ingredient of Brahmi vati (Sharma et al., 1998). It is used as a substitute for fennel seeds.

983. Pinus roxburghii Sargent (Plate 166 A)

Family: Pinaceae

Vernacular Name: San: Pita Vrksha, Sarala
   Eng: Long leaved pine
   Kan: Saral, Turpentine enne mara
   Mal: Saral, Saralam
   Tulu: Pine

Habit: Large tree.

Habitat: Mountainous tracts of North East India.

Status: Frequent.

Description: Exudates are dry white opaque substance of soft and sticky consistence, having a strong and peculiar odour. It becomes yellowish brown or brown on exposure, smooth, semisolid mass.

Uses: Resin extract is appetizer, anthelmintic, cardiac tonic, diuretic and expectorant. Resin mixed with mustard oil is applied externally for rheumatism.
Note: Ingredient of *Amrta prasa churna, Kusthadi taila, Karpuradyarista, Rajanyadi churna* and *Sudarsana churna* (Sharma et al., 1998). Heart wood contains $\alpha$ & $\beta$-careen, $\alpha$-pinene as active components, with appetizer, anthelmintic, antispasmodic, carminative, diuretic and expectorant actions (Kapoor, 1990).

984. *Piper cubeba* L. f. (Plate 166 B)

Family: Piperaceae

Vernacular Name: San: Kankolaka, Kankola, Kakkola  
Eng: Cubebs, Tailed pepper  
Kan: Gandha menasu, Balamenasu  
Mal: Takkolam, Valmulaku  
Tulu: Beelamunchi, Gandhamunchi

Habit: Climbing shrub.

Habitat: Cultivated for its fruits.

Status: Occasional.

Description: Dried fruits are wrinkled, rounded, dark brown, long stalked, hard with stony albumen, pungent and aromatic.

Uses: Fruit powder has aphrodisiac property, by mixing with honey it is given for asthma and bronchitis. Seed decoction is given to old people suffering from cough, thirst, rheumatism, phlegm and diabetes. Fruit powder with honey is given to expel phlegm. *Fruit powder is used for removing foul breath. Root extract is given for indigestion as it is digestive. Fruit extract is a tonic and also a digestive.

Etymology: Balamenasu (tailed pepper) is due to the persistent long stalk of the fruits.

Note: Ingredient of *Dasamularista* and *Kumaryasava* (Sharma et al., 1998). Piperine is the active component, having stomachic, carminative and febrifuge properties, useful for chronic bronchitis, sciatica and paralysis (Chaudhri, 1996).
**985. *Pistacia integerrima*** Steward ex Brandis (Plate 166 C)

Syn: *Pistacia chinensis* Burgo

Family: Anacardiaceae

Vernacular Name: San: Srngi, Visani, Karkata, Karkatashringi

   Eng: Crab’s claw

   Kan: Karkatasmgni, Karkataka shrngi, Chakrangi

   Mal: Karkatasmgni

   Tulu: Karkatasmgni

Habit: Medium-sized tree.

Habitat: Hilly tracts of Himalayas.

Status: Vulnerable.

Description: Dried leaf galls are hard, hollow, horn-like, thin-walled, cylindrical, tapering at the ends, grayish brown externally and reddish brown internally.

Uses: *Gall powder along with *Acorus calamus* rhizome and long pepper fruits in equal quantity are powdered and given with honey for fever in small children.

Etymology: Karkatashringi (crab’s claws) is due to the resemblance of its galls to the claws of crab.

Note: Ingredient of *Balacaturbhadrika taila* (Sharma et al., 1998). Gall contains α-pinene, camphene, dl-limonene and cineole as major active components, giving appetizer, expectorant and tonic action (Kapoor, 1990). In the study area, galls on the leaves of *Terminalia chebula* are used as substitute for this drug.

**986. *Plantago ovata*** Forssk. (Plate 166 D)

Family: Plantaginaceae

Vernacular Name: San: Ashwagilam

   Eng: Spogel seeds, Ispaghula
Kan: Isabgol
Mal: Isabgol
Tulu: Isabgul

Habit: Erect herb.

Habitat: Northwestern India.

Status: Common.

Description: Seeds are dull pinkish to grey-brown, ovate, dorsal surface convex, with a small elliptical or elongated shining reddish-brown spot. Ventral surface is concave with a deep furrow.

Uses: Seed decoction is used for chronic dysentery. *Seed powder mixed with sugarcandy or dried seed powder is given as digestive and also for cough and phlegm. Crushed seed extract in water is taken before food for piles. *Seed powder dissolved in hot water is given for stomachache.

Note: Seed and seed coat contains mucilage, holoside plantose, and aucubin as active components, with demulcent, mildly astringent, emollient, laxative and diuretic actions (Kapoor, 1990). Best remedy for constipation.

987. Prunus dulcis (Miller) D. A. Webb. (Plate 166 E)

Syn: Prunus amygdalus Batsch

Family: Rosaceae

Vernacular Name: San: Badama
Eng: Almond
Kan: Badam, Badami
Mal: Badam
Tulu: Badam

Habit: Medium-sized tree.

Habitat: Cultivated throughout India.
Status: Common.

Description: Fruit is a drupe, with thick, leathery, grey-green exocarp and reticulated, hard woody endocarp. Seed flattened, ovoid, with a brownish seed coat, pointed apical end and blunt opposite end.

Uses: Seeds along with milk are used as general tonic. Seed increases memory power, is nutritive and rich in antioxidants. Oil extracted from the seeds is applied for skin diseases and hair fall. It is rich in iron. Seed oil is applied all over the body for leucoderma.

Note: Ingredient of *Candanasava*, *Guducyadi kvatha*, *Guducyadi taila* and *Usirasava* (Sharma et al., 1998). Emulcin and amygdalin are the major constituents, also rich in vitamins and minerals. They have stimulant, nutritive, nervine tonic and emollient properties (Kapoor, 1990). Seeds are nutritious food.

988. *Psoralea corylifolia* L. (Plate 166 F)

Family: Papilionaceae

Vernacular Name: San: Avalguja, Somaraji, Bakuchi
   Eng: Babchi seeds
   Kan: Bavanchi gida, Bakuchi
   Mal: Karkokil, Karkogil
   Tulu: Bakuchi

Habit: Erect annual herb.

Habitat: Cultivated throughout India.

Status: Frequent.

Description: Fruits are dark chocolate to black with pericarp adhering to the seed coat, ovoid-oblong to bean shaped, somewhat compressed and glabrous.

Uses: *Paste prepared by grinding seeds is applied of leprosy, leucoderma and internally for jaundice and diarrhoea. However, it has contraceptive action. Seed paste is applied over the head and exposed to sunlight for blackening the hairs. Oil
extracted from the seeds is applied for leucoderma. *Seed, *Tectona grandis* shoot tip and *Hemidesmus indicus* root are boiled in oil and is applied to head in case of white hair. Bark paste with ghee is used as wound healer. *Seed, *Trichosanthes tricuspidata* root, *Euphorbia nivulia* stem and fresh turmeric in equal quantity are ground into a paste and is applied for leprosy. Seed paste with *Raphanus sativus* juice is applied for ringworm.

Note: Ingredient of Somaraji taila and Avalgujadi lepa (Sharma et al., 1998) Seeds contain psoralen, isopsoralen, psoralidin, corylifolean and isopsoralidin as active constituents, imparting laxative, anthelmintic, diaphoretic, antibacterial, anti-inflammatory and antipyretic activities. It is very useful for leucoderma, psoriasis and hair care (Kapoor, 1990).

989. *Quercus infectoria* Olivo (Plate 167 A)

Family: Fagaceae

Vernacular Name:  San: Mayaphala, Mayakku, Mayukam  
  Eng: Oak gall  
  Kan: Machi kaai, Mapalakam, Agrada kaayi  
  Mal: Maja kaanee, Mashikkay  
  Tulu: Maachi kaai, Agrotha kaayi

Habit: Large tree.

Habitat: Northwestern Himalayas.

Status: Frequent.

Description: Galls are spherical or pear shaped, hard and brittle, with short basal stalk and numerous rounded projections on the upper part of the gall, smooth, shining, bluish-green in colour.

Uses: Gall decoction is used as an antidote for *datura*,aconite, *nux-vomica* and opium poisoning. It is also useful for skin diseases, leucorrhoea, genitor urinary disorders. It also has astringent and expectorant properties.

Etymology: Agrada kaayi (thrush seed) comes from its traditional use. *Traditionally the galls are ground with water and applied over tongue to remove
thrush from tongue of small children.

Note: Ingredient of *Gorochanadi vati* and *Asthisandhanaka lepa* (Sharma et al., 1998). Galls contain ellagic acid and pento-digalloyl-glucose as active principles, with astringent, haemostatic and antiseptic properties. These are useful for pharyngitis and tonsillitis (Chaudhri, 1996).

**990. Raphanus sativus** L. (Plate 167 B)

Family: Brassicaceae

Vernacular Name: San: Visra, Saleya, Salamarkataka, Mulaka
   
   Eng: Radish
   
   Kan: Moolangi, Mullangi, Moolangi gadde
   
   Mal: Mullanki
   
   Tulu: Mullangi

Habit: Erect herb.

Habitat: Cultivated throughout India.

Status: Common. Exotic.

Description: Roots are fleshy, fusiform, cylindrical with a few lateral fibrous roots, white in colour.

Uses: Cooked tuber ground with gingelly seeds is used for piles. *Tuber or whole plant juice is given with butter milk for kidney and bladder stones. Tuber juice mixed with ghee is given daily in the morning for bleeding piles. *Tuber ashes and sulphur (in equal quantity) paste with fresh ginger juice is applied for tinea versicolor. Seed is ground with borax, *Achyranthes aspera* leaf juice or with curd or with *Cedrus deodara, Coscinium fenestratum*, neem seed extract in cow urine or with mustard seed, *Embelia ribes, Psoralea corylifolia* seed, ginger, turmeric, resin of *Shorea robusta, Coscinium fenestratum*, long pepper and pepper (in equal quantity) are powdered, mixed with cow urine and are applied for ring worm, warts, leucoderma and fungal infections. *Seeds, neem leaf, white mustard seeds and impure sodium chloride ground in water are applied for leprosy. Seed ground with lime juice is made into pills. This pill paste with water or cow urine is applied for ring worm and warts. *Dried tuber along with turmeric and pearl shell are burnt into
ashes, which are ground with cow urine and applied for hardened tumours and lymph node swellings.

Note: Ingredient of Mulakaksara and Gandhaka vati (Sharma et al., 1998). Contain glucosides, methyl mercaptan, cyanin and pelargonin as major constituents, having diuretic, laxative and lithotriptic actions (Kapoor, 1990). Tuberous roots are used as vegetable.

991. Rheum australæ D. Don. (Plate 167 C)

Syn: Rheum emodi Wall. ex Meissner

Family: Polygonaceae

Vernacular Name: San: Amlavetasa

Eng: Indian rhubarb
Kan: Reval chinni, Tigade
Mal: Tigada
Tulu: Tigade

Habit: Stout herb.

Habitat: Alpine and subalpine Himalayas.

Status: Frequent.

Description: Tuberous roots are cylindrical, woody, barrel-shaped, conical, outer surface irregularly longitudinally wrinkled, covered with brownish cortex.

Uses: Tuber extract is given internally for digestive disorders, indigestion and to stop purgation. Over dose may cause biliousness. Root decoction is usually recommended for biliousness, lumbago and skin diseases.

Note: Tubers contain chrysophanic acid, emodin, rhaponticin, rheo-tannic acid, as active constituents, with stomachic, cathartic, purgative, diuretic and emmenagogue actions (Chaudhri, 1996).

992. Salix caprea L. (Plate 167 D)

Family: Salicaceae

Vernacular Name: San: Vetas
Eng: Broad leaved willow, Goat willow  
Kan: Neerganji mara, Neeranji, Neeravanji  
Tulu: Neerganji

Habit: Medium-sized tree.  
Habitat: North eastern Himalayas.  
Status: Common.  
Description: Bark is yellowish brown when fresh, becomes dark brown with time, internally white, tough and fibrous.  
Uses: Bark decoction is recommended for increasing vision power, nerve diseases and urinary disorders. It also has aphrodisiac, astringent and expectorant properties.  
Note: Active constituents are salicin, deiphidinin and cyanidine, with analgesic, anodyne, antiperiodic, aphrodisiac, cephalic, expectorant and stimulant activities (Dey, 1994).

993. *Saussurea lappa* C. B. Clarke (Plate 167 E)

Family: Asteraceae  
Vernacular Name: San: Amaya, Pakala, Kushta, Kankusta  
Eng: Costus  
Kan: Changal kustha, Changalvakostha, Kankushta, Koshta  
Mal: Kottam  
Tulu: Kankushto

Habit: Perennial herb.  
Habitat: Valleys of Himalayas.  
Status: Vulnerable.  
Description: Dried tuberous roots are grayish to dull brown, thick, stout, fusiform to cylindrical; thicker roots with collapsed centre, ridged with longitudinal wrinkles.  
Uses: *Seeds and Cuminum cyminum* (4:1) are made into a decoction and is used twice a day for repeated attack of boils.
Note: Ingredient of *Kottamcukkadi taila* (Sharma *et al.*, 1998). Roots contain camphene, phellandrene, d-costen, \( \beta \)-costen, costol, costic acid and costos lactone as active components having carminative, strongly antiseptic, disinfectant, cardiac stimulant actions. It relaxes involuntary muscles (Kapoor, 1990). In study area *Costus speciosus* is used as substitute of this drug.

**994. *Setaria italicata* (L.) P. Beauv. (Plate 167 F)**

Syn: *Panicum italicum* L.

Family: Poaceae

Vernacular Name: San: Priyangu  
     Eng: Fox glow millet  
     Kan: Priyangu, Navane, Thene gida  
     Mal: Thina  
     Tulu: Navane

Habit: Erect herb.

Habitat: Widely cultivated throughout India.

Status: Common.

Description: Fruit broadly ovoid caryopsis, pale yellow to orange, red or brown, tightly enclosed by lemma and palea. Seeds are fusiform to ellipsoid, varies in size, orange to yellow in colour.

Uses: Seeds are boiled in milk and used as health tonic.

Note: Seed extract with milk is given to the babies as health tonic. It is one of the major ingredients of recently much talked *lavana taila**. Seeds are used as nutritious food.

**995. *Shorea robusta* Gaertner f. (Plate 168 A)**

Syn: *Vatica robusta* Steudel

Family: Dipterocarpaceae
Vernacular Name: San: Sala, Salah, Ashvakarna
   Eng: Indian dammar
   Kan: Aragina mara, Ralada mara, Aseena
   Mal: Malappu marutu
   Tulu: Karmara, Karimara, Chandalike

Habit: Large tree.

Habitat: Valleys of mountains of central and north India.

Status: Frequent.

Description: Exudates are oleo resin, white, opaline masses of different size and shape, with mild aroma.

Uses: Gum resin paste is applied to heal wounds.

Etymology: Ralada mara (gum tree) is due to the characteristic gum resin (Rala) obtained from this tree.

Note: It is one of the ingredients of Pinda taila, Chandanadi vati and Atsayadi lepa. Turpentine forms majority of the resin, has anodyne, aphrodisiac, astringent, expectorant, stomachic and vermifuge actions (Dey, 1994).

996. Taxus baccata L. (Plate 168 B)

Family: Taxaceae

Vernacular Name: San: Sukapuspa, Vikarna, Sthauneya, Talisapatra
   Eng: Himalayan yew
   Kan: Sthauneyak, Talisapatre
   Mal: Thuriangam, Talisam
   Tulu: Talisapatre

Habit: Medium-sized tree.

Habitat: Temperate Himalayas.
Status: Frequent.

Description: Leaves flattened, linear with recurved margins, tip sharp pointed and prickly, entire, brown above, paler below.

Uses: Leaf decoction has antispasmodic action and is recommended for asthma, hiccup, indigestion, hemoptysis and epilepsy.

Note: Ingredient of *Mahanarayana taila, Bala taila, Talisadi churna, Jatiphaladi churna, Talisadi modaka* and *Bhaskara lavana* (Sharma *et al.*, 1998). Major alkaloids are taxol, taxine, taxinine and ephedrine. Taxol is much valued for its anticancerous and antitumour properties. It also has carminative, expectorant, antispasmodic and emmenagogue activities (Kapoor, 1990).

997. *Trachyspermum ammi* (L.) Sprague ex Turril *(Plate 168 C)*

Syn: *Carum copticum* Benth. & Hook. f.

Family: Apiaceae

Vernacular Name: San: Dipyaka, Yavani, Yavanika, Yamani
   Eng: Bishop’s weed
   Kan: Oma, Ajamoda
   Mal: Omam, Ayamodakam
   Tulu: Omo

Habit: Biennial herb.

Habitat: Cultivated throughout India.

Status: Common. Exotic.

Description: Fruit consists of two mericarps, grayish brown, ovoid, compressed, with pale coloured protuberances, 5 ridges and 6 vittae.

Uses: Seed decoction is given internally for indigestion, colic and diarrhoea.

Note: Ingredient of *Yavani sadava* (Sharma *et al.*, 1998). Seeds have steroptin, cumene and thymine as active constituents, giving them carminative, tonic and antiseptic actions (Chaudhri, 1996). Seeds are used as condiment.
**998. Trigonella foenum-graecum L. (Plate 168 D)**

Family: Papilionaceae

Vernacular Name: San: Methini, Methi, Medhika  
Eng: Fenugreek  
Kan: Menthe, Mette  
Mal: Uluva  
Tulu: Mette

Habit: Annual herb.

Habitat: Cultivated all over India.

Status: Common.

Description: Seeds are oblong, rhomboidal with deep furrow running obliquely from one side, dividing into a larger and smaller part, broad, smooth, very hard, dull yellow.

Uses: Burnt seeds are given for dysentery in children. *Ten seeds along with two spoon curd are given to eat to control dysentery. Seed paste is heated and applied for joint pain. Eating seeds daily is beneficial in moderate diabetes. Seed extract is given internally for gas trouble and 30 gm essence daily for diabetes. Seed paste is applied for joint pain. Seed paste is applied for swelling and furuncles. Seeds cooked in milk are given by mixing with sugar as a health tonic. *Fried seed powder mixed with jaggery and milk is used as coffee for rheumatic problems. Seed paste is massaged to the scalp for dandruff. *Seeds preserved in *Aloe vera* leaf are given a covering with dried banana petiole and kept overnight. Next morning, the seeds are ground with curd and consumed early morning in empty stomach for leucorrhoea. *50 gm each of seed powder and black gram dhal are ground with egg white and smeared into a cloth and tied for three days in case of bone fracture. *Tambuli* prepared from this is used for polio, diabetes and bleeding piles. Seeds fried in ghee are ground in buttermilk and is given for diarrhoea. Seeds along with coriander ground in butter milk are used for diarrhoea. Fruit powder in hot water is
used for diarrhoea. *Decoction made of its seeds, cumin and coriander is recommended for chest pain. *Seeds and green gram (1:3) boiled in water is heated on the next day and is taken in empty stomach for three months in case of obesity. 1 – 1½ spoon seed powder dissolved in hot milk is used for constipation in old people. Seeds boiled in coconut oil are applied on scalp for dandruff. Seed is swallowed as such for stomachache and dysentery. Seed is fried and chewed with salt for stomachache. Seeds are eaten with jaggery for backache. *One spoon of dried seed powder is taken with tea for a week in case of urinary disorders. *One spoon seed cooked with rice is eaten by adding coconut gratings to increase lactation after delivery. *About ten seeds mixed with thick curd are given to eat in case of dysentery due to indigestion. Paste made of its seeds and *Nardostachys jatamansi rhizome cooked in milk is applied before three hrs of bath in case of dandruff and white hairs.

Note: Ingredient of *Mustakarista and *Mrtasanjivani sara (Sharma et al., 1998). Trigonelline, choline and diosgenin are the major alkaloids present in the seeds, which are responsible for emmenagogue, diuretic, nutritive, tonic, lactagogue, carminative and aphrodisiac actions (Kapoor, 1990). Seeds are nutritious food.

999. *Triticum aestivum* L. (Plate 168 E)

Family: Poaceae

Vernacular Name: San: Godhumah

Eng: Common wheat, Bread wheat

Kan: Godi

Mal: Godambu

Tulu: Godhi

Habit: Erect herb.

Habitat: Cultivated in central and north India.

Status: Common.

Description: Fruit oblong, ventrally grooved, dry indehiscent caryopsis. Dorsal side smoothly rounded, ventral has the deep crease, embryo is situated at the point of
attachment of the spikelet axis, distal end has a brush of fine hairs. Fruit consists of bran coat and the endosperm. Coat consists of 3 layers.

Uses: Various preparations made from seeds are beneficial for diabetes, rheumatism and also show semen quality improving property. *Seed paste in water is given internally for mercury poisoning and applied externally for burnt skin. Wheat along with jaggery and lime are made into a paste, heated and applied for rat bite. *Seed ash paste with gingelly oil is applied for ulcers due to burn. Wheat flour mixed with milk is applied repeatedly for pus release form abscess. *Seeds along with that of *Eleusine coracana, *Zea mays, *Vigna radiata and *Oryza sativa are powdered, cooked and used as nourishing food for strengthening the body of children.

Note: Seeds contain a number of glucans, heteroglycans, fatty oil and phospholipids, making them useful for flatulence, constipation, itching and menorrhagia (Chaudhri, 1996). Seeds are much used as nutritious food.

1000. Valeriana jatamansi Jones (Plate 168 F)

Syn: Valeriana wallichii DC.

Family: Valerianaceae

Vernacular Name: San: Kalanusari, Kalanusarika, Nata, Tagara
Eng: Indian Valerian
Kan: Tagara, Nandibattalu, Nati jatamansi
Mal: Thakaram
Tulu: Tagara

Habit: Perennial herb.

Habitat: Temperate Himalayas.

Status: Vulnerable.

Description: Tuberous rhizome is dull yellowish brown, sub-cylindrical, dorsiventrally flattened, rough, slightly curved, upper surface marked with raised encircling leaf scars, under surface with numerous small circular root scars and a few stout rootlets.
Uses: Rhizome decoction is recommended for nervous debility, hysteria, epilepsy and neurosis. It also has hypnotic and spasmodic properties.

Note: Ingredient of Dhanvantara taila and Mahanarayana taila (Sharma et al., 1998). Rhizome has iso-valerianic acid, valerian and valeric acid as active constituents, making them very useful for nervous debility (Kapoor, 1990).

1001. *Vitis vinifera* L. (Plate 168 G)

Family: Vitaceae

Vernacular Name:  
San: Mrdvika, Gortani, Draksha  
Eng: Raisins, Grapes  
Kan: Drakshe, Drakshi  
Mal: Munthiri, Munthiringa  
Tulu: Drakshi, Dracchi

Habit: Climbing herb.

Habitat: Cultivated allover India.

Status: Common. Exotic.

Description: Dried fruits are berries, sticky, pulpy, dark brown to black, oblong or oval, outer skin irregularly wrinkled, forming ridges and furrows.

albumin release in the urine of children. *Dry grapes soaked in water are made into a gojju* and is given in the morning for constipation in children.

Note: Ingredient of Draksasava, Draksarista, Draksadi kvatha and Draksadi churna (Sharma et al., 1998). Fruit has malic, tartaric and racemic acids, giving them laxative, stomachic and diuretic actions (Kapoor, 1990). Fruits are nutritious food.

Table 1. Different plants used in medicinal practices of Tulunadu

<table>
<thead>
<tr>
<th>Plant Groups</th>
<th>Natural</th>
<th>Bazaar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family</td>
<td>Genera</td>
</tr>
<tr>
<td>Fungi</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pteridophytes</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Gymnosperms</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Angiosperms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dicots</td>
<td>110</td>
<td>476</td>
</tr>
<tr>
<td>Monocots</td>
<td>23</td>
<td>82</td>
</tr>
<tr>
<td>Total</td>
<td>147</td>
<td>573</td>
</tr>
</tbody>
</table>

Fig. 2. Dominant families

![Bar chart showing the number of plants per family](image-url)
Table 2. Species distribution

<table>
<thead>
<tr>
<th>No. of Species</th>
<th>No. of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 and above</td>
<td>3</td>
</tr>
<tr>
<td>30 — 39</td>
<td>2</td>
</tr>
<tr>
<td>20 — 29</td>
<td>10</td>
</tr>
<tr>
<td>10 — 19</td>
<td>15</td>
</tr>
<tr>
<td>2 — 9</td>
<td>75</td>
</tr>
<tr>
<td>1</td>
<td>51</td>
</tr>
</tbody>
</table>

Fig. 3. Dominant genera

<table>
<thead>
<tr>
<th>Genera</th>
<th>No. of species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ficus</td>
<td>13</td>
</tr>
<tr>
<td>Ipomoea</td>
<td>12</td>
</tr>
<tr>
<td>Solanum</td>
<td>10</td>
</tr>
<tr>
<td>Curcuma</td>
<td>9</td>
</tr>
<tr>
<td>Desmodium</td>
<td>9</td>
</tr>
<tr>
<td>Phyllanthus</td>
<td>9</td>
</tr>
<tr>
<td>Senna</td>
<td>9</td>
</tr>
<tr>
<td>Enchiod</td>
<td>8</td>
</tr>
<tr>
<td>Ipomium</td>
<td>8</td>
</tr>
<tr>
<td>Syzygium</td>
<td>8</td>
</tr>
</tbody>
</table>
Table 3. Habit of medicinal plants of Tulunadu

<table>
<thead>
<tr>
<th>Habit</th>
<th>No. of plants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herb</td>
<td>326</td>
<td>32.57</td>
</tr>
<tr>
<td>Shrub</td>
<td>186</td>
<td>18.58</td>
</tr>
<tr>
<td>Climber</td>
<td>188</td>
<td>18.78</td>
</tr>
<tr>
<td>Tree</td>
<td>301</td>
<td>30.07</td>
</tr>
</tbody>
</table>
Table 4. Plant Parts used in medicinal practices of *Tulunadu*

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>BA</th>
<th>FL</th>
<th>FR</th>
<th>HW</th>
<th>LE</th>
<th>RO</th>
<th>SE</th>
<th>ST</th>
<th>TS</th>
<th>TU</th>
<th>WP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natural Medicines</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Abelmoschus esculentus</em></td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Abelmoschus manihot</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Abelmoschus moschatus</em></td>
<td>4</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Abrus precatorius</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Abrus pulchellus</em></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Abutilon indicum</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acacia caesia</em></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acacia catechu</em></td>
<td>1</td>
<td></td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acacia farnesiana</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acacia nilotica</em></td>
<td>3</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acacia sinuata</em></td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acacia torta</em></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acalypha ciliata</em></td>
<td></td>
<td>14</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><em>Acalypha fruticosa</em></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acalypha indica</em></td>
<td></td>
<td>14</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><em>Acampe praemorsa</em></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Acanthus ilicifolius</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Achyranthes aspera</em></td>
<td></td>
<td>1</td>
<td>21</td>
<td>22</td>
<td>10</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>34</td>
</tr>
<tr>
<td><em>Acorus calamus</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acronychia pedunculata</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Adansonia digitata</em></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Adenanthera pavonina</em></td>
<td>7</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Adenia hondala</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Adiantum capillus-veneris</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><em>Adiantum caudatum</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Adiantum lunulatum</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td><em>Aegle marmelos</em></td>
<td>3</td>
<td>1</td>
<td>9</td>
<td>23</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Aerva lanata</em></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Aeschynomene indica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>Agave americana</em></td>
<td></td>
<td>6</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ageratum conyzoides</em></td>
<td>1</td>
<td></td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td><em>Aglai a elaeagnoides</em></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ailanthus excelsa</em></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>Ailanthus triphysa</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Alangium salvifolium ssp. hexapetalum</em></td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Albizia chinensis</em></td>
<td>15</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Albizia lebbeck</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albizia odoratissima</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allamanda cathartica</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allophylus cobbe</td>
<td>9</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allophylus serratus</td>
<td>9</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alocasia macrorrhiza</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Aloe vera</td>
<td>43</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Alpinia calcarata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Alpinia galanga</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Alseodaphne semecarpifolia var. semecarpifolia</td>
<td>6</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alstonia scholaris</td>
<td>23</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alstonia venenata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Alternanthera bettzickiana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Alternanthera brasiliana</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Alternanthera sessilis</td>
<td></td>
<td>11</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Alternanthera tenella</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Alysicarpus vaginalis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Amaranthus spinosus</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Amaranthus tricolor</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Amaranthus viridis</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Amorphophallus bulbifer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Amorphophallus commutatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Amorphophallus paeonifolius var. campanulatus</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amorphophallus paeonifolius var. paeonifolius</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ampelocissus indica</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Ampelocissus latifolia</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anacardium occidentale</td>
<td></td>
<td>6</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anamirta cocculus</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ananas comosus</td>
<td></td>
<td>8</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anaphyllium wightii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Andrographis paniculata</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Anisochilus carnosus</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Anisomeles indica</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Anisomeles malabarica</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Annona muricata</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annona reticulata</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annona squamosa</td>
<td>4</td>
<td>12</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anodendron paniculatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Antiaris toxicaria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Antidesma acidum</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antidesma ghaesembilla</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antidesma montanum</td>
<td></td>
<td></td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aphanamixis polystachya</td>
<td>2</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Aporosa lindleyana</td>
<td>2</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ardisia solanaceae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Areca catechu</td>
<td>1</td>
<td>2</td>
<td>14</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arenga wightii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Argemone mexicana</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyreia elliptica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Argyreia nervosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Aristaema tortuosum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Aristolochia indica</td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>26</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aristolochia tagala</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artabotrys hexapetalus</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artemisia vulgaris var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td>1</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>indicia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artemisia vulgaris var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>nilagirica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus gomezianus</td>
<td>8</td>
<td>5</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ssp. zeylanicus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus heterophyllus</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus hirsutus</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus incisus</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arundo donax</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asclepias curassavica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Asplenium trichomanes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Asystasia dalzelliana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Asystasia gangetica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Atalantia monophylla</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Averrhoa bilimbi</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Averrhoa carambola</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avicennia marina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Azadirachta indica</td>
<td>18</td>
<td>44</td>
<td>14</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azima tetracantha</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Baccaurea courtallensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bacopa monnieri</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baliospermum montanum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bambusa bambos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barleria cristata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barleria prionitis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barringtonia racemosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basella alba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia acuminata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia malabarica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia phoenicea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia purpurea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia racemosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia scandens var. anguina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia tomentosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia variegata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Begonia malabarica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benincasa hispida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benkara malabarica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bidens biternata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biophytum reinwardtii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bixa orellana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blepharis asperrima</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blepharis repens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boehmeria glomerulifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boerhavia diffusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boerhavia erecta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bombax ceiba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bombax insigne</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borassus flabellifer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bougainvillea spectabilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brassica juncea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breynia retusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breynia vittis-idaea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Briedelia retusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Briedelia scandens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buchanania lanzan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulbophyllum sterile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Butea frondosa</td>
<td>8</td>
<td>4</td>
<td></td>
<td>5</td>
<td></td>
<td>2</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Caesalpinia bonduc</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia coriaria</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia cristata</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia mimosoides</td>
<td></td>
<td>6</td>
<td>1</td>
<td>16</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia pulcherrima</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia sappan</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia spicata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cajanus cajan</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cajanus scarabaeoides</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calacanthus grandiflorus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Calamus rotang</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callicarpa tomentosa</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calophyllum calaba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calophyllum inophyllum</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>10</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calotropis gigantea</td>
<td>4</td>
<td>26</td>
<td>15</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calycoperis floribunda</td>
<td>4</td>
<td>1</td>
<td>16</td>
<td>1</td>
<td>16</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camellia sinensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cananga odorata</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canavalia cathartica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canna indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabis sativa ssp. indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Canthium coromandeliciun</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canthium rheedei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capparis floribunda</td>
<td></td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capsicum annuum</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capsicum frutescens</td>
<td>11</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carallia brachiata</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiospermum haliacabum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
<td>2</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Careya arborea</td>
<td>15</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carica papaya</td>
<td></td>
<td>10</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carissa carandas</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carissa congesta</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caryota urens</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casearia ovata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cassia fistula</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cassytha filiformis</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Casuarina litorea</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catharanthus pusillus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Catharanthus roseus</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catunaregam spinosa</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cayratia mollissima</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceiba pentandra</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celastrus paniculatus</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celosia argentea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Celtis timorensis</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centella asiatica</td>
<td></td>
<td>16</td>
<td>2</td>
<td></td>
<td></td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centratherum punctatum</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centrosema molle</td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cerbera odollam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereus pterogonus</td>
<td>1</td>
<td>1</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceropegia candelabrum var. candelabrum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cestrum nocturnum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Chamaecrista mimosoides</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Chassalia curviflora var. longifolia</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chassalia curviflora var. ophioxyloides</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheilanthes farinosa</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Chenopodium ambrosioides</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chionanthus mala-elengi ssp. mala-elengi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chonemorpha fragrans</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Chromolaena odorata</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chrysanthemum indicum</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chrysophyllum cainito</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cicer aridinum</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinchona succirubra</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum camphora</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum malabatrum</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum verum</td>
<td></td>
<td>9</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cipadessa baccifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissampelos pareira var. hirsuta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cissus discolor</td>
<td></td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus elongata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Cissus latifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus quadrangularis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus repanda</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus repens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Citharexylum spinosum</td>
<td>5</td>
<td>5</td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrullus colocynthis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Citrullus lanatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus aurantifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Citrus aurantium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Citrus limon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Citrus maxima</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus medica</td>
<td>10</td>
<td>10</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus reticulata</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleistanthus collinus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cleome burmannii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleome viscosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Clerodendrum inerme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Clerodendrum phlomidis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerodendrum serratum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Clerodendrum viscosum</td>
<td>1</td>
<td>11</td>
<td>16</td>
<td>10</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinacanthus nutans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Clitoria ternatea var. pleniflora</td>
<td>1</td>
<td>2</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clitoria ternatea var. ternata</td>
<td>1</td>
<td>2</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coccinia grandis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>13</td>
<td>11</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocculus hirsutus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cocos nucifera</td>
<td>10</td>
<td>44</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffea arabica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Coix lacryma-jobi</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Coldenia procumbens</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Colocasia esculenta</td>
<td></td>
<td>6</td>
<td>1</td>
<td>2</td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combretum latifolium</td>
<td>7</td>
<td></td>
<td></td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commelina benghalensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Commelina diffusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Corallocarpus epigaeus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Corchorus capsularis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cordia obliqua</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coronopus didymus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Corypha umbraculifera</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coscinium fenestratum</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cosmostigma racemosum</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costus pictus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costus speciosus</td>
<td>1</td>
<td>4</td>
<td>10</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Couroupita guianensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crassocephalum crepidioides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Crataeva magna</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum asiaticum</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum latifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum viviparum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crossandra infundibuliformis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Crotalaria calycina</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria pallida</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria retusa</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria verrucosa</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croton laevigatus</td>
<td>8</td>
<td>2</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croton malabaricus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croton tiglium</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cryptolepis buchananii</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Cucumis melo</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Cucumis prophetarum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumis sativus</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cucurbita maxima</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucurbita pepo</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curculigo orchioides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Curcuma amada</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma aromatica</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma caesia</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma longa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>Curcuma neilgherrensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma oligantha var. lutea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Curcuma oligantha var. lutea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Curcuma pseudomontana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Curcuma zedoaria</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuscuta reflexa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Cyanotis cristata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Cyathula prostrata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>6</td>
<td>3</td>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Cycas circinalis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cyclamia peltata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>21</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Cymbidium aloifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Cymbopogon citratus</td>
<td></td>
<td></td>
<td>12</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Cymbopogon flexuosus</td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Cynodon dactylon</td>
<td></td>
<td>1</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td>Cynoglossum zeylanicum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cyperus rotundus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Dalbergia horrida var. horrida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Dalbergia lanceolaria ssp. lanceolaria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dalbergia latifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dalbergia sissoo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dalbergia volubilis</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Datura metel</td>
<td></td>
<td>2</td>
<td>4</td>
<td>18</td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Datura stramonium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Delonix elata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dendrobium barbatulum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dendrobium ovatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dendrocalamus strictus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dendrophthoe falcata var. falcata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Derris brevipes var. brevipes</td>
<td></td>
<td>4</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Derris scandens</td>
<td></td>
<td>4</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Desmodium gangeticum</td>
<td></td>
<td>1</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Desmodium heterocarpon</td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Desmodium heterophyllum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Desmodium laxiflorum</td>
<td></td>
<td>1</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Desmodium motorium</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Desmodium oojeinense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Desmodium triangulare</td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Desmodium triflorum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Desmodium triquetrum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Dichrostachys cinerea</td>
<td></td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dillenia indica</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Dillenia pentagyna</td>
<td></td>
<td>9</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Dioscorea alata</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea belophylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea bulbifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea hispida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea oppositifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Dioscorea pentaphylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea wallichii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Diospyros buxifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Diospyros candolleana</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Diospyros malabarica</td>
<td></td>
<td>8</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Diospyros montana</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploclisia glaucescens</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Diplocyclos palmatus</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dipteracanthus patulus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dipterocarpus indicus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dodonaea viscosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dolichos trilobus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dracaena terniflora</td>
<td></td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drosera indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Drynaria quercifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drypetes roxburghii</td>
<td></td>
<td>4</td>
<td>1</td>
<td>2</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecbolium ligustrinum var.</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>ligustrinum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eclipta prostrata</td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eichhornia crassipes</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeagnus conferta</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeis guinensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Elaeocarpus serratus var.</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>serratus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeocarpus sphaericus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Elaeocarpus tuberculatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Elephantopus scaber</td>
<td></td>
<td>3</td>
<td>10</td>
<td>9</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elettaria cardamomum</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Eleusine coracana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Eleusine indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Embelia ribes</td>
<td></td>
<td>8</td>
<td>11</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embelia tsjeriam-cottam</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emilia sonchifolia</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>Ensete superbum</td>
<td></td>
<td>2</td>
<td></td>
<td>9</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entada rheedei</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Eranthemum roseum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Erycibe paniculata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eryngium foetidum</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erythrina stricta</td>
<td>17</td>
<td>1</td>
<td></td>
<td>11</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erythrina variegata</td>
<td>17</td>
<td>1</td>
<td></td>
<td>11</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erythroxylum monogynum</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eucalyptus tereticornis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Eupatorium triplinerve</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Euphorbia hirta</td>
<td></td>
<td>2</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Euphorbia nivalia</td>
<td>1</td>
<td>1</td>
<td></td>
<td>10</td>
<td>2</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euphorbia thymifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euphorbia tirucalli</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>3</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evolvulus alsinoides</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Evolvulus nummularius var. alsinoides</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exacum tetragonum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excoecaria agallocha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Fagraea ceylanica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus amplissima</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus arnottiana</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ficus auriculata</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ficus benghalensis var. benghalensis</td>
<td>13</td>
<td>1</td>
<td>2</td>
<td>10</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus callosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Ficus exasperata</td>
<td>11</td>
<td>2</td>
<td></td>
<td>7</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus hispida</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus microcarpa</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ficus racemosa</td>
<td>25</td>
<td>7</td>
<td></td>
<td>4</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus religiosa</td>
<td>17</td>
<td>3</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus tinctoria ssp. gibbosa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus tsjahela</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ficus virens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Flacourtia indica</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacourtia jangomas</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Flacourtia montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flemingia macrophylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Flemingia strobilifera</td>
<td>1</td>
<td>2</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Flemingia tuberosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Flueggea leucopyrus</td>
<td>1</td>
<td>15</td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td><em>Fomes fomentarius</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Garcinia gummi-gutta</em> var. gummi-gutta</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Garcinia indica</em></td>
<td>14</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Garcinia morella</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Garcinia xanthochymus</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gardenia jasminoides</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gardenia resinifera</em></td>
<td>3</td>
<td>2</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Garuga pinnata</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Geissaspis cristata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Geophila repens</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Girardinia diversifolia</em></td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Glicididia sepium</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Globba sessiliflora</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Glochidion zeylanicum</em> var. zeylanicum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gloryska superba</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td><em>Glycosmis pentaphylla</em></td>
<td>2</td>
<td>8</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gmelina arborea</em></td>
<td>9</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gmelina asiatica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gnetum edule</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><em>Gomphia serrata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gomphrena celosioides</em></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gossypium arboreum</em></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gossypium barbadense</em></td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gossypium hirsutum</em></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Grangea maderaspatana</em></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Graptophyllum pictum</em></td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Grewia glabra</em></td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Grewia nervosa</em></td>
<td>7</td>
<td></td>
<td>1</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Grewia tiliifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gymnacranthera farquhariana</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gymnema sylvestre</em></td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gymnostachyum febrifugum</em> var. febrifugum</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Gynandropsis gynandra</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Habenaria diphylla</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Habenaria grandifloriformis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Haldina cordifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedychium coronarium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Hedyotis auriculata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis corymbosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis herbacea</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis neesiana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Helianthus annus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helicanthes elastica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Helicteres isora</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heliotropium indicum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemidesmus indicus var. indicus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td>38</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Hemigraphis colorata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Heterophragma roxburghii</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus hispidissimus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus mutabilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Hibiscus radiatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Hibiscus rosa-sinensis var. rosa-sinensis</td>
<td>31</td>
<td></td>
<td></td>
<td>20</td>
<td></td>
<td>9</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus rosa-sinensis var. schizopetalus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus surattensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiptage benghalensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holarrhena pubescens</td>
<td>16</td>
<td>4</td>
<td>1</td>
<td></td>
<td>8</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holigarna arnottiana</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Holigarna ferruginea</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Holoptelea integrifolia</td>
<td>15</td>
<td></td>
<td></td>
<td>7</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holostemma ada-kodien</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Homalocladium platycladum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Homonoia retusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Homonoia riparia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Hopea parviflora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopea ponga</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoya ovalifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Hugonia mystax</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humboldtia brunonis</td>
<td>9</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Hybanthus enneaspermus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Hydnocarpus alpina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydnocarpus macrocarpa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td><em>Hydnocarpus pentandra</em></td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hydrocotyle javanica</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hydrocotyle sibthorpioides</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hygrophiila ringens</em></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hygrophiila schulli</em></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hymenodictyon obovatum</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hymenodictyon orixense</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hyptis capitata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Hyptis suaveolens</em></td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Ichnocarpus frutescens</em></td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Impatiens flaccida</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Impatiens minor</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><em>Imperata cylindrica</em></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Indigofera linnaei</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Indigofera tinctoria</em></td>
<td>1</td>
<td>16</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea aculeata</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td><em>Ipomoea alba</em></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea aquatica</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea asarifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea batatas</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea marginata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea mauritiana</em></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea nil</em></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Ipomoea obscura</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea pes-caprae ssp. pes-caprae</em></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea pes-tigridis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea triflora</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ixora brachiata</em></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Ixora coccinea</em></td>
<td>18</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ixora nigricans</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum angustifolium</em> var. angustifolium*</td>
<td>9</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum auriculatum</em></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Jasminum coarctatum</em></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Jasminum flexile var. flexile</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Jasminum grandiflorum</em></td>
<td>4</td>
<td>16</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum malabaricum var. malabaricum</em></td>
<td>3</td>
<td></td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Jasminum multiflorum</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum sambac</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jatropha curcas</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jatropha glandulifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jatropha gossypifolia</td>
<td></td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jatropha multifida</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justicia adhatoda</td>
<td>3</td>
<td>25</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justicia gendarussa</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justicia nagpurensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Justicia procumbens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Justicia trinervia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Kaempferia galanga</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Kaempferia rotunda</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Kalanchoe pinnata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td>8</td>
</tr>
<tr>
<td>Kammetia caryophyllata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Kingiodendron pinnatum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knema attenuata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Kyllinga brevifolia var. brevifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kyllinga nemoralis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lablab purpureus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagenandra ovata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Lagenandra toxicaria var. toxicaria</td>
<td>17</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagenaria siceraria</td>
<td>10</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagerstroemia microcarpa</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagerstroemia speciosa</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lannea coromandelica</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lantana camara var. camara</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laportea interrupta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Lawsonia inermis</td>
<td>1</td>
<td>27</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leea asiatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leea indica</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lemna perpusilla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Lepidagathis incurva var. mucronata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lepidagathis keralensis</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Lepidagathis prostrata</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Leptadenia reticulata</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Leucas aspera</td>
<td>9</td>
<td>31</td>
<td>9</td>
<td>4</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leucas biflora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Leucas lavandulifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Limnophila indica</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Limnophila repens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Limonia acidissima</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lindernia caespitosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Lindernia crustacea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Litsea coriacea</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Litsea ghatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Litsea glutinoso</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Lobelia nicotianifolia var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>nicotianifolia</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loeseneriella arnottiana</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Lophopetalum wightianum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ludwigia hyssopifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ludwigia octovalvis ssp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>sessiliflora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luffa acutangula var.</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>acutangula</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luffa acutangula var.</td>
<td>3</td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>amara</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luffa cylindrica</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Lycopersicon esculentum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lygodium flexuosum</td>
<td></td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Macaranga peltata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Macrostyloma uniflorum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Madhuca longifolia var.</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>laurifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Madhuca nerifolia</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maesa indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Mallotus philippensis var.</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>philippensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mammea suriga</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Mangifera indica</td>
<td>15</td>
<td>1</td>
<td>7</td>
<td>13</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manihot esculenta</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Manilkara hexandra</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Manilkara zapota</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maranta arundinacea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Marrubium vulgaris</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Marsilea minuta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Melastoma malabathricum</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Melia azedarach</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melia dubia</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melicope lunu-ankenda</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon angustifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon grande</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon randerianum</td>
<td>6</td>
<td>19</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon umbellatum</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentha piperita</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentha spicata</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merremia turpethum</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merremia umbellata</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merremia vitifolia</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mesua ferrea var. ferrea</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michelia champaca</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micrococca mercurialis</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miliuusa tomentosa</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Millingtonia hortensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mimosa pudica</td>
<td>6</td>
<td>10</td>
<td>1</td>
<td>4</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minusops elengi</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mirabilis jalapa</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Mitragyna parvifolia</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molineria trichocarpa</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mollugo pentaphylla</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Momordica charantia var. charantia</td>
<td>7</td>
<td>17</td>
<td>1</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Momordica charantia var. muricata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Momordica dioica</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>13</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monochoria vaginalis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morinda citrifolia</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morinda pubescens</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morinda umbellata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moringa pterygosperma</td>
<td>18</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morus alba</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mucuna pruriens var. pruriens</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>14</td>
<td>12</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Mukia maderaspatana</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muntingia calabura</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Murraya koenigii</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Musa paradisiaca</td>
<td>11</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Musaendabelilla</td>
<td>1</td>
<td></td>
<td>9</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Myristica beddomei ssp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Myristica fragrans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Myristica malabarica</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Myxopyrum smilacifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Naravelia zeelenica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Naregamia alata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Naringi crenulata</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>8</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Nelumbo nucifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Neolamarckia cadamba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nertium oleander</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>8</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Nervilia aragoana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Nervilia crociformis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Nicotiana tabacum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Nothapodytes nimmoniana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Nyctanthes arbor-tristis</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nymphaea nouchali</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Nymphaea pubescens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ochlandra travancorica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ochrouba obtusata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ochreaunclea missionis</td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ocimum americanum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Ocimum basilicum var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Ocimum gratissimum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocimum kilimandscharicum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Ocimum tenuiflorum</td>
<td>1</td>
<td>107</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olea dioica</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ophiirhiza mungos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Ophiirhiza rugosa var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Opuntia striata var.</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ormocarpum cochininense</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oroxyllum indicum</td>
<td>12</td>
<td>4</td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orthosiphon aristatus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Oryza sativa</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osbeckia brachystemon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Osbeckia muralis</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Otacanthus caeruleus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxalis corniculata</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Paederia foetida</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pajanelia longifolia</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pancratium triflorum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pandanus canaranus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pandanus odoratissimus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Parahemionitis cordata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Paramignya monophylla</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passiflora foetida var. foetida</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavetta indica var. indica</td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavetta indica var. tomentosa</td>
<td>1</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavonia odorata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pavonia zeylanica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedaliun murex</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Peperomia pellucida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Pergularia daemia</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Persea macrantha</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persicaria chinensis</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phoenix sylvestris</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pholidota imbricata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Phragmites karka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Phyla nodiflora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Phyllanthus acidus</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus airy-shawii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Phyllanthus amarus</td>
<td></td>
<td>2</td>
<td>4</td>
<td></td>
<td>2</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus emblica</td>
<td>4</td>
<td>30</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus kozhikodianus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Phyllanthus maderaspatensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Phyllanthus reticulatus</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus tenellus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Phyllanthus urinaria</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Phyllocephalum scabridum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Physalis angulata</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physalis peruviana</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piper betle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Piper chaba</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piper longum</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piper nigrum var. nigrum</td>
<td>22</td>
<td>2</td>
<td></td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piper triocum</td>
<td>3</td>
<td>1</td>
<td>10</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pistia stratiotes</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pileccllophium dulce</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plectranthus amboinicus</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plectranthus vettiveroides</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbago indica</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbago zeylanica</td>
<td></td>
<td>1</td>
<td>15</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumeria alba</td>
<td>11</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumeria rubra</td>
<td>11</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon deccanensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon heynanus</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon paniculatus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon purpurascens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon quadrifolius</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyalthia longifolia</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polycarpaea corymbosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pongamia pinnata</td>
<td>19</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portulaca oleracea var. oleracea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pothos scandens</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pouzolzia wightii var. wightii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pouzolzia zeylanica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premna latifolia var. viburnoides</td>
<td>8</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premna serratifolia</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosopis juliflora</td>
<td>2</td>
<td>4</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protasparagus gonocladus</td>
<td></td>
<td>2</td>
<td></td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protasparagus racemosus</td>
<td></td>
<td>2</td>
<td></td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudarthria viscida</td>
<td></td>
<td>1</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseuderanthemum malabaricum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psidium guajava</td>
<td>4</td>
<td>4</td>
<td>7</td>
<td>3</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psilanthus travancorensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1163
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>BA</th>
<th>FL</th>
<th>FR</th>
<th>HW</th>
<th>LE</th>
<th>RO</th>
<th>SE</th>
<th>ST</th>
<th>TS</th>
<th>TU</th>
<th>WP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychotria dalzellii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychotria flavida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterocarpus marsupium</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterocarpus santalinus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterospermum acerifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterospermum diversifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Punica granatum</td>
<td>4</td>
<td>1</td>
<td>20</td>
<td></td>
<td>2</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quassia indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quisqualis indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quisqualis malabarica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rauvolfia serpentina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rauvolfia tetraphylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reissantia indica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remusatia vivipara</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Rhaphidophora pertusa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Rhinacanthus nasutus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Rhizophora mucronata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Rhynchostylis retusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ricinus communis</td>
<td>1</td>
<td>7</td>
<td>20</td>
<td>11</td>
<td></td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosa damascena</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Rosa indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Rotula aquatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rourea minor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubia cordifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Ruelia tuberosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ruta chalepensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Saccharum munja</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Saccharum officinarum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Saccharum spontaneum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Salacia chinensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Salacia fruticosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Salacia oblonga</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Salvadora persica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Salvinia molesta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Samanea saman</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sansevieria cylindrica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sansevieria roxburghiana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Santalum album</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Sapindus emarginatus</td>
<td>1</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sapindus trifoliatus</td>
<td>1</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sapium insigne</td>
<td>3</td>
<td>14</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saraca asoca</td>
<td>9</td>
<td>4</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarcostemma viminalis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Sarcostigma kleinii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Saurous androcygnus</td>
<td></td>
<td>4</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Scaevola sericea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schleichera oleosa</td>
<td>4</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Scleridia lithosperma ssp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Scleropyrum pentandrum</td>
<td>7</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Scoparia dulcis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Sebastiana chamaelea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Seidenfia rheedei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Selaginella delicatula</td>
<td>2</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Selaginella involvens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Semecarpus anacardium</td>
<td>2</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Senna alata</td>
<td>1</td>
<td>16</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Senna angustifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Senna auriculata</td>
<td>4</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Senna hirsuta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Senna occidentalis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Senna siamea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Senna sophora</td>
<td>1</td>
<td></td>
<td></td>
<td>8</td>
<td></td>
<td>14</td>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Senna surattensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna tora</td>
<td></td>
<td>12</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Sesamum orientale</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Sesbania grandiflora</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Sesbania sesban</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sida acuta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Sida alnifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sida cordata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Sida cordifolia</td>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida mysorensis</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida rhombifolia</td>
<td>3</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sida rhomboidea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Smilax zeylanica</td>
<td>1</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Smithia conferta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Smithia sensitiva</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Solanum americanum</td>
<td>3</td>
<td>12</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Solanum erianthum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Solanum lasiocarpum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Solanum melongena</td>
<td>4</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum torvum</td>
<td>2</td>
<td>1</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum trilobatum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum tuberosum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Solanum violaceum ssp. multiflorum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Solanum violaceum ssp. violaceum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum virginianum</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solana amplexicaulis</td>
<td>1</td>
<td></td>
<td>6</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Sorghum halepense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatholobus parviflorus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Spermacoce articularis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Spermacoce hispida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spermacoce latifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sphaeranthus indicus</td>
<td>1</td>
<td></td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Spilanthes calva</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Spilanthes paniculata</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Spondias pinnata</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stachyphrynium spicatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Stachytarpheta indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Sterculia foetida</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sterculia guttata</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereospermum colais var. colais</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Stereospermum suaveolens</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Streblus asper</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strobilanthes ciliatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Strychnos colubrina</td>
<td>1</td>
<td></td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strychnos nux-vomica</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>9</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strychnos potatorum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Swertia corymbosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Symphorema involucratum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Symplacos cochinchenensis ssp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>laurina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symplocos racemosa</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synedrella nodiflora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Syzygium aqueum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Syzygium aromaticum</td>
<td>1</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Syzygium caryophyllatum</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Syzygium cumini var. cumini</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Syzygium hemisphericum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Syzygium jambos</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium travancoricum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Syzygium zeylanicum</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Tabernaemontana divaricata</td>
<td>3</td>
<td>6</td>
<td></td>
<td>7</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Tabernaemontana heyneana</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Tacca leontopetaloides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tagetes erecta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Talinum triangulare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Tamarindus indica</td>
<td>12</td>
<td>20</td>
<td></td>
<td>16</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamilnadia uliginosa</td>
<td>2</td>
<td>9</td>
<td></td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarenna asiatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Tecoma stans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Tectona grandis</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tephrosia purpurea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Tephrosia tinctoria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Terminalia bellirica</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Terminalia catappa</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Terminalia chebula</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminalia cuneata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Terminalia elliptica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Terminalia paniculata</td>
<td>7</td>
<td>1</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Theobroma cacao</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Thespesia lampas</td>
<td>2</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Thespesia populnea</td>
<td>11</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Thevetia peruviana</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Thottea silicuosa</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Thunbergia fragrans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Thunbergia grandiflora</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thunbergia mysorensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Tinospora cordifolia</td>
<td>1</td>
<td>3</td>
<td></td>
<td>13</td>
<td>1</td>
<td>61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tinospora sinensis</td>
<td></td>
<td>2</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toddalia asiatica</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toona ciliata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Torenia bicolor</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tragia involucrata</td>
<td>3</td>
<td>5</td>
<td>14</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trema orientalis</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trewia nudiflora</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trianthema portulacastrum</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tribulus terrestris</td>
<td>5</td>
<td>1</td>
<td>11</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichopus zeylanicus ssp. travancoricus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichosanthes anguina</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichosanthes cucumerina</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichosanthes tricuspidata var. tricuspidata</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tridax procumbens</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triumfetta rhomboidea</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnera subulata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnera ulmifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylophora fasciculata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylophora indica var. indica</td>
<td>10</td>
<td>6</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylophora tetrapetala var. tetrapetala</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uraria rufescens</td>
<td>1</td>
<td>3</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urena lobata ssp. lobata</td>
<td>6</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urena lobata ssp. sinuata</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urginea indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utricularia reticulata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uvaria narum</td>
<td></td>
<td>7</td>
<td>13</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vanda tessellata</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vateria indica</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilago denticulata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilago maderaspatana</td>
<td>8</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vernonia anthelmintica</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vernonia cinerea</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vetiveria zizanioides</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna dalzelliana</td>
<td>4</td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna mungo</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td><em>Vigna pilosa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Vigna radiata var. radiata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Vigna radiata var. sublobata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Vigna unguiculata ssp. unguiculata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Vitex altissima</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Vitex leucoxylon</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Vitex negundo</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Vitex trifolium</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Wattakaka volubilis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Wedelia chinensis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Wedelia trilobata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Wedlandia thyrsoida</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Withania somnifera</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Woodfordia fruticosa</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Wrightia tinctoria</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Xanthosoma sagittifolium</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Xenostegia tridentata ssp. hastata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Xenostegia tridentata ssp. tridentata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Xylica xylocarpa</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zanonia indica</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zanthoxylum ovalifolium</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zanthoxylum rhetsa</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zea mays</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zingiber cernuum</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zingiber neesanum</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zingiber officinale</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zingiber roseum</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zingiber zerumbet</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zizyphus glabrata</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zizyphus mauritiana</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zizyphus oenoplia</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zizyphus rugosa</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zizyphus xylopyrus</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zornia diphylla</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>Zornia gibbosa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td><strong>Bazaar Medicines</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aconitum chasmanthum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aconitum heterophyllum</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allium cepa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>44</td>
</tr>
<tr>
<td>Allium sativum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Amomum subulatum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anacyclus pyrethrum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anethum graveolens</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angelica glauca</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Aquilaria agallocha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arachis hypogaea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Berberis aristata</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boswellia serrata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Boswellia thurifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Brassica nigra</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canarium vulgare</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carum carvi</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cedrus deodara</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum tamala</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commiphora myrrha</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commiphora wightii</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coriandrum sativum</td>
<td></td>
<td>3</td>
<td>19</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crocus sativus</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuminum cyminum</td>
<td></td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decalepis hamiltonii</td>
<td></td>
<td>2</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Elaeocarpus ganitrus</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferula asafoetida</td>
<td></td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foeniculum vulgare</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fritillaria roylei</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycyrrhiza glabra</td>
<td></td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guizotia abyssinica</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hordeum vulgare</td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyoscyamus niger</td>
<td></td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inula racemosa</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lilium polyphyllum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linum usitatissimum</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nardostachys jatamansi</td>
<td></td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nigella sativa</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Papaver somniferum</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BA</td>
<td>FL</td>
<td>FR</td>
<td>HW</td>
<td>LE</td>
<td>RO</td>
<td>SE</td>
<td>ST</td>
<td>TS</td>
<td>TU</td>
<td>WP</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Phoenix dactylifera</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Picrorrhiza scrophularifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Pimpinella anisum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pinus sylvestris</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Piper cubeba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pistacia integerrima</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plantago ovata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Prunus dulcis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Psoralea corylifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quercus infectoria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raphanus sativus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rheum australe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Salix caprea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saussurea lappa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Setaria italica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorea robusta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxus baccata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trachyspermum ammi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trigonella foenum-graecum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triticum aestivum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Valeriana jatamansi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitis vinifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>
### Table 5. Different plant parts used in medicine

<table>
<thead>
<tr>
<th>Plant Part</th>
<th>Uses</th>
<th>Source plants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bark</td>
<td>1175</td>
<td>274</td>
<td>11.78</td>
</tr>
<tr>
<td>Flower</td>
<td>302</td>
<td>105</td>
<td>3.02</td>
</tr>
<tr>
<td>Fruit</td>
<td>954</td>
<td>209</td>
<td>9.56</td>
</tr>
<tr>
<td>Heart wood</td>
<td>104</td>
<td>28</td>
<td>1.04</td>
</tr>
<tr>
<td>Leaf</td>
<td>2124</td>
<td>474</td>
<td>21.27</td>
</tr>
<tr>
<td>Root</td>
<td>1444</td>
<td>361</td>
<td>14.47</td>
</tr>
<tr>
<td>Seed</td>
<td>841</td>
<td>226</td>
<td>8.43</td>
</tr>
<tr>
<td>Stem</td>
<td>267</td>
<td>100</td>
<td>2.68</td>
</tr>
<tr>
<td>Tender shoot</td>
<td>432</td>
<td>149</td>
<td>4.33</td>
</tr>
<tr>
<td>Tuber</td>
<td>696</td>
<td>98</td>
<td>6.98</td>
</tr>
<tr>
<td>Whole plant</td>
<td>1639</td>
<td>418</td>
<td>16.43</td>
</tr>
</tbody>
</table>
Table 6. Different forms of medicine

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>DE</th>
<th>GR</th>
<th>JU</th>
<th>LA</th>
<th>LE</th>
<th>OI</th>
<th>PA</th>
<th>PI</th>
<th>PO</th>
<th>TA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Medicines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abelmoschus esculentus</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abelmoschus manihot</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abelmoschus moschatus</td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Abrus precatorius</td>
<td>3</td>
<td>8</td>
<td></td>
<td>2</td>
<td>11</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abrus pulchellus</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abutilon indicum</td>
<td>3</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acacia caesia</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acacia catechu</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acacia farnesiana</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acacia nilotica</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acacia sinuata</td>
<td>10</td>
<td>3</td>
<td></td>
<td>1</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acacia torta</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acalypha ciliata</td>
<td>4</td>
<td>10</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acalypha fruticosa</td>
<td>2</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acalypha indica</td>
<td>4</td>
<td>10</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acampe praemorsa</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acanthus ilicifolius</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Achyranthes aspera</td>
<td>10</td>
<td>32</td>
<td>12</td>
<td>24</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acorus calamus</td>
<td>1</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Acronychia pedunculata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Adamsonia digitata</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adenanthera pavonina</td>
<td>5</td>
<td>1</td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adenia hondala</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adiantum capillus-veneris</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adiantum caudatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Adiantum lunulatum</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aegle marmelos</td>
<td>12</td>
<td>13</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerva lanata</td>
<td>9</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Aeschynomene indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Agave americana</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ageratum conyzoides</td>
<td>1</td>
<td>5</td>
<td></td>
<td>3</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aglaia elaeagnoidea</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ailanthus excelsa</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ailanthus triphysa</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Alangium salvifolium ssp.</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hexapetalum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>Albizia chinensis</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albizia lebbeck</td>
<td>4</td>
<td></td>
<td>1</td>
<td></td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albizia odoratissima</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allamanda cathartica</td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allophylus cobbe</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>1</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allophylus serratus</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>1</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alocasia macrorrhiza</td>
<td>1</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aloe vera</td>
<td>6</td>
<td>45</td>
<td></td>
<td>6</td>
<td>10</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpinia calcarata</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpinia galanga</td>
<td>4</td>
<td></td>
<td>1</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alseodaphne semecarpifolia var. semecarpifolia</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alstonia scholaris</td>
<td>10</td>
<td>2</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alstonia venenata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternanthera bettzickiana</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternanthera brasiliana</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternanthera sessilis</td>
<td>3</td>
<td>15</td>
<td></td>
<td>2</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternanthera tenella</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alysicarpus vaginalis</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amaranthus spinosus</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amaranthus tricolor</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amaranthus viridis</td>
<td>4</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amorphophallus bulbifer</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amorphophallus commutatus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amorphophallus paonii folius var. campanulatus</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amorphophallus paonii folius var. paonii folius</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ampelocissus indica</td>
<td>8</td>
<td>5</td>
<td>6</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ampelocissus latifolia</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anacardium occidentale</td>
<td>2</td>
<td>3</td>
<td>9</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anamirta cocculus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ananas comosus</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anaphyllyum wightii</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andrographis paniculata</td>
<td>15</td>
<td>2</td>
<td></td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anisochilus carnosus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anisomeles indica</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anisomeles malabarica</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annona muricata</td>
<td>1</td>
<td>3</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Annona reticulata</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annona squamosa</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>10</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anodendron paniculatum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antiaris toxicaria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antidesma acidum</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antidesma ghaesembilla</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antidesma montanum</td>
<td></td>
<td>1</td>
<td>2</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aphanamixis polystachya</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aporosa lindleyana</td>
<td>5</td>
<td>10</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ardisia solanacea</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Areca catechu</td>
<td>5</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arenga wightii</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argemone mexicana</td>
<td></td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyrea elliptica</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyrea nervosa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aristea tortuosa</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aristolochia indica</td>
<td>7</td>
<td>12</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aristolochia tagala</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artabotrys hexapetalus</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artemisia vulgaris var. indica</td>
<td>1</td>
<td>14</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artemisia vulgaris var. nilagirica</td>
<td>4</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus gomezianus ssp. zeylanicus</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus heterophyllus</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus hirsutus</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus incisus</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arundo donax</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asclepias curassavica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asplenium trichomanes</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asystasia dalzelliana</td>
<td>1</td>
<td>2</td>
<td>9</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asystasia gangetica</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atalantia monophylla</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Averrhoa bilimbi</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Averrhoa carambola</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avicennia marina</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azadirachta indica</td>
<td>29</td>
<td>7</td>
<td>15</td>
<td>18</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azima tetracantha</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baccaurea courtallensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bacopa monnieri</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1175
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>DE</th>
<th>GR</th>
<th>JU</th>
<th>LA</th>
<th>LE</th>
<th>OI</th>
<th>PA</th>
<th>PI</th>
<th>PO</th>
<th>TA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baliospermum montanum</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bambusa bambos</td>
<td>11</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Barleria cristata</td>
<td>7</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Barleria prionitis</td>
<td>5</td>
<td></td>
<td>3</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Barringtonia racemosa</td>
<td>3</td>
<td>2</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Basella alba</td>
<td>1</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia acuminata</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia malabarica</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia phoenicea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia purpurea</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia racemosa</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia scandens var. anguina</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia tomentosa</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia variegata</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Begonia malabarica</td>
<td>1</td>
<td></td>
<td>20</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Benincasa hispida</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Benkara malabarica</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bidens biternata</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Biophytum reinwardtii</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bixa orellana</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Blepharis asperrima</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Blepharis repens</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Boehmeria glomerulifera</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Boerhavia diffusa</td>
<td>12</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Boerhavia erecta</td>
<td>12</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bombax ceiba</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bombax insignis</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Borassus flabellifer</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bougainvillea spectabilis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Brassica juncea</td>
<td>2</td>
<td>3</td>
<td>12</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Breynia retusa</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Breynia vitis-idaea</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Briedelia retusa</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Briedelia scandens</td>
<td>15</td>
<td>1</td>
<td>10</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Buchanania lanzan</td>
<td>15</td>
<td>1</td>
<td>10</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bulbophyllum sterile</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Butea frondosa</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Caesalpinia bonduc</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Caesalpinia coriaria</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia cristata</td>
<td>10</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia mimosoides</td>
<td>11</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia pulcherrima</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia sappan</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia spicata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cajanus cajan</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cajanus scarabaeoides</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calacanthus grandiflorus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calamus rotang</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callicarpa tomentosa</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calophyllum calaba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Calophyllum inophyllum</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calotropis gigantea</td>
<td>3</td>
<td>1</td>
<td>14</td>
<td>12</td>
<td>3</td>
<td>25</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calycopteris floribunda</td>
<td>11</td>
<td>18</td>
<td>8</td>
<td>12</td>
<td>25</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camellia sinensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cananga odorata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canavalia cathartica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabis sativa ssp. indica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canthium coromandelicum</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canthium rheedei</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capsicum annuum</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capsicum frutescens</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carallia brachiata</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiospermum halicacabum</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>10</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Careya arborea</td>
<td>13</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carica papaya</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carissa carandas</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carissa congesta</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caryota urens</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casearia ovata</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cassia fistula</td>
<td>8</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>18</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cassytha filiformis</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casuarina litorea</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catharanthus pusillus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catharanthus roseus</td>
<td>6</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catunaregam spinosa</td>
<td>4</td>
<td></td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Cayratia mollissima</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ceiba pentandra</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celastrus paniculatus</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celosia argentea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celtis timorensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Centella asiatica</td>
<td>9</td>
<td>25</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centratherum punctatum</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centrosema molle</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Cerbera odollam</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereus pterogonus</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceropegia candelabrum var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>candelabrum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cestrum nocturnum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Chamaecrista mimosoides</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chassalia curviflora var.</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>longifolia</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chassalia curviflora var.</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ophioxyloides</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheilanthes farinosa</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chenopodium ambrosioides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Chionanthus mala-elengi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ssp. mala-elengi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chonemorpha fragrans</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromolaena odorata</td>
<td></td>
<td>3</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chrysanthemum indicum</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Chrysophyllum cainito</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cicer arietinum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinchona succirubra</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum camphora</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum malabatrum</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum verum</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cipadessa baccifera</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cissampelos pareira var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hirsuta</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus discolor</td>
<td>1</td>
<td>2</td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus elongata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus latifolia</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus quadrangularis</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus repanda</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus repens</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citharexylum spinosum</td>
<td>4</td>
<td>1</td>
<td></td>
<td>7</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Citrullus colocynthis</td>
<td>2</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrullus lanatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus aurantifolia</td>
<td>28</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus aurantium</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus limon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Citrus maxima</td>
<td>4</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus medica</td>
<td>8</td>
<td>1</td>
<td>9</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus reticulata</td>
<td>1</td>
<td>6</td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleistanthus collinus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clematis gouriana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleome burmannii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Cleome viscosa</td>
<td>5</td>
<td>1</td>
<td></td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerodendrum inerme</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerodendrum phlomidis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerodendrum serratum</td>
<td>5</td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerodendrum viscosum</td>
<td>6</td>
<td>1</td>
<td>12</td>
<td>7</td>
<td>13</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinacanthus nutans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Clitoria ternatea var. pleniflora</td>
<td>5</td>
<td>9</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clitoria ternatea var. ternatea</td>
<td>5</td>
<td>9</td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coccinia grandis</td>
<td>6</td>
<td>2</td>
<td>19</td>
<td>2</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocculus hirsutus</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocos nucifera</td>
<td>10</td>
<td>22</td>
<td>18</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffea arabica</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coix lacryma-jobi</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coldenia procumbens</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colocasia esculenta</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combretum latifolium</td>
<td>10</td>
<td>3</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commelina benghalensis</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commelina diffusa</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corallocarpus epigaeus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Corchorus capsularis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cordia obliqua</td>
<td>2</td>
<td>7</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coronopus didymus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corypha umbraculifera</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coscinium fenestratum</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cosmostigma racemosum</td>
<td>1</td>
<td>2</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costus pictus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costus speciosus</td>
<td>3</td>
<td>2</td>
<td>11</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Couroupita guianensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crassocephalum crepidioides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crataeva magna</td>
<td></td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum asiaticum</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum latifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum viviparum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crossandra infundibuliformis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria calycina</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria pallida</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria retusa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria verrucosa</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croton laevigatus</td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croton malabaricus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croton tiglium</td>
<td>1</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cryptolepis buchananii</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumis melo</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumis prophetarum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumis sativus</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucurbita maxima</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cucurbita pepo</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curculigo orchioides</td>
<td>8</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma amada</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma aromatica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma caesia</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma longa</td>
<td>8</td>
<td>8</td>
<td></td>
<td></td>
<td>37</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma neilgherrensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma oligantha var. lutea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma oligantha var. oligantha</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma pseudomontana</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma zedoaria</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuscuta reflexa</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyanotis cristata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyathula prostrata</td>
<td>8</td>
<td>20</td>
<td></td>
<td></td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cymbopogon flexuosus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Cynodon dactylon</td>
<td>10</td>
<td>1</td>
<td>27</td>
<td></td>
<td></td>
<td>6</td>
<td>23</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Cynoglossum zeylanicum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cyperus rotundus</td>
<td>15</td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Dalbergia horrida var. horrida</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Dalbergia lanceolaria ssp. lanceolaria</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia latifolia</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia sissoo</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia volubilis</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datura metel</td>
<td>1</td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td>8</td>
<td>10</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Datura stramonium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Delonix elata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dendrobium barbatulum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dendrobium ovatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dendrocalamus strictus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dendrophthoe falcata var. falcata</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Derris brevipes var. brevipes</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Derris scandens</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Desmodium gangeticum</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Desmodium heterocarpon</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Desmodium heterophyllum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium laxiflorum</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Desmodium motorium</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Desmodium oojeinense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Desmodium triangulare</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Desmodium triflorum</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium triquetrum</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dichrostachys cinerea</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Dillenia indica</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dillenia pentagyna</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea alata</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea belophylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea buckifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea hispida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea oppositifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dioscorea pentaphylla</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea wallichii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Diospyros buxifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Diospyros candolleana</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diospyros malabarica</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diospyros montana</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploclisia glaucescens</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diplocyclos palmatus</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dipterocarthus patulus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dipterocarпус indicus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dodonaea viscosa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dolichos trilobus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dracaena terniflora</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drosera indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Drynaria quercifolia</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drypetes roxburghii</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Echolium ligustrinum var. ligustrinum</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eclipta prostrata</td>
<td>2</td>
<td>22</td>
<td>11</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eichhornia crassipes</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeagnus conferta</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeis guinensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Elaeocarpus serratus var. serratus</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Elaeocarpus sphaericus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeocarpus tuberculatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Elephantopus scaber</td>
<td>9</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elettaria cardamomum</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eleusine coracana</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eleusine indica</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embelia ribes</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embelia tsjeriam-cottam</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emilina sonchifolia</td>
<td>13</td>
<td>1</td>
<td>9</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensete superbum</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entada rheedei</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td>1</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eranthemum roseum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Erycibe paniculata</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eryngium foetidum</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erythrina stricta</td>
<td>12</td>
<td>2</td>
<td>8</td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erythrina variegata</td>
<td>12</td>
<td>2</td>
<td>8</td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erythroxylum monogynum</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eucalyptus globulus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Eupatorium triplinerve</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Euphorbia hirta</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Euphorbia nivulia</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euphorbia thymifolia</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euphorbia tirucalli</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evolvulus alsinoides var. alsinoides</td>
<td>11</td>
<td>3</td>
<td></td>
<td>3</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evolvulus nummularius</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exacum tetragonum</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excoecaria agallocha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Fagraea ceylanica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Ficus amplissima</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus arnottiana</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus auriculata</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Ficus benghalensis var. benghalensis</td>
<td>10</td>
<td>1</td>
<td>14</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus callosa</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Ficus exasperata</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus hispida</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus microcarpa</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus racemosa</td>
<td>15</td>
<td>3</td>
<td>10</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus religiosa</td>
<td>12</td>
<td>4</td>
<td>9</td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus tinctoria ssp. gibbosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ficus tsjahela</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Ficus virens</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacourtia indica</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacourtia jangomas</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacourtia montana</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flemingia macrophylla</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flemingia strobilfera</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Flemingia tuberosa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flueggea leucopyrus</td>
<td>6</td>
<td>1</td>
<td>11</td>
<td>10</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fomes fomentarius</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Garcinia gummi-gutta var. gummi-gutta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Garcinia indica</td>
<td>3</td>
<td>8</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garcinia morella</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Garcinia xanthochymus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gardenia jasminoides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gardenia resinifera</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garuga pinnata</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Geissaspis cristata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geophila repens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girardinia diversifolia</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gliricidia sepium</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Globba sessiliflora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glochidion zeylanicum var. zeylanicum</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gloriosa superba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Glycosmis pentaphylla</td>
<td>7</td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gmelina arborea</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gmelina asiatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gnetum edule</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gomphia serrata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gomphrena celosioides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Gossypium arboreum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gossypium barbadense</td>
<td>7</td>
<td>5</td>
<td></td>
<td></td>
<td>6</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gossypium hirsutum</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Grangea maderaspatana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Graptophyllum pictum</td>
<td>1</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grewia glabra</td>
<td>3</td>
<td>1</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grewia nervosa</td>
<td>4</td>
<td>5</td>
<td></td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grewia tiliifolia</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gymnacranthera farquhariana</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gymnema sylvestre</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gymnostachyum febrifugum var. febrifugum</td>
<td>3</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gynandropsis gynandra</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habenaria diphylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Habenaria grandifloriformis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Haldina cordifolia</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedychium coronarium</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis auricularis</td>
<td>9</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis corymbosa</td>
<td>4</td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis herbacea</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis neesiana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Helianthus annus</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helicanthes elastica</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helicteres isora</td>
<td>8</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heliotropium indicum</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td><em>Hemidesmus indicus var. indicus</em></td>
<td>21</td>
<td>12</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hemigraphis colorata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>Heterophragma roxburghii</em></td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hibiscus hispidissimus</em></td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hibiscus mutabilis</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hibiscus radiatus</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hibiscus rosa-sinensis var. rosa-sinensis</em></td>
<td>4</td>
<td>3</td>
<td>28</td>
<td>5</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hibiscus rosa-sinensis var. schizopetalus</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hibiscus surattensis</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hiptage benghalensis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Holarrhena pubescens</em></td>
<td>9</td>
<td>14</td>
<td>4</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Holigarna arnottiana</em></td>
<td>2</td>
<td>7</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Holigarna ferruginea</em></td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Holoptelea integrifolia</em></td>
<td>11</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Holostemma ada-kodien</em></td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Homalocladium platycladum</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Homonoia retusa</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Homonoia riparia</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hopea parviflora</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Hopea ponga</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>Hoya ovalifolia</em></td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hygionia mystax</em></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Humbolditia brunonis</em></td>
<td>10</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hybanthus enneaspermus</em></td>
<td>2</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hydnocarpus alpina</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Hydnocarpus macrocarpa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Hydnocarpus pentandra</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><em>Hydrocotyle javanica</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Hydrocotyle sibthorpioides</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>Hygropha ringens</em></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Hygropha schulli</em></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Hymenodictyon obovatum</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hymenodictyon orixense</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hyptis capitata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Hyptis suaveolens</em></td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ichnocarpus frutescens</em></td>
<td>4</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Impatiens flaccida</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Impatiens minor</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Imperata cylindrica</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Indigofera linnaei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Indigofera tinctoria</td>
<td>7</td>
<td>1</td>
<td>12</td>
<td></td>
<td>1</td>
<td>13</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea aculeata</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea alba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ipomoea aquatica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea asarifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ipomoea batatas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea marginata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ipomoea mauritiana</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea nil</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Ipomoea obscura</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ipomoea pes-caprae ssp. pes-caprae</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea pes-tigridis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea triloba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ixora brachiata</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ixora coccinea</td>
<td>10</td>
<td>1</td>
<td>22</td>
<td>3</td>
<td>16</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ixora nigricans</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Jasminum angustifolium var. angustifolium</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum auriculatum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum coarctatum</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum flexile var. flexile</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum grandiflorum</td>
<td>1</td>
<td>3</td>
<td></td>
<td>10</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum malabaricum var. malabaricum</td>
<td>8</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum multiflorum</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum sambac</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jatropha curcas</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>12</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jatropha glandulifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jatropha gossypifolia</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jatropha multifida</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Justicia adhatoda</td>
<td>13</td>
<td>18</td>
<td>1</td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justicia gendarussa</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justicia nagpurensis</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justicia procumbens</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justicia trinervia</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaempferia galanga</td>
<td>3</td>
<td>3</td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Kaempferia rotunda</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Kalanchoe pinnata</td>
<td>16</td>
<td>3</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kammetia caryophyllata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kingiodendron pinnatum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knema attenuata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kyllinga brevifolia var. brevifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kyllinga nemoralis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lablab purpureus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagenandra ovata</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagenandra toxicaria var. toxicaria</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagenaria siceraria</td>
<td>5</td>
<td>2</td>
<td>8</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagerstroemia microcarpa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagerstroemia speciosa</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lannea coromandelica</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lantana camara var. camara</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laportea interrupta</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lawsonia inermis</td>
<td>10</td>
<td>1</td>
<td>13</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leea asiatica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leea indica</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td>3</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lemna perpusilla</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lepidagathis incurva var. mucronata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lepidagathis keralensis</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lepidagathis prostrata</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leptadenia reticulata</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leucas aspera</td>
<td>12</td>
<td>3</td>
<td>50</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leucas biflora</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leucas lavandulifolia</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limnophila indica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limnophila repens</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limonia acidissima</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lindernia caespitosa</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lindernia crustacea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Litsea coriacea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Litsea glutinosa</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lobelia nicotianifolia var. nicotianifolia</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Loeseneriella arnottiana</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lophopetalum wightianum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ludwigia hyssopifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ludwigia octovalvis var. sessiliflora</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luffa acutangula var. acutangula</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luffa acutangula var. amara</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luffa cylindrica</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lycopersicon esculentum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lygodium flexuosum</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macaranga peltata</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macrotyloma uniflorum</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Madhuca longifolia var. latifolia</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Madhuca neriifolia</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maesa indica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mallotus philippensis var. philippensis</td>
<td>1</td>
<td></td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mammea suriga</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mangifera indica</td>
<td>11</td>
<td>3</td>
<td>17</td>
<td>4</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manihot esculenta</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manilkara hexandra</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manilkara zapota</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maranta arundinacea</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marrubium vulgaris</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marsilea minuta</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melastoma malabathricum</td>
<td>4</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melia azedarach</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melia dubia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melicope lunu-ankenda</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon angustifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon grande</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon randerianum</td>
<td>5</td>
<td>10</td>
<td></td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon umbellatum</td>
<td>5</td>
<td>1</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentha piperita</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentha spicata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merremia turpethum</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merremia umbellata</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merremia vitifolia</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Mesua ferrea var. ferrea</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michelia champaca</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micrococoa mercurialis</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miliusa tomentosa</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Millingtonia hortensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mimosa pudica</td>
<td>14</td>
<td>3</td>
<td>10</td>
<td>1</td>
<td>6</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mimosa pudica var.</td>
<td>14</td>
<td>3</td>
<td>10</td>
<td>1</td>
<td>6</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mimusops elengi</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mirabilis jalapa</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mitragny parvifolia</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molineria trichocarpa</td>
<td>8</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mollugo pentaphylla</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Momordica charantia var. charantia</td>
<td>1</td>
<td>19</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Momordica charantia var. muricata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Momordica dioica</td>
<td>3</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monochoria vaginalis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morinda citrifolia</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morinda pubescens</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morinda umbellata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moringa pterygosperma</td>
<td>8</td>
<td>2</td>
<td>12</td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morus alba</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mucuna pruriens var. pruriens</td>
<td>8</td>
<td>4</td>
<td>16</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mukia maderaspatana</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muntingia calabura</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Murraya koenigii</td>
<td>8</td>
<td>9</td>
<td>3</td>
<td>9</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Musa paradisiaca</td>
<td>41</td>
<td></td>
<td>1</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mussaenda belilla</td>
<td>7</td>
<td>17</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myristica beddomei ssp. beddomei</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myristica fragrans</td>
<td>14</td>
<td>3</td>
<td>4</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myristica malabarica</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myxopyrum smilacifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naravelia zeylanica</td>
<td>2</td>
<td>8</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naregania alata</td>
<td>7</td>
<td>9</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naringi crenulata</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nelumbo nucifera</td>
<td>4</td>
<td>7</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neolamarckia cadamba</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nerium oleander</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Nervilia aragoana</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nervilia crociflora</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicotiana tabacum</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nothapodytes nimmoniana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nyctanthes arbor-tristis</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nymphaea nouchali</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nymphaea pubescens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ochlandra travancorica</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ochna obtusata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ochreinauclea missionis</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocimum americanum</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocimum basilicum var. basilicum</td>
<td>4</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocimum gratissimum</td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocimum kilimandscharicum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocimum tenuiflorum</td>
<td>10</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olea dioica</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ophiopogon mungos</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ophiopogon rugosae var. prostrata</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opuntia strigata var. dillenii</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ormocarpum cochinichense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oroxyllum indicum</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orthosiphon aristatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oryza sativa</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td>9</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osbeckia brachystemon</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osbeckia muralis</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Otacanthus caeruleus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxalis corniculata</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>3</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paederia foetida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pajanelia longifolia</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pancratium triflorum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pandanus canaranus</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pandanus odoratissimus</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parahemionitis cordata</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paramignya monophylla</td>
<td>3</td>
<td>1</td>
<td></td>
<td>3</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passiflora foetida var. foetida</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavetta indica var. indica</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavetta indica var. tomentosa</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavonia odorata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1190
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>DE</th>
<th>GR</th>
<th>JU</th>
<th>LA</th>
<th>LE</th>
<th>OI</th>
<th>PA</th>
<th>PI</th>
<th>PO</th>
<th>TA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pavonia zeylanica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedalium murex</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peperomia pellucida</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pergularia daemia</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persea macrantha</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persicaria chinensis</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phoenix sylvestris</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pholidota imbricata</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phragmites karka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Phyla nodiflora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Phyllanthus acidus</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus airy-shawii</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus amarus</td>
<td>6</td>
<td>10</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus emblica</td>
<td>9</td>
<td>23</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus kozhikodianus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus maderaspatensis</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus reticulatus</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus tenellus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllanthus urinaria</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phyllocephalum scabridum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physalis angulata</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Physalis peruviana</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Piper betle</td>
<td>1</td>
<td>18</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piper chaba</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Piper longum</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piper nigrum var. nigrum</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>23</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piper triocicum</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Pistia stratiotes</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plectrocephalium dulce</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Plectranthus amboinicus</td>
<td>2</td>
<td>15</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plectranthus vettiveroides</td>
<td>2</td>
<td>3</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plumbago indica</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbago zeylanica</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumeria alba</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumeria rubra</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon deccanensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pogostemon heyneanus</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Pogostemon paniculatus</td>
<td>1</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon purpurascens</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Pogostemon quadrifolius</td>
<td></td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyalthia longifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polycarpaea corymbosa</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pongamia pinnata</td>
<td>16</td>
<td>3</td>
<td></td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portulaca oleracea var. oleracea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pothos scandens</td>
<td>2</td>
<td>2</td>
<td></td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pouzolzia wightii var. wightii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pouzolzia zeylanica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premna latifolia var. viburnoides</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premna serratifolia</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prospis juliflora</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protasparagus gonocladus</td>
<td>8</td>
<td>1</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protasparagus racemosus</td>
<td>8</td>
<td>1</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseuderanthemum malabaricum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psidium guajava</td>
<td>11</td>
<td>20</td>
<td></td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psilanthus travancorensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychotria dalzellii</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychotria flavida</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterocarpus marsupium</td>
<td>12</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterocarpus santalinus</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterospermum acerifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterospermum diversifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Punica granatum</td>
<td>11</td>
<td>17</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quassia indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quisqualis indica</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quisqualis malabarica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rauvolfia serpentina</td>
<td>3</td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td>12</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rauvolfia tetrathylla</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reissantia indica</td>
<td>7</td>
<td>2</td>
<td></td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Remusatia vivipara</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Rhaphidophora pertusa</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhinacanthus nasutus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Rhizophora mucronata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Rynchostylis retusa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ricinus communis</td>
<td>19</td>
<td>8</td>
<td>7</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosa damascena</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Rosa indica</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotula aquatica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rourea minor</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubia cordifolia</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruellia tuberosa</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruta chalepensis</td>
<td>5</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saccharum munja</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saccharum officinarum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Saccharum spontaneum</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salacia chinensis</td>
<td>6</td>
<td>10</td>
<td></td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salacia fruticosa</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Salacia oblonga</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Salvadoria persica</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Salvinia molesta</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samanea saman</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sansevieria cylindrica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sansevieria roxburghiana</td>
<td>4</td>
<td>8</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santalum album</td>
<td>2</td>
<td>15</td>
<td></td>
<td>15</td>
<td>12</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sapindus emarginatus</td>
<td>2</td>
<td>11</td>
<td></td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sapindus trifoliatus</td>
<td>2</td>
<td>11</td>
<td></td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sapium insigne</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saraca asoca</td>
<td>10</td>
<td>2</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarcostemma viminale</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarcostigma kleinii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sauropus androgyneus</td>
<td>2</td>
<td>3</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scaevola sericea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schleicheria oleosa</td>
<td>2</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scleria lithosperma ssp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>lithosperma</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scleropyrum pentandrum</td>
<td>1</td>
<td></td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scoparia dulcis</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sebastiana chamaelea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seidenfia rheedei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selaginella delicatula</td>
<td>1</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selaginella involvens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Semecarpus anacardium</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna alata</td>
<td>3</td>
<td>5</td>
<td></td>
<td>2</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna angustifolia</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna auriculata</td>
<td>3</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Senna hirsuta</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna occidentalis</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna siamea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna sophera</td>
<td>12</td>
<td>1</td>
<td>7</td>
<td></td>
<td>6</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna surattensis</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna tora</td>
<td></td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>13</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sesbania orientale</td>
<td></td>
<td>5</td>
<td>5</td>
<td>13</td>
<td>17</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sesbania grandiflora</td>
<td></td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sesbania sesban</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida acuta</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida alnifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida cordata</td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Sida cordifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida mysorensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida rhombifolia</td>
<td>14</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sida rhomboidea</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smilax zeylanica</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smithia conferta</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smithia sensitiva</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum americanum</td>
<td>6</td>
<td>2</td>
<td>13</td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum erianthum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum lasiocarpum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum melongena</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum torvum</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum trilobatum</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum tuberosum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Solanum violaceum ssp. multiflorum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum violaceum ssp. violaceum</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum virginianum</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solena amplexicaulis</td>
<td>3</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sorghum halepense</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatholobus parviflorus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spermacoce articularis</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spermacoce hispida</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spermacoce latifolia</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphaeranthus indicus</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spilanthes calva</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1194
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>DE</th>
<th>GR</th>
<th>JU</th>
<th>LA</th>
<th>LE</th>
<th>OI</th>
<th>PA</th>
<th>PI</th>
<th>PO</th>
<th>TA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spilanthes paniculata</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spondias pinnata</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stachyphyrium spicatum</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stachytarpheta indica</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Sterculia foetida</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sterculia guttata</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereospermum colais var. colais</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereospermum suaveolens</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereolus asper</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strobilanthes ciliatus</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Strychnos colubrina</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Strychnos nux-vomica</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strychnos potatorum</td>
<td>4</td>
<td></td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swertia corymbosa</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symphorema involucratum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Symplocos cochinchenensis ssp. laurina</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symplocos racemosus</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synebrella nodiflora</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium aqueum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium aromaticum</td>
<td>5</td>
<td></td>
<td>1</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium caryophyllatum</td>
<td>16</td>
<td>8</td>
<td>1</td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium cumini var. cumini</td>
<td>13</td>
<td>8</td>
<td></td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium hemisphericum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium jambos</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium travancoricum</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium zeylanicum</td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tabernaemontana divaricata</td>
<td>2</td>
<td>11</td>
<td></td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tabernaemontana heynecana</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>11</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tacca leontopetaloides</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tagetes erecta</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talinum triangulare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Tamarindus indica</td>
<td>6</td>
<td>25</td>
<td>7</td>
<td>15</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamilnadia uliginosa</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarenna asiatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Tecoma stans</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tectona grandis</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tephrosia purpurea</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tephrosia tinctoria</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Terminalia bellirica</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminalia catappa</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminalia chebula</td>
<td>20</td>
<td>18</td>
<td>12</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminalia cuneata</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminalia elliptica</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminalia paniculata</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theobroma cacao</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thespesia lampas</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thespesia populnea</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thevetia peruviana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thottea siliquosa</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thunbergia fragrans</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thunbergia grandiflora</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thunbergia mysorensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tinospora cordifolia</td>
<td>58</td>
<td>16</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tinospora sinensis</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toddalia asiatica</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toona ciliata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Torenia bicolor</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tragia involucrata</td>
<td>9</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trema orientalis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trewia nudiflora</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trianthema portulacastrum</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tribulus terrestris</td>
<td>13</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichopus zeylanicus ssp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>travancoricus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichosanthes anguina</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichosanthes cucumerina</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichosanthes tricuspidata</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>var. tricuspidata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tridax procumbens</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triumfetta rhomboidea</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnera subulata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnera ulmifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylophora fasciculata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylophora indica var. indica</td>
<td>3</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylophora tetrapetala var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tetrapetala</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uraria rufescens</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urena lobata ssp. lobata</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Urena lobata ssp. sinuata</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urginea indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utricularia reticulata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uvaria narum</td>
<td>5</td>
<td>10</td>
<td>1</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vanda tessellata</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vateria indica</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilago denticulata</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilago maderaspatana</td>
<td>1</td>
<td>2</td>
<td></td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vernononia anthelmintica</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vernonia cinerea</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vetiveria zizanioides</td>
<td>13</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna dalzelliana</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna mungo</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna pilosa</td>
<td>3</td>
<td>2</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna radiata var. radiata</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna radiata var. sublobata</td>
<td>3</td>
<td>2</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna unguiculata ssp. unguiculata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Vitex altissima</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitex leucoxylon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitex negundo</td>
<td>8</td>
<td>13</td>
<td>3</td>
<td>11</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitex trifolia</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wattakaka volubilis</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wedelia chinensis</td>
<td></td>
<td></td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wedelia trilobata</td>
<td></td>
<td></td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wendlandia thyrsoides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Withania somnifera</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodfordia fruticosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wrightia tinctoria</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xanthosoma sagittifolium</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xenostegia tridentata ssp. hastata</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xenostegia tridentata ssp. tridentata</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xyliya xylocarpa</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zanonia indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zanthoxylum ovalifolium</td>
<td>3</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zanthoxylum rhetsa</td>
<td>1</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zea mays</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Zingiber cernuum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Zingiber neesanum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Zingiber officinale</td>
<td>16</td>
<td>1</td>
<td>23</td>
<td>14</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Zingiber roseum</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Zingiber zerumbet</td>
<td>2</td>
<td>4</td>
<td></td>
<td>1</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Zizyphus glabrata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus mauritiana</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Zizyphus oenoplia</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td>2</td>
<td>9</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Zizyphus rugosa</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Zizyphus xylopyrus</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Zornia diphylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Zornia gibbosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Bazaar Medicines</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aconitum chasmanthum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Aconitum heterophyllum</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allium cepa</td>
<td>2</td>
<td>3</td>
<td>21</td>
<td>3</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Allium sativum</td>
<td>4</td>
<td></td>
<td>16</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Amomum subulatum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Anacyclus pyrethrum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Anethum graveolens</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angelica glauca</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquilaria agallocha</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arachis hypogea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Berberis aristata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Boswellia serrata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boswellia thurifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Brassica nigra</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canarium vulgare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Carum carvi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cedrus deodara</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Cinnamomum tamala</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commiphora myrrha</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commiphora wightii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Coriandrum sativum</td>
<td>11</td>
<td>8</td>
<td></td>
<td>3</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Crocus sativus</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cuminum cyminum</td>
<td>13</td>
<td>3</td>
<td></td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Decalepis hamiltonii</td>
<td>21</td>
<td>12</td>
<td>1</td>
<td></td>
<td>2</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Elaeocarpus ganitrus</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ferula asafoetida</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Plant Name</td>
<td>DE</td>
<td>GR</td>
<td>JU</td>
<td>LA</td>
<td>LE</td>
<td>OI</td>
<td>PA</td>
<td>PI</td>
<td>PO</td>
<td>TA</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td><em>Foeniculum vulgare</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Fritillaria roylei</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Glycyrrhiza glabra</em></td>
<td>5</td>
<td>11</td>
<td>1</td>
<td>9</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Guizotia abyssinica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Hordeum vulgare</em></td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hyoscyamus niger</em></td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Inula racemosa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lilium polyphyllum</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Linum usitatissimum</em></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Nardostachys jatamansi</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Nigella sativa</em></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Papaver somniferum</em></td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Phoenix dactylifera</em></td>
<td>1</td>
<td></td>
<td></td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Picrorrhiza scrophulariifolia</em></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Pimpinella anisum</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Pinus sylvestris</em></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Piper cubeba</em></td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Pistacia integerrima</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Plantago ovata</em></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Prunus dulcis</em></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Psoralea corylifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Quercus infectoria</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Raphanus sativus</em></td>
<td></td>
<td>1</td>
<td></td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Rheum australe</em></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Salix caprea</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Saussurea lappa</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Setaria italic</em></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Shorea robusta</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Taxus baccata</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trachyspermum ammi</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trigonella foenum - graecum</em></td>
<td>2</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>8</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Triticum aestivum</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Valeriana jatamansi</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Vitis vinifera</em></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Form of usage</td>
<td>Uses</td>
<td>Source plants</td>
<td>Percentage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>-------</td>
<td>---------------</td>
<td>------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decoction</td>
<td>2528</td>
<td>721</td>
<td>25.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gruel</td>
<td>384</td>
<td>208</td>
<td>3.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juice</td>
<td>3084</td>
<td>665</td>
<td>31.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latex</td>
<td>130</td>
<td>41</td>
<td>1.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lehyam</td>
<td>30</td>
<td>26</td>
<td>0.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil</td>
<td>694</td>
<td>319</td>
<td>7.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paste</td>
<td>2310</td>
<td>653</td>
<td>23.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pickle</td>
<td>23</td>
<td>20</td>
<td>0.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powder</td>
<td>521</td>
<td>237</td>
<td>5.28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tambuli</td>
<td>164</td>
<td>111</td>
<td>1.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 8. Medicinal formulations of *Tulunadu*

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Formulations</th>
<th>Single</th>
<th>Combination</th>
<th>Diseases</th>
<th>New</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natural Medicines</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Abelmoschus esculentus</em></td>
<td>12</td>
<td>7</td>
<td>5</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td><em>Abelmoschus manihot</em></td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td><em>Abelmoschus moschatus</em></td>
<td>13</td>
<td>10</td>
<td>3</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td><em>Abrus precatorius</em></td>
<td>30</td>
<td>13</td>
<td>17</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td><em>Abrus pulchellus</em></td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><em>Abutilon indicum</em></td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td><em>Acacia caesia</em></td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td><em>Acacia catechu</em></td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td><em>Acacia farnesiana</em></td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td><em>Acacia nilotica</em></td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td><em>Acacia sinuata</em></td>
<td>19</td>
<td>9</td>
<td>10</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td><em>Acacia torta</em></td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td><em>Acalypha ciliata</em></td>
<td>20</td>
<td>12</td>
<td>8</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td><em>Acalypha fruticosa</em></td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td><em>Acalypha indica</em></td>
<td>20</td>
<td>12</td>
<td>8</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td><em>Acampe praemorsa</em></td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td><em>Acanthus ilicifolius</em></td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><em>Achyranthes aspera</em></td>
<td>93</td>
<td>32</td>
<td>61</td>
<td>59</td>
<td>29</td>
</tr>
<tr>
<td><em>Acorus calamus</em></td>
<td>23</td>
<td>9</td>
<td>14</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td><em>Acronychia pedunculata</em></td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><em>Adansonia digitata</em></td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><em>Adenanthera pavonina</em></td>
<td>11</td>
<td>7</td>
<td>4</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td><em>Adenia hondala</em></td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><em>Adiantum capillus-veneris</em></td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td><em>Adiantum caudatum</em></td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><em>Adiantum lunulatum</em></td>
<td>13</td>
<td>8</td>
<td>5</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td><em>Aegle marmelos</em></td>
<td>41</td>
<td>29</td>
<td>12</td>
<td>29</td>
<td>13</td>
</tr>
<tr>
<td><em>Aerva lanata</em></td>
<td>13</td>
<td>7</td>
<td>6</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td><em>Aeschynomene indica</em></td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><em>Agave americana</em></td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td><em>Ageratum conyzoides</em></td>
<td>16</td>
<td>11</td>
<td>5</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td><em>Aglaia elaeagnoides</em></td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td><em>Ailanthus excelsa</em></td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td><em>Ailanthus triphysa</em></td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Alangium salvifolium ssp. hexapetalum</td>
<td>16</td>
<td>13</td>
<td>3</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Albizia chinensis</td>
<td>25</td>
<td>15</td>
<td>10</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Albizia lebbeck</td>
<td>11</td>
<td>11</td>
<td>0</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>*Albizia odoratissima</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Allamanda cathartica</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Allophylus cobbe</td>
<td>16</td>
<td>12</td>
<td>4</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Allophylus serratus</td>
<td>16</td>
<td>12</td>
<td>4</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Alocasia macrorrhiza</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Aloe vera</td>
<td>50</td>
<td>31</td>
<td>19</td>
<td>34</td>
<td>27</td>
</tr>
<tr>
<td>Alpinia calcarata</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Alpinia galanga</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>*Alseodaphne semecarpifolia var. semecarpifolia</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Alstonia scholaris</td>
<td>28</td>
<td>16</td>
<td>12</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>Alstonia venenata</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Alternanthera bettzickiana</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>*Alternanthera brasiliana</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Alternanthera sessilis</td>
<td>28</td>
<td>10</td>
<td>18</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td>Alternanthera tenella</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>*Alysicarpus vaginalis</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Amaranthus spinosus</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>*Amaranthus tricolor</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Amaranthus viridis</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>*Amorphophallus bulbifer</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>*Amorphophallus commutatus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Amorphophallus paeoniifolius var. campanulatus</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Amorphophallus paeoniifolius var. paeoniifolius</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Ampelocissus indica</td>
<td>22</td>
<td>11</td>
<td>11</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>*Ampelocissus latifolia</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Anacardium occidentale</td>
<td>22</td>
<td>16</td>
<td>6</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>Anamirta cocculus</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Ananas comosus</td>
<td>11</td>
<td>6</td>
<td>5</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>*Anaphyllum wightii</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Andrographis paniculata</td>
<td>27</td>
<td>9</td>
<td>18</td>
<td>28</td>
<td>17</td>
</tr>
<tr>
<td>*Anisochilus carnosus</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>*Anisomeles indica</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>*Anisomeles malabarica</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Annona muricata</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Annona reticulata</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Annona squamosa</td>
<td>20</td>
<td>16</td>
<td>4</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>*Anodendron paniculatum</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>*Antiaris toxicaria</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Antidesma acidum</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Antidesma ghaesembilla</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>*Antidesma montanum</td>
<td>11</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Aphananxis polystachya</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Aporosa lindleyana</td>
<td>24</td>
<td>13</td>
<td>11</td>
<td>21</td>
<td>14</td>
</tr>
<tr>
<td>Ardisia solanacea</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Areca catechu</td>
<td>26</td>
<td>16</td>
<td>10</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>Arenga wightii</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Argemone mexicana</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>*Argyreia elliptica</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Argyreia nervosa</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>*Arisaema tortuosum</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Aristlochica indica</td>
<td>36</td>
<td>16</td>
<td>20</td>
<td>26</td>
<td>16</td>
</tr>
<tr>
<td>Aristlochica tagala</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Artabotrys hexapetalus</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Artemisia vulgaris var. indica</td>
<td>19</td>
<td>13</td>
<td>6</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>Artemisia vulgaris var. nilagirica</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Artocarpus gomezianus ssp. zeylanicus</td>
<td>14</td>
<td>7</td>
<td>7</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Artocarpus heterophyllus</td>
<td>16</td>
<td>11</td>
<td>5</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Artocarpus hirsutus</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>*Artocarpus incisus</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Arundo donax</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>*Asclepias curassavica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Asplenium trichomanes</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Asystasia dalzelliana</td>
<td>16</td>
<td>10</td>
<td>6</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Asystasia gangetica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Atalantia monophylla</td>
<td>12</td>
<td>8</td>
<td>4</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>*Averrhoa bilimbi</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Averrhoa carambola</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>*Avicennia marina</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Azadirachta indica</td>
<td>76</td>
<td>40</td>
<td>36</td>
<td>39</td>
<td>28</td>
</tr>
<tr>
<td>*Azima tetracantha</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Baccaurea courtallensis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Bacopa monnieri</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Baliospermum montanum</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Bambusa bambos</td>
<td>25</td>
<td>16</td>
<td>9</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>Barleria cristata</td>
<td>10</td>
<td>9</td>
<td>1</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Barleria prionitis</td>
<td>14</td>
<td>8</td>
<td>6</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>Barringtonia racemosa</td>
<td>35</td>
<td>17</td>
<td>18</td>
<td>28</td>
<td>12</td>
</tr>
<tr>
<td>Basella alba</td>
<td>16</td>
<td>12</td>
<td>4</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>Bauhinia acuminata</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Bauhinia malabarica</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>*Bauhinia phoenicea</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Bauhinia purpurea</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>*Bauhinia racemosa</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Bauhinia scandens var. anguina</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia tomentosa</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Bauhinia variegata</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>*Begonia malabarica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Benincasa hispida</td>
<td>35</td>
<td>21</td>
<td>14</td>
<td>27</td>
<td>24</td>
</tr>
<tr>
<td>*Benkara malabarica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Bidens biternata</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Biophytum reinwardtii</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Bixa orellana</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Blepharis asperrima</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Blepharis repens</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Boehmeria glomerulifera</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Boerhavia diffusa</td>
<td>16</td>
<td>8</td>
<td>8</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Boerhavia erecta</td>
<td>16</td>
<td>8</td>
<td>8</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Bombax ceiba</td>
<td>14</td>
<td>11</td>
<td>3</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Bombax insigne</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Borassus flabellifer</td>
<td>11</td>
<td>9</td>
<td>2</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Bougainvillea spectabilis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Brassica juncea</td>
<td>17</td>
<td>10</td>
<td>7</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>Breynia retusa</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Breynia vitis-idaea</td>
<td>21</td>
<td>7</td>
<td>14</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Briedelia retusa</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Briedelia scandens</td>
<td>28</td>
<td>10</td>
<td>18</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>Buchanania lanzan</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Bulbophyllum sterile</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Butea frondosa</td>
<td>34</td>
<td>18</td>
<td>16</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>Caesalpinia bonduc</td>
<td>11</td>
<td>7</td>
<td>4</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>*Caesalpinia coriaria</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Caesalpinia crista</td>
<td>20</td>
<td>14</td>
<td>6</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Caesalpinia mimosoides</td>
<td>28</td>
<td>18</td>
<td>10</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Caesalpinia pulcherrima</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Caesalpinia sappan</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>*Caesalpinia spicata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Cajanus cajan</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Cajanus scarabaeoides</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Calacanthis grandiflorus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Calamus rotang</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Callicarpa tomentosa</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>*Calophyllum calaba</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Calophyllum inophyllum</td>
<td>23</td>
<td>20</td>
<td>3</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>Calotropis gigantea</td>
<td>62</td>
<td>17</td>
<td>45</td>
<td>35</td>
<td>53</td>
</tr>
<tr>
<td>Calycopteris floribunda</td>
<td>40</td>
<td>22</td>
<td>18</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Camellia sinensis</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>*Cananga odorata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Canavalia cathartica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Canna indica</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Cannabis sativa ssp. indica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Canthus coromandelicum</td>
<td>19</td>
<td>14</td>
<td>5</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>*Canthus rheedei</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Capparisa floribunda</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Capsicum annum</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Capsicum frutescens</td>
<td>17</td>
<td>5</td>
<td>12</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>*Carallia brachiata</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Cardiospermum</td>
<td>29</td>
<td>21</td>
<td>8</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>halicacabum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Careya arborea</td>
<td>30</td>
<td>20</td>
<td>10</td>
<td>26</td>
<td>19</td>
</tr>
<tr>
<td>Carica papaya</td>
<td>15</td>
<td>11</td>
<td>4</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>*Carissa carandas</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Carissa congesta</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Caryota urens</td>
<td>19</td>
<td>8</td>
<td>11</td>
<td>19</td>
<td>11</td>
</tr>
<tr>
<td>*Casearia ovata</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Cassia fistula</td>
<td>40</td>
<td>18</td>
<td>22</td>
<td>29</td>
<td>22</td>
</tr>
<tr>
<td>Cassytha filiformis</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>*Casuarina litorea</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Catharanthus pusillus</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Catharanthus roseus</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>*Catunaregam spinosa</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>*Cayratia mollissima</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Ceiba pentandra</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Celastrus paniculatus</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>*Celosia argentea</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Celtis timorensis</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Centella asiatica</td>
<td>46</td>
<td>20</td>
<td>26</td>
<td>34</td>
<td>28</td>
</tr>
<tr>
<td>*Centratherum punctatum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Centrosema molle</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>*Cerbera odollam</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cereus pterogonus</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>*Ceropegia candelabrum var. candelabrum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>*Cestrum nocturnum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>*Chamaecrista mimosoides</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Chassalia curviflora var. longifolia</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>*Chassalia curviflora var. ophioxyloides</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>*Cheilanthes farinosa</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>*Chenopodium ambrosioides</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Chionanthus mala-elengi ssp. mala-elengi</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Chonemorpha fragrans</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Chromolaena odorata</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Chrysanthemum indicum</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>*Chrysophyllum cainito</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Cicer arietinum</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Cinchona succirubra</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Cinnamomum camphora</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Cinnamomum malabatrum</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Cinnamomum verum</td>
<td>11</td>
<td>10</td>
<td>1</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>*Cipadessa baccifera</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Cissampelos pareira var. hirsuta</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>*Cissus discolor</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>*Cissus elongata</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cissus latifolia</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Cissus quadrangularis</td>
<td>17</td>
<td>9</td>
<td>8</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>*Cissus repanda</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Cissus repens</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>*Citharexylum spinosum</td>
<td>18</td>
<td>12</td>
<td>6</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Citrullus colocynthis</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>*Citrullus lanatus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Citrus aurantifolia</td>
<td>44</td>
<td>15</td>
<td>29</td>
<td>36</td>
<td>34</td>
</tr>
<tr>
<td>Citrus aurantium</td>
<td>12</td>
<td>10</td>
<td>2</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Citrus limon</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Citrus maxima</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Citrus medica</td>
<td>24</td>
<td>18</td>
<td>6</td>
<td>24</td>
<td>17</td>
</tr>
<tr>
<td>*Citrus reticulata</td>
<td>13</td>
<td>10</td>
<td>3</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>*Cleistanthus collinus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>*Clematis gouriana</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Cleome burmannii</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cleome viscosa</td>
<td>12</td>
<td>8</td>
<td>4</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Clerodendrum inerme</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>*Clerodendrum phlomidis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Clerodendrum serratum</td>
<td>22</td>
<td>7</td>
<td>15</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Clerodendrum viscosum</td>
<td>41</td>
<td>14</td>
<td>27</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td>*Clinacanthus nutans</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Clitoria ternatea var. pleniflora</td>
<td>19</td>
<td>16</td>
<td>3</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Clitoria ternatea var. ternatea</td>
<td>19</td>
<td>16</td>
<td>3</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Coccinia grandis</td>
<td>35</td>
<td>22</td>
<td>13</td>
<td>33</td>
<td>23</td>
</tr>
<tr>
<td>Cocculus hirsutus</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cocos nucifera</td>
<td>60</td>
<td>27</td>
<td>33</td>
<td>40</td>
<td>36</td>
</tr>
<tr>
<td>Coffea arabica</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>*Coix lacryma-jobi</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Coldenia procumbens</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Colocasia esculenta</td>
<td>14</td>
<td>11</td>
<td>3</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td>Combretum laetifolium</td>
<td>16</td>
<td>9</td>
<td>7</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>*Commelina benghalensis</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Commelina diffusa</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>*Corallocarpus epigaeus</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Corchorus capsularis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cordia obliqua</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>*Coronopus didymus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Corypha umbraculifera</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Coscinium fenestratum</td>
<td>12</td>
<td>7</td>
<td>5</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>*Cosmostigma racemosum</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Costus pictus</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Costus speciosus</td>
<td>17</td>
<td>14</td>
<td>3</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>*Couroupita guianensis</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Crassocephalum crepidioides</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Crataeva magna</td>
<td>12</td>
<td>11</td>
<td>1</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Crinum asiaticum</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>*Crinum latifolium</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>*Crinum viviparum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Crossandra infundibulariformis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Crotalaria calycina</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Crotalaria pallida</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>*Crotalaria retusa</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Crotalaria verrucosa</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Croton laevigatus</td>
<td>22</td>
<td>13</td>
<td>9</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>*Croton malabaricus</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Croton tiglium</td>
<td>11</td>
<td>9</td>
<td>2</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>*Cryptolepis buchananii</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Cucumis melo</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>*Cucumis prophetarum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Cucumis sativus</td>
<td>13</td>
<td>6</td>
<td>7</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>Cucurbita maxima</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Cucurbita pepo</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Curculigo orchoides</td>
<td>14</td>
<td>4</td>
<td>10</td>
<td>21</td>
<td>8</td>
</tr>
<tr>
<td>Curcuma amada</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Curcuma aromatica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>*Curcuma caesia</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Curcuma longa</td>
<td>58</td>
<td>12</td>
<td>46</td>
<td>38</td>
<td>41</td>
</tr>
<tr>
<td>Curcuma neilgherrensis</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>*Curcuma oligantha var. lutea</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>*Curcuma oligantha var. oligantha</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Curcuma pseudomontana</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Curcuma zedoaria</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>*Cuscuta reflexa</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>*Cyanotis cristata</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cyathula prostrata</td>
<td>37</td>
<td>11</td>
<td>26</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>*Cycas circinalis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cyclea peltata</td>
<td>61</td>
<td>29</td>
<td>32</td>
<td>41</td>
<td>30</td>
</tr>
<tr>
<td>*Cymbidium aloifolium</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Cymbopogon citratus</td>
<td>16</td>
<td>8</td>
<td>8</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Cymbopogon flexuosus</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Cynodon dactylon</td>
<td>70</td>
<td>22</td>
<td>48</td>
<td>44</td>
<td>42</td>
</tr>
<tr>
<td>*Cynoglossum zeylanicum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Cyperus rotundus</td>
<td>27</td>
<td>17</td>
<td>10</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td>*Dalbergia horrida var. horrida</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Dalbergia lanceolaria ssp. lanceolaria</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>*Dalbergia latifolia</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>*Dalbergia sissoo</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Dalbergia volubilis</td>
<td>14</td>
<td>8</td>
<td>6</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>*Datura metel</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Datura stramonium</td>
<td>35</td>
<td>18</td>
<td>17</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td>Delonix elata</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Dendrobium barbatulum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Dendrobium ovatum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Dendrocalamus strictus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>*Dendrophthoe falcata var. falcata</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>*Derris brevipes var. brevipes</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>*Derris scandens</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Desmodium gangeticum</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>22</td>
<td>7</td>
</tr>
<tr>
<td>Desmodium heterocarpon</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>*Desmodium heterophyllum</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Desmodium laxiflorum</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>22</td>
<td>7</td>
</tr>
<tr>
<td>Desmodium motorium</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>*Desmodium ooeinense</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Desmodium triangulare</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Desmodium triflorum</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Desmodium triquetrum</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Dichrostachys cinerea</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>*Dillenia indica</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Dillenia pentagyna</td>
<td>10</td>
<td>4</td>
<td>6</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Dioscorea alata</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>*Dioscorea belophylla</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>*Dioscorea bulbifera</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Dioscorea hispida</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Dioscorea oppositifolia</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Dioscorea pentaphylla</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>*Dioscorea wallichii</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Diospyros buxifolia</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Diospyros candolleana</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Diospyros malabarica</td>
<td>13</td>
<td>10</td>
<td>3</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>*Diospyros montana</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Diplocisia glaucescens</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>*Diplocyclos palmatus</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>*Dipteracanthus patulus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>*Dipterocarpus indicus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>*Dodonaea viscosa</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>*Dolichos trilobus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Dracaena terniflora</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>*Drosera indica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Drynaria quercifolia</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Drypetes roxburghii</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>*Ecbolium ligustrinum var. ligustrinum</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Eclipta prostrata</td>
<td>44</td>
<td>16</td>
<td>28</td>
<td>39</td>
<td>25</td>
</tr>
<tr>
<td>*Eichhornia crassipes</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>*Elaeagnus conferta</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>*Elaeis guineensis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Elaeocarpus serratus var. serratus</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>*Elaeocarpus sphaericus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Elaeocarpus tuberculatus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Éléphantopus scaber</td>
<td>34</td>
<td>12</td>
<td>22</td>
<td>32</td>
<td>27</td>
</tr>
<tr>
<td>Elettaria cardamomum</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Eleusine coracana</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>*Eleusine indica</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Embelia ribes</td>
<td>30</td>
<td>8</td>
<td>22</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>Émeltia tsjeriam-cottam</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Emilia sonchifolia</td>
<td>29</td>
<td>16</td>
<td>13</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>Ensete superbum</td>
<td>20</td>
<td>12</td>
<td>8</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Entada rheedei</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>*Eranthemum roseum</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Erycibe paniculata</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>*Eryngium foetidum</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Érythrina stricta</td>
<td>31</td>
<td>19</td>
<td>12</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Erythrina variegata</td>
<td>31</td>
<td>19</td>
<td>12</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Érythroxylum monogynum</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Eucalyptus tereticornis</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Eupatorium triplinerve</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Euphorbia hirta</td>
<td>14</td>
<td>9</td>
<td>5</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Euphorbia nivulia</td>
<td>37</td>
<td>21</td>
<td>16</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td>Éuphorbia thymifolia</td>
<td>13</td>
<td>7</td>
<td>6</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Euphorbia tirucalli</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Évolvulus alsinoides var. alsinoides</td>
<td>21</td>
<td>7</td>
<td>14</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>*Évolvulus nummularius</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Exacum tetragonum</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>*Excoecaria agallocha</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Fagraea ceilanica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Ficus amplissima</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Ficus arnottiana</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Ficus auriculata</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Ficus benghalensis var. benghalensis</td>
<td>33</td>
<td>13</td>
<td>20</td>
<td>27</td>
<td>16</td>
</tr>
<tr>
<td>*Ficus callosa</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Ficus exasperata</td>
<td>24</td>
<td>14</td>
<td>10</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Ficus hispida</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Ficus microcarpa</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>Ficus racemosa</td>
<td>41</td>
<td>14</td>
<td>27</td>
<td>27</td>
<td>21</td>
</tr>
<tr>
<td>Ficus religiosa</td>
<td>29</td>
<td>9</td>
<td>20</td>
<td>22</td>
<td>9</td>
</tr>
<tr>
<td>*Ficus tinctoria ssp. gibbosa</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>*Ficus tsjahela</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>*Ficus virens</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Flacourtia indica</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Flacourtia jangomas</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Flacourtia montana</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Flemingia macrophylla</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Flemingia strobilifera</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>22</td>
<td>6</td>
</tr>
<tr>
<td>Flemingia tuberosa</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Flueggea leucoppyrus</td>
<td>39</td>
<td>20</td>
<td>19</td>
<td>29</td>
<td>20</td>
</tr>
<tr>
<td>Fomes fomentarius</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Garcinia gummi-gutta var. gummi-gutta</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Garcinia indica</td>
<td>20</td>
<td>18</td>
<td>2</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>*Garcinia morella</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Garcinia xanthochymus</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Gardenia jasminoides</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Gardenia resinifera</td>
<td>11</td>
<td>6</td>
<td>5</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Garuga pinnata</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>*Geissaspis cristata</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Geophila repens</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Girardinia diversifolia</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>*Gliricidia sepium</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>*Globba sessiliflora</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Glochidion zeylanicum var. zeylanicum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Gloriosa superba</td>
<td>13</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Glycosmis pentaphylla</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Gmelina arborea</td>
<td>16</td>
<td>11</td>
<td>5</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>*Gmelina asiatica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Gnetum edule</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>*Gomphia serrata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>*Gomphrena celosioides</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>*Gossypium arboreum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Gossypium barbadense</td>
<td>22</td>
<td>16</td>
<td>6</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>*Gossypium hirsutum</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Grangea maderaspatana</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Graptophyllum pictum</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Grewia glabra</td>
<td>13</td>
<td>5</td>
<td>8</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Grewia nervosa</td>
<td>13</td>
<td>7</td>
<td>6</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>*Grewia tilifolia</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Gymnacranthera farquhariana</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Gymnema sylvestre</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Gymnostachyum febrifugum var. febrifugum</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Gynandropsis gynandra</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>*Habenaria diphylla</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Habenaria grandiflorignaris</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Haldina cordifolia</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Hedychium coronarium</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Hedyotis auricularia</td>
<td>19</td>
<td>5</td>
<td>14</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td>Hedyotis corymbosa</td>
<td>10</td>
<td>4</td>
<td>6</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>*Hedyotis herbacea</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>*Hedyotis neesiana</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Helianthus annus</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Helicanthes elastica</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Helicteres isora</td>
<td>24</td>
<td>14</td>
<td>10</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>Heliotropium indicum</td>
<td>19</td>
<td>15</td>
<td>4</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>Hemidesmus indicus var. indicus</td>
<td>43</td>
<td>17</td>
<td>26</td>
<td>32</td>
<td>20</td>
</tr>
<tr>
<td>Hemigraphis colorata</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Heterophragma roxburghii</td>
<td>17</td>
<td>6</td>
<td>11</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Hibiscus hispidissimus</td>
<td>21</td>
<td>7</td>
<td>14</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>*Hibiscus mutabilis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Hibiscus radiatus</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>*Hibiscus rosa-sinensis var. rosa-sinensis</td>
<td>61</td>
<td>30</td>
<td>31</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>*Hibiscus rosa-sinensis var. schizopetalus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>*Hibiscus surattensis</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>*Hiptage benghalensis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Holarrhena pubescens</td>
<td>36</td>
<td>16</td>
<td>20</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Holigarna arnottiana</td>
<td>14</td>
<td>4</td>
<td>10</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>*Holigarna ferruginea</td>
<td>14</td>
<td>4</td>
<td>10</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Holoptelea integrifolia</td>
<td>24</td>
<td>18</td>
<td>6</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>Holostemma ada-kodien</td>
<td>13</td>
<td>10</td>
<td>3</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>*Homalocladium platycladum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Homonoia retusa</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Homonoia riparia</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>*Hopea parviflora</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Hopea ponga</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>*Hoya ovalifolia</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Hugonia mystax</td>
<td>13</td>
<td>11</td>
<td>2</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>*Humboldtia brunonis</td>
<td>15</td>
<td>8</td>
<td>7</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>Hybanthus enneaspermus</td>
<td>13</td>
<td>2</td>
<td>11</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>*Hydnocarpus alpina</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>*Hydnocarpus macrocarpa</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Hydnocarpus pentandra</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>*Hydrocotyle javanica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>*Hydrocotyle sibthorpioides</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>*Hygrophiila ringens</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Hygrophiila schulli</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>*Hymenodictyon obovatum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Hymenodictyon orixense</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>*Hyptis capitata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hyptis suaveolens</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Ichnocarpus frutescens</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>*Impatiens flaccida</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Impatiens minor</td>
<td>9</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Imperata cylindrica</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>*Indigofera linnaei</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Indigofera tinctoria</td>
<td>36</td>
<td>20</td>
<td>16</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>*Ipomoea aculeata</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>*Ipomoea alba</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>*Ipomoea aquatica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>*Ipomoea asarifolia</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Ipomoea batatas</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Ipomoea marginata</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Ipomoea mauritiana</td>
<td>16</td>
<td>12</td>
<td>4</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Ipomoea nil</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Ipomoea obscura</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Ipomoea pes-caprae ssp. pes-caprae</td>
<td>8</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>*Ipomoea pes-tigridis</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ipomoea triloba</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Ixora brachiata</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Ixora coccinea</td>
<td>53</td>
<td>26</td>
<td>27</td>
<td>33</td>
<td>41</td>
</tr>
<tr>
<td>*Ixora nigricans</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Jasminum angustifolium var. angustifolium</td>
<td>15</td>
<td>11</td>
<td>4</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Jasminum auriculatum</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Jasminum coarctatum</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>*Jasminum flexile var. flexile</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Jasminum grandiflorum</td>
<td>24</td>
<td>11</td>
<td>13</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Jasminum malabaricum var. malabaricum</td>
<td>26</td>
<td>15</td>
<td>11</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>*Jasminum multiflorum</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Jasminum sambac</td>
<td>15</td>
<td>12</td>
<td>3</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Jatropha curcas</td>
<td>40</td>
<td>25</td>
<td>15</td>
<td>33</td>
<td>21</td>
</tr>
<tr>
<td>*Jatropha glandulifera</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Jatropha gossypifolia</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Jatropha multifida</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Justicia adhatoda</td>
<td>36</td>
<td>18</td>
<td>18</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>Justicia gendarussa</td>
<td>12</td>
<td>7</td>
<td>5</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>*Justicia nagpurensis</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Justicia procumbens</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>*Justicia trinervia</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Kaempferia galanga</td>
<td>12</td>
<td>9</td>
<td>3</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Kaempferia rotunda</td>
<td>12</td>
<td>11</td>
<td>1</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Kalanchoe pinnata</td>
<td>34</td>
<td>18</td>
<td>16</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>*Kammetia caryophyllata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Kingiodendron pinnatum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Knema attenuata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Kyllinga brevifolia var. brevifolia</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Kyllinga nemoralis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lablab purpureus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Lagenandra ovata</td>
<td>19</td>
<td>7</td>
<td>12</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Lagenandra toxicaria var. toxicaria</td>
<td>19</td>
<td>7</td>
<td>12</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Lagenaria siceraria</td>
<td>20</td>
<td>17</td>
<td>3</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>Lagerstroemia microcarpa</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Lagerstroemia speciosa</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Lannea coromandelica</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Lantana camara var. camara</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>*Laportea interrupta</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Lawsonia inermis</td>
<td>35</td>
<td>21</td>
<td>14</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>*Leea asiatica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Leea indica</td>
<td>27</td>
<td>6</td>
<td>21</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>Lemna perpusilla</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>*Lepidagathis incurva var. mucronata</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>*Lepidagathis keralensis</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>*Lepidagathis prostrata</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Leptadenia reticulata</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Leucas aspera</td>
<td>76</td>
<td>23</td>
<td>53</td>
<td>45</td>
<td>55</td>
</tr>
<tr>
<td>*Leucas biflora</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>*Leucas lavandulifolia</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>*Limnophila indica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>*Limnophila repens</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Limonia acidissima</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>*Lindernia caespitosa</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Lindernia crustacea</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>*Litsea coriacea</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>*Litsea ghatica</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>*Litsea glutinosa</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Lobelia nicotianifolia</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>var. nicotianifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loeseneriella arnottiana</td>
<td>15</td>
<td>11</td>
<td>4</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>*Lophopetalum wightianum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Ludwigia hyssopifolia</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Ludwigia octovalvis ssp. sessiliflora</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Luffa acutangula var. acutangula</td>
<td>14</td>
<td>9</td>
<td>5</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>Luffa acutangula var. amara</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>*Luffa cylindrica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Lycopersicon esculentum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Lygodium flexuosum</td>
<td>15</td>
<td>7</td>
<td>8</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Macaranga peltata</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Macrotyloma uniflorum</td>
<td>16</td>
<td>5</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Madhuca longifolia var. latifolia</td>
<td>10</td>
<td>9</td>
<td>1</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Madhuca neriifolia</td>
<td>13</td>
<td>11</td>
<td>2</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>*Maesa indica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Mallotus philippensis var. philippensis</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Mammea suriga</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Mangifera indica</td>
<td>48</td>
<td>21</td>
<td>27</td>
<td>33</td>
<td>34</td>
</tr>
<tr>
<td>Manihot esculenta</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Manilkara hexandra</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Manilkara zapota</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Maranta arundinacea</td>
<td>11</td>
<td>7</td>
<td>4</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Marrubium vulgaris</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>*Marsilea minuta</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Melastoma malabathricum</td>
<td>18</td>
<td>9</td>
<td>9</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Melia azedarach</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>*Melia dubia</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Melicope lunu-ankenda</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Memecylon angustifolium</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>*Memecylon grande</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Memecylon randerianum</td>
<td>27</td>
<td>8</td>
<td>19</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>Memecylon umbellatum</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Mentha piperita</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Mentha spicata</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Merremia turpethum</td>
<td>11</td>
<td>9</td>
<td>2</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>*Merremia umbellata</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>*Merremia vitifolia</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Mesua ferrea var. ferrea</td>
<td>12</td>
<td>10</td>
<td>2</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Michelia champaca</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>*Micrococa mercurialis</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>*Miliusa tomentosa</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>*Millingtonia hortensis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Mimosa pudica</td>
<td>45</td>
<td>26</td>
<td>19</td>
<td>33</td>
<td>27</td>
</tr>
<tr>
<td>Minusops elengi</td>
<td>21</td>
<td>19</td>
<td>2</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Mirabilis jalapa</td>
<td>14</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>*Mitragnya parvifolia</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Molaria trichocarpa</td>
<td>14</td>
<td>4</td>
<td>10</td>
<td>21</td>
<td>8</td>
</tr>
<tr>
<td>*Mollugo pentaphylla</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Momordica charantia var. charantia</td>
<td>28</td>
<td>16</td>
<td>12</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Momordica charantia var. muricata</td>
<td>28</td>
<td>16</td>
<td>12</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Momordica dioica</td>
<td>24</td>
<td>16</td>
<td>8</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>*Monochoria vaginalis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Morinda citrifolia</td>
<td>20</td>
<td>16</td>
<td>4</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>*Morinda pubescens</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>*Morinda umbellata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Moringa pterygosperma</td>
<td>44</td>
<td>17</td>
<td>27</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>Morus alba</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Mucuna pruriens var. pruriens</td>
<td>34</td>
<td>14</td>
<td>20</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td>Mukia maderaspatana</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>*Muntingia calabura</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Murraya koenigii</td>
<td>31</td>
<td>20</td>
<td>11</td>
<td>24</td>
<td>15</td>
</tr>
<tr>
<td>Musa paradisiaca</td>
<td>61</td>
<td>39</td>
<td>22</td>
<td>45</td>
<td>43</td>
</tr>
<tr>
<td>Mussaenda belilla</td>
<td>29</td>
<td>20</td>
<td>9</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Myristica beddomei ssp. beddomei</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Myristica fragrans</td>
<td>22</td>
<td>6</td>
<td>16</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Myristica malabarica</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>*Myxopyrum smilacifolium</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Naravelia zeylanica</td>
<td>23</td>
<td>15</td>
<td>8</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Naregamia alata</td>
<td>23</td>
<td>11</td>
<td>12</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>Naringi crenulata</td>
<td>21</td>
<td>7</td>
<td>14</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Nelumbo nucifera</td>
<td>14</td>
<td>11</td>
<td>3</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Neolamarckia cadamba</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Nerium oleander</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>*Nervilia aragoana</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>*Nervilia crociforim</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Nicotiana tabacum</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>*Nothapodytes nimmoniana</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Nyctanthes arbor-tristis</td>
<td>18</td>
<td>12</td>
<td>6</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>*Nymphaea nouchali</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>*Nymphaea pubescens</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>*Ochlandra travancorica</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Ochna obtusata</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Ochreinauclea missionis</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Ocimum americanum</td>
<td>12</td>
<td>11</td>
<td>1</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Ocimum basilicum var. basilicum</td>
<td>18</td>
<td>15</td>
<td>3</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Ocimum gratissimum</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Ocimum kilimandscharicum</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Ocimum tenuiflorum</td>
<td>130</td>
<td>44</td>
<td>86</td>
<td>55</td>
<td>71</td>
</tr>
<tr>
<td>*Olea dioica</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Ophiorrhiza mungos</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Ophiorrhiza rugosa var. prostrata</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Opuntia striata var. dillenii</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>*Ormocarpum cochinchinense</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Oroxylum indicum</td>
<td>26</td>
<td>15</td>
<td>11</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>*Orthosiphon aristasus</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Oryza sativa</td>
<td>18</td>
<td>8</td>
<td>10</td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Osbeckia brachystemon</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Osbeckia muralis</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>*Otacanthus caeruleus</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Oxalis corniculata</td>
<td>17</td>
<td>9</td>
<td>8</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>*Paederia foetida</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Pajanelia longifolia</td>
<td>20</td>
<td>9</td>
<td>11</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>*Pancratium triflorum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>*Pandanus canaranus</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Pandanus odoratissimus</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Parahemionitis cordata</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Paramignya monophylla</td>
<td>12</td>
<td>8</td>
<td>4</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Passiflora foetida var. foetida</td>
<td>10</td>
<td>9</td>
<td>1</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>*Pavetta indica var. indica</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Pavetta indica var. tomentosa</td>
<td>14</td>
<td>8</td>
<td>6</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>*Pavonia odorata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Pavonia zeylanica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pedalium murex</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Peperomia pellucida</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Pergularia daemia</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Persea macrantha</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Persicaria chinensis</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Phoenix sylvestris</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>*Pholidota imbricata</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>*Phragmites karka</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>*Phyla nodiflora</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Phyllanthus acidus</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>*Phyllanthus airy-shawii</td>
<td>9</td>
<td>3</td>
<td>6</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Phyllanthus amarus</td>
<td>17</td>
<td>15</td>
<td>2</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Phyllanthus emblica</td>
<td>46</td>
<td>19</td>
<td>27</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>*Phyllanthus kozhikodianus</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Phyllanthus maderaspatensis</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Phyllanthus reticulatus</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>*Phyllanthus tenellus</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Phyllanthus urinaria</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Phyllocephalum scabridum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Physalis angulata</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Physalis peruviana</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Piper betle</td>
<td>27</td>
<td>13</td>
<td>14</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Piper chaba</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Piper longum</td>
<td>17</td>
<td>5</td>
<td>12</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>Piper nigrum var. nigrum</td>
<td>40</td>
<td>8</td>
<td>32</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>Piper trioidicum</td>
<td>15</td>
<td>13</td>
<td>2</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>Pistia stratiotes</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>*Pithecellobium dulce</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Plectranthus amboinicus</td>
<td>25</td>
<td>13</td>
<td>12</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>Plectranthus verticuloides</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Plumbago indica</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Plumbago zeylanica</td>
<td>17</td>
<td>5</td>
<td>12</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>Plumeria alba</td>
<td>13</td>
<td>8</td>
<td>5</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Plumeria rubra</td>
<td>13</td>
<td>8</td>
<td>5</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>*Pogostemon deccanensis</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Pogostemon heynanensis</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>*Pogostemon paniculatus</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>*Pogostemon purpurascens</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Pogostemon quadritifolia</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Polyalthea longifolia</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>*Polycarpsae corymbosa</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Pongamia pinnata</td>
<td>26</td>
<td>16</td>
<td>10</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td>*Portulaca oleracea var. oleracea</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Pothos scandens</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td>*Pouzolzia wightii var. wightii</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Pouzolzia zeylanica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Premna latifolia var. viburnoides</td>
<td>14</td>
<td>9</td>
<td>5</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Premna serratifolia</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Prosopis juliflora</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Protasparagus gonocladus</td>
<td>26</td>
<td>13</td>
<td>13</td>
<td>28</td>
<td>17</td>
</tr>
<tr>
<td>Protasparagus racemosus</td>
<td>26</td>
<td>13</td>
<td>13</td>
<td>28</td>
<td>17</td>
</tr>
<tr>
<td>Pseudarthria viscida</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>*Pseuderanthemum malabaricum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Psidium guajava</td>
<td>36</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>*Psilanthus travancorensis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Psychotria dalzellii</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>*Psychotria flavida</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Pterocarpus marsupium</td>
<td>20</td>
<td>12</td>
<td>8</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Pterocarpus santalinus</td>
<td>13</td>
<td>7</td>
<td>6</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>*Pterospermum acerifolium</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Pterospermum diversifolium</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Punica granatum</td>
<td>34</td>
<td>20</td>
<td>14</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>*Quassia indica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>*Quisqualis indica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Quisqualis malabarica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Rauvolfia serpentina</td>
<td>26</td>
<td>11</td>
<td>15</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Rauvolfia tetrephylla</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>*Reissantia indica</td>
<td>15</td>
<td>11</td>
<td>4</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Remusatia vivipara</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Rhaphidophora pertusa</td>
<td>16</td>
<td>9</td>
<td>7</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>Rhinacanthus nasutus</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>*Rhizophora mucronata</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>*Rhynchostylis retusa</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Ricinus communis</td>
<td>44</td>
<td>20</td>
<td>24</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>Rosa damascena</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Rosa indica</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Rotula aquatica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>*Rourea minor</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Rubia cordifolia</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>*Ruellia tuberosa</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Ruta chalepensis</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Saccharum munja</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Saccharum officinarum</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Saccharum spontaneum</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Salacia chinensis</td>
<td>22</td>
<td>8</td>
<td>14</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>*Salacia fruticosa</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Salacia oblonga</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Salvadoria persica</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>*Salvia molesta</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Samanea saman</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>*Sansevieria cylindrica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sansevieria roxburghiana</td>
<td>16</td>
<td>14</td>
<td>2</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Santalum album</td>
<td>31</td>
<td>7</td>
<td>24</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>Sapindus emarginatus</td>
<td>16</td>
<td>14</td>
<td>2</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Sapindus trifoliatus</td>
<td>16</td>
<td>14</td>
<td>2</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Sapium insigne</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Saraca asoca</td>
<td>15</td>
<td>8</td>
<td>7</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>Sarcostemma viminale</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>*Sarcostigma kleinii</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>*Sauropus androgyinus</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Scaevola sericea</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Schleichera oleosa</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>*Scleria lithosperma</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Scleropyrum pentandrum</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Scoparia dulcis</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>*Sebastiana chamaelea</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>*Seidenfia rheedei</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>*Selaginella delicatula</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Selaginella involvens</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Semecarpus anacardium</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Senna alata</td>
<td>20</td>
<td>11</td>
<td>9</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>Senna angustifolia</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Senna auriculata</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>*Senna hirsuta</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Senna occidentalis</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>*Senna siamea</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Senna sophora</td>
<td>29</td>
<td>15</td>
<td>14</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td>*Senna surattensis</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Senna tora</td>
<td>27</td>
<td>13</td>
<td>14</td>
<td>23</td>
<td>12</td>
</tr>
<tr>
<td>Sesamum orientale</td>
<td>44</td>
<td>16</td>
<td>28</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>Sesbania grandiflora</td>
<td>22</td>
<td>15</td>
<td>7</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>*Sesbania sesban</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Sida acuta</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>*Sida alnifolia</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Sida cordata</td>
<td>12</td>
<td>7</td>
<td>5</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Sida cordifolia</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>*Sida mysorensis</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Sida rhombifolia</td>
<td>21</td>
<td>4</td>
<td>17</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>Sida rhomboidea</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Smilax zeylanica</td>
<td>10</td>
<td>9</td>
<td>1</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>*Smithia conferta</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>*Smithia sensitiva</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Solanum americanum</td>
<td>25</td>
<td>13</td>
<td>12</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>*Solanum erianthum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>*Solanum lasiocarpum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Solanum melongena</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Solanum torvum</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Solanum trilobatum</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Solanum tuberosum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Solanum violaceum ssp. multiflorum</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>*Solanum violaceum ssp. violaceum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Solanum virginianum</td>
<td>12</td>
<td>10</td>
<td>2</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Solena amplexicaulis</td>
<td>19</td>
<td>16</td>
<td>3</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>*Sorghum halepense</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>*Spatholobus parviflorus</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>*Spermacoce articulatis</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Spermacoce hispida</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>*Spermacoce latifolia</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sphaeranthus indicus</td>
<td>23</td>
<td>15</td>
<td>8</td>
<td>17</td>
<td>10</td>
</tr>
<tr>
<td>Spilanthes calva</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Spilanthes paniculata</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Spondias pinnata</td>
<td>19</td>
<td>12</td>
<td>7</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Stachyphrynium spicatum</td>
<td>11</td>
<td>7</td>
<td>4</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Stachytarpheta indica</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Sterculia foetida</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Sterculia guttata</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Stereospermum colais var. colais</td>
<td>8</td>
<td>3</td>
<td>5</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Stereospermum suaveolens</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Streblus asper</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Strobilanthes ciliatus</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>*Strychnos colubrina</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Strychnos nux-vomica</td>
<td>35</td>
<td>16</td>
<td>19</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Strychnos potatorum</td>
<td>11</td>
<td>8</td>
<td>3</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Swertia corymbosa</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>*Symphorema involucratum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Symlocos cochininchinesis ssp. laurina</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Symlocos racemosa</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Synedrella nodiflora</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>*Syzygium aqueum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Syzygium aromaticum</td>
<td>13</td>
<td>10</td>
<td>3</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Syzygium caryophyllatum</td>
<td>29</td>
<td>17</td>
<td>12</td>
<td>24</td>
<td>15</td>
</tr>
<tr>
<td>Syzygium cumini var. cumini</td>
<td>26</td>
<td>17</td>
<td>9</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>*Syzygium hemisphericum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Syzygium jambos</td>
<td>12</td>
<td>9</td>
<td>3</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Syzygium travancoricum</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Syzygium zeylanicum</td>
<td>10</td>
<td>4</td>
<td>6</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Tabernaemontana divaricata</td>
<td>26</td>
<td>12</td>
<td>14</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Tabernaemontana heyneana</td>
<td>25</td>
<td>12</td>
<td>13</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>*Tacca leontopetaloides</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tagetes erecta</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>*Talinum triangulare</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Tamarindus indica</td>
<td>55</td>
<td>29</td>
<td>26</td>
<td>34</td>
<td>31</td>
</tr>
<tr>
<td>Tamilnadia uliginosa</td>
<td>16</td>
<td>11</td>
<td>5</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>*Tareena asiatica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Tecoma stans</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Tectona grandis</td>
<td>14</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Tephrosia purpurea</td>
<td>16</td>
<td>12</td>
<td>4</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Tephrosia tinctoria</td>
<td>16</td>
<td>12</td>
<td>4</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Terminalia bellirica</td>
<td>14</td>
<td>6</td>
<td>8</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Terminalia catappa</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Terminalia chebula</td>
<td>67</td>
<td>17</td>
<td>50</td>
<td>37</td>
<td>31</td>
</tr>
<tr>
<td>Terminalia cuneata</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Terminalia elliptica</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Terminalia paniculata</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>*Theobroma cacao</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Thespiesia lampas</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Thespiesia populnea</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Thevetia peruviana</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Thottea siliquosa</td>
<td>11</td>
<td>9</td>
<td>2</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>*Thunbergia fragrans</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Thunbergia grandiflora</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Thunbergia mysorensis</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tinospora cordifolia</td>
<td>79</td>
<td>21</td>
<td>58</td>
<td>43</td>
<td>33</td>
</tr>
<tr>
<td>Tinospora sinensis</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Toddaia asiatica</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>*Toona ciliata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Torenia bicolor</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Tragia involucrata</td>
<td>26</td>
<td>12</td>
<td>14</td>
<td>25</td>
<td>16</td>
</tr>
<tr>
<td>*Trema orientalis</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>*Trewia nudiflora</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Trianthema portulacastrum</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Tribulus terestris</td>
<td>18</td>
<td>9</td>
<td>9</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>Trichopus zeylanicus ssp. travancoricus</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Trichosanthes anguina</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Trichosanthes cucumerina</td>
<td>16</td>
<td>14</td>
<td>2</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Trichosanthes tricuspidata var. tricuspidata</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Tridax procumbens</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Triumfetta rhomboidea</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Turnera subulata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Turnera ulmifolia</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>*Tylophora fasciculata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tylophora indica var. indica</td>
<td>17</td>
<td>12</td>
<td>5</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>*Tylophora tetrapetala var. tetrapetala</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td><em>Uraria rufescens</em></td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td><em>Urena lobata ssp. lobata</em></td>
<td>10</td>
<td>8</td>
<td>2</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td><em>Urena lobata ssp. sinuata</em></td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td><em>Urginea indica</em></td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><em>Utricularia reticulata</em></td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><em>Uvaria narum</em></td>
<td>23</td>
<td>18</td>
<td>5</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td><em>Vanda tessellata</em></td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Vateria indica</td>
<td>13</td>
<td>6</td>
<td>7</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td><em>Ventilago denticulata</em></td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Ventilago maderaspatana</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td><em>Vernonia anthelmintica</em></td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td><em>Vernonia cinerea</em></td>
<td>19</td>
<td>13</td>
<td>6</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>Vetiveria zizanioides</td>
<td>26</td>
<td>11</td>
<td>15</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>Vigna dalzelliana</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Vigna mungo</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Vigna pilosa</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Vigna radiata var. radiata</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Vigna radiata var. sublobata</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Vigna unguiculata ssp. unguiculata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Vitex altissima</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td><em>Vitex leucoxylon</em></td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Vitex negundo</td>
<td>37</td>
<td>24</td>
<td>13</td>
<td>28</td>
<td>22</td>
</tr>
<tr>
<td>Vitex trifolia</td>
<td>12</td>
<td>10</td>
<td>2</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Wattakaka volubilis</td>
<td>20</td>
<td>11</td>
<td>9</td>
<td>19</td>
<td>14</td>
</tr>
<tr>
<td>Wedelia chinensis</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td><em>Wedelia trilobata</em></td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td><em>Wendlandia thyroidea</em></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Withania somnifera</td>
<td>18</td>
<td>3</td>
<td>15</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Woodfordia fruticosa</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Wrightia tinctoria</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Xanthosoma sagittifolium</td>
<td>14</td>
<td>6</td>
<td>8</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td><em>Xenostegia tridentata</em></td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>*Xenostegia tridentata var. hastata</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>*Xenostegia tridentata var. tridentata</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Xylia xylocarpa</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Zanonia indica</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Zanthoxylum ovalifolium</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Zanthoxylum rhetsa</td>
<td>19</td>
<td>8</td>
<td>11</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>Zea mays</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Zingiber cernuum</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Zingiber neesanum</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Zingiber officinale</td>
<td>63</td>
<td>22</td>
<td>41</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Zingiber roseum</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Zingiber zerumbet</td>
<td>15</td>
<td>7</td>
<td>8</td>
<td>17</td>
<td>10</td>
</tr>
<tr>
<td>*Zizyphus glabrata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Zizyphus mauritiana</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Zizyphus oenoplia</td>
<td>20</td>
<td>14</td>
<td>6</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Zizyphus rugosa</td>
<td>21</td>
<td>9</td>
<td>12</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Zizyphus xylopyrus</td>
<td>21</td>
<td>9</td>
<td>12</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>*Zornia diphylla</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>*Zornia gibbosa</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>Bazaar Medicines</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Aconitum chasmanthum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>*Aconitum heterophyllum</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Allium cepa</td>
<td>48</td>
<td>32</td>
<td>16</td>
<td>33</td>
<td>17</td>
</tr>
<tr>
<td>Allium sativum</td>
<td>30</td>
<td>21</td>
<td>9</td>
<td>29</td>
<td>12</td>
</tr>
<tr>
<td>Amomum subulatum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Anacyclus pyrethrum</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Anethum graveolens</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Angelica glauca</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Aquilaria agallocha</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>*Arachis hypogea</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Berberis aristata</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Boswellia serrata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Boswellia thurifera</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Brassica nigra</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Canarium strictum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Carum carvi</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Cedrus deodara</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Cinnamomum tamala</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Commiphora myrrha</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Commiphora wightii</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Coriandrum sativum</td>
<td>24</td>
<td>7</td>
<td>17</td>
<td>29</td>
<td>9</td>
</tr>
<tr>
<td>Crocus sativus</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Cuminum cyminum</td>
<td>25</td>
<td>7</td>
<td>18</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Decalepis hamiltonii</td>
<td>43</td>
<td>17</td>
<td>26</td>
<td>32</td>
<td>20</td>
</tr>
<tr>
<td>Elaeocarpus ganitrus</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Ferula asafoetida</td>
<td>24</td>
<td>2</td>
<td>22</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Foeniculum vulgare</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Fritillaria roylei</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Glycyrrhiza glabra</td>
<td>31</td>
<td>10</td>
<td>21</td>
<td>23</td>
<td>6</td>
</tr>
<tr>
<td>Guizotia abyssinica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Hordeum vulgare</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Hyoscyamus niger</td>
<td>22</td>
<td>9</td>
<td>13</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Inula racemosa</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Lilium polyphyllum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Linum usitatissimum</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Nardostachys jatamansi</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Nigella sativa</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Papaver somniferum</td>
<td>15</td>
<td>7</td>
<td>8</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Phoenix dactylifera</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Picrorrhiza scrophularifolia</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Pimpinella anisum</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Pinus roxburghii</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Piper cubeba</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>*Pistacia integerrima</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Plantago ovata</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Prunus dulcis</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Psoralea corylifolia</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>*Quercus infectoria</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Raphanus sativus</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Rheum australe</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Salix caprea</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>*Saussurea lappa</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Setaria italica</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Shorea robusta</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Taxus baccata</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Trachyspermum ammi</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Trigonella foenum-graecum</td>
<td>28</td>
<td>10</td>
<td>18</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Formulations</td>
<td>Single</td>
<td>Combination</td>
<td>Diseases</td>
<td>New</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Triticum aestivum</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Valeriana jatamansi</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>*Vitis vinifera</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 9. Percentage of medicinal formulations

<table>
<thead>
<tr>
<th>Nature of Drug</th>
<th>Formulations</th>
<th>Source plants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Drug</td>
<td>5813</td>
<td>979</td>
<td>58.73</td>
</tr>
<tr>
<td>Combination</td>
<td>4085</td>
<td>600</td>
<td>41.27</td>
</tr>
</tbody>
</table>

Table 10. Plants and their formulations

<table>
<thead>
<tr>
<th>No. of Formulations</th>
<th>No. of Plants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>176</td>
<td>17.58</td>
</tr>
<tr>
<td>2 — 9</td>
<td>492</td>
<td>49.15</td>
</tr>
<tr>
<td>10 — 19</td>
<td>185</td>
<td>18.48</td>
</tr>
<tr>
<td>20 — 29</td>
<td>82</td>
<td>8.19</td>
</tr>
<tr>
<td>30 — 39</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>40 — 49</td>
<td>19</td>
<td>1.9</td>
</tr>
<tr>
<td>50 and above</td>
<td>17</td>
<td>1.7</td>
</tr>
</tbody>
</table>
Table 11. Therapeutic Profile of medicinal plants of Tulunadu

| Plant Name                  | B | O | C | H | D | E | N | F | E | H | A | L | I | L | U | N | E | P | O | R | H | S | K | U | I | V | E | W | O |
| Natural Medicines           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| *Abelmoschus esculentus*    | 1 | 1 |   |   |   |   |   | 1 |   |   | 1 |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |
| *Abelmoschus manihot*       |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |
| *Abelmoschus moschatus*     | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |
| *Abrus precatorius*         | 1 | 1 |   |   | 1 |   | 1 |   |   | 1 |   | 1 | 1 |   |   |   |   | 1 | 1 |   |   |   |   |   |   |   |   |
| *Abrus pulchellus*          |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| *Abutilon indicum*          | 1 |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |
| *Acacia caesia*             | 1 |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| *Acacia catechu*            | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 1 |   |   |   |   |   |   |   |   |   |
| *Acacia farnesiana*         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acacia nilotica*           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acacia sinuata*            | 1 | 1 | 1 | 1 |   |   | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| *Acacia torta*              | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acalypha ciliata*          | 1 | 1 |   |   |   | 1 | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acalypha fruticosa*        | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| *Acalypha indica*           | 1 | 1 |   |   | 1 | 1 | 1 |   |   |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acampe praemorsa*          | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acanthus ilicifolius*      | 1 | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Achyranthes aspera*        | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Acorus calmus*             | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acronychia pedunculata*    | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Adansonia digitata*        | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Adenanthera pavonina*      | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Adenia hondala*            | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Adiantum capillus-veneris*  | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Adiantum caudatum*         | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Adiantum lunulatum*        | 1 | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| *Aegle marmelos*            | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Aerva lanata*              | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Aescynomene indica*        | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Agave americana*           | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Ageratum conyzoides*       | 1 | 1 | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| *Aglaia elaegnoidea*        | 1 | 1 |   |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Ailanthus excelsa*         | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Ailanthus triphysea*       | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |

1232
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>BO</th>
<th>BU</th>
<th>CH</th>
<th>DI</th>
<th>EN</th>
<th>FE</th>
<th>HA</th>
<th>LA</th>
<th>LI</th>
<th>LU</th>
<th>NE</th>
<th>PO</th>
<th>RE</th>
<th>RH</th>
<th>SK</th>
<th>UI</th>
<th>VE</th>
<th>WO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alangium salvifolium ssp. hexapetalum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Albizia chinensis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Albizia lebbeck</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Albizia odoratissima</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allamanda cathartica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Allophylus cobbe</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Allophylus serratus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Alocasia macrorrhiza</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Aloe vera</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Alpinia calcarata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Alpinia galanga</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Alseodaphne semecarpifolia var.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Alstmania scholaris</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Alstonia venenata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternanthera bettzickiana</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternanthera brasiliana</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternanthera sessilis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Alternanthera tenella</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alysicarpus vaginalis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amaranthus spinosus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amaranthus tricolor</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amaranthus viridis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amorphophallus bulbifer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Amorphophallus commutatus</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amorphophallus paeoniifolius var.</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amorphophallus paeoniifolius</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ampelocissus indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ampelocissus latifolia</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anacardium occidentale</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Anamirta cocculus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ananas comosus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Anaphylium wightii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andrographis paniculata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>BO</td>
<td>BU</td>
<td>CH</td>
<td>DI</td>
<td>EN</td>
<td>FE</td>
<td>HA</td>
<td>LA</td>
<td>LI</td>
<td>LU</td>
<td>NE</td>
<td>PO</td>
<td>RE</td>
<td>RH</td>
<td>SK</td>
<td>UI</td>
<td>VE</td>
<td>WO</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Anisochilus carnosus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anisomeles indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anisomeles malabarica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annona muricata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annona reticulata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annona squamosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anodendron paniculatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Antiaris toxicaria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antidesma acidum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antidesma ghaesembilla</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antidesma montanum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aphanamixis polystachya</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aporosa lindleyana</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ardisia solanacea</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Areca catechu</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arenga wightii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argemone mexicana</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyrea elliptica</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyrea nervosa</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arisaeoma tortuosum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aristolochia indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aristolochia tagala</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artabotrys hexapetalus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artemisia vulgaris var.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artemisia vulgaris var.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nilagirica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus gomezianus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ssp. zeylanicus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus heterophyllus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus hirsutus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus incisus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arundo donax</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asclepias curassavica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asplenium trichomanes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asystasia dalzelliana</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asystasia gangetica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atalantia monophylla</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Averrhoa bilimbi</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BO</td>
<td>BU</td>
<td>CH</td>
<td>DI</td>
<td>EN</td>
<td>FE</td>
<td>HA</td>
<td>LA</td>
<td>LI</td>
<td>LU</td>
<td>NE</td>
<td>PO</td>
<td>RE</td>
<td>RH</td>
<td>SK</td>
<td>UI</td>
<td>VE</td>
<td>WO</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Averrhoa carambola</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Avicennia marina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azadirachta indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Azima tetracantha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baccarea courtallensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bacopa monnieri</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Baliospermum montanum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bambusa bambos</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Barleria cristata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Barleria prionitis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Barringtonia racemosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Basella alba</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia acuminata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia malabarica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia phoenicea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia purpurea</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia racemosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia scandens var. anguina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauhinia tomentosa</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bauhinia variegata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Begonia malabarica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benincasa hispida</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Benkara malabarica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bidens biternata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biophytum reinwardtii</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bixa orellana</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Blepharis asperrima</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Blepharis repens</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Boehmeria glomerulifera</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boerhavia diffusa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Boerhavia erecta</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bombax ceiba</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bombax insigne</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borassus flabellifer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bougainvillea spectabilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brassica juncea</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Breynia retusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breynia vitis-idaea</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>O</td>
<td>U</td>
<td>C</td>
<td>H</td>
<td>D</td>
<td>E</td>
<td>N</td>
<td>F</td>
<td>E</td>
<td>H</td>
<td>A</td>
<td>L</td>
<td>I</td>
<td>L</td>
<td>U</td>
<td>N</td>
<td>E</td>
</tr>
<tr>
<td>Briedelia retusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Briedelia scandens</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buchanania lanzan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulbophyllum sterile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butea frondosa</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia bondac</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia coriaria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia crista</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia mimosoides</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinta pulcherrima</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia sappan</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caesalpinia spicata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cajanus cajan</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cajanus scarabaeoides</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calacanthus grandiflorus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calamus rotang</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callicarpa tomentosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calophyllum calaba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calophyllum inophyllum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calotropis gigantea</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calycoperis floribunda</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camellia sinensis</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cananga odorata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canavalia cathartica</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canna indica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabis sativa ssp. indica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canthium coromandelicum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canthium rheedei</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capparis floribunda</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capsicum annum</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capsicum frutescens</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carallia brachiata</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardioecnum halicabacum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Careya arborea</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carica papaya</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carissa carandas</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carissa congesta</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>O</td>
<td>U</td>
<td>C</td>
<td>H</td>
<td>D</td>
<td>E</td>
<td>N</td>
<td>F</td>
<td>E</td>
<td>H</td>
<td>A</td>
<td>L</td>
<td>I</td>
<td>L</td>
<td>U</td>
<td>N</td>
<td>P</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Caryota urens</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casearia ovata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cassia fistula</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cassytha filiformis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casuarina litorea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catharanthus pusillus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catharanthus roseus</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catunaregam spinosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cayratia mollissima</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceiba pentandra</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celastrus paniculatus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celosia argentea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celtis timorensis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centella asiatica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centratherum punctatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centresea molle</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cerbera odollam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereus pterogonus</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceropegia candelabrum var. candelabrum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cestrum nocturnum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chamaecrista mimosoides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chassalia curviflora var. longifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chassalia curviflora var. ophioxyloides</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheilanthes farinosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chenopodium ambrosioides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chionanthus mala-elengi ssp. mala-elengi</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chonemorpha fragrans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromolaena odorata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chrysanthemum indicum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chrysophyllum cainito</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cicer arietinum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinchona succirubra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum camphora</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum malabatrum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum verum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>O</td>
<td>U</td>
<td>C</td>
<td>H</td>
<td>D</td>
<td>I</td>
<td>E</td>
<td>N</td>
<td>F</td>
<td>H</td>
<td>A</td>
<td>L</td>
<td>I</td>
<td>U</td>
<td>N</td>
<td>P</td>
<td>R</td>
</tr>
<tr>
<td>Cipadessa baccifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissampelos pareira var. hirsuta</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus discolor</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus elongata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus latifolia</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus quadrangularis</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus repanda</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cissus repens</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citharexylum spinosum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrullus colocynthis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrullus lanatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus aurantifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus aurantium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus limon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus maxima</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus medica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus reticulata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleistanthus collinus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clematis gouriana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleome burmannii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleome viscosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerodendrum inerme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerodendrum phlomidis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerodendrum serratum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerodendrum viscosum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinacanthus nutans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clitoria ternatea var. pleniflora</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clitoria ternatea var. ternatea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coccinia grandis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocculus hirsutus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocos nucifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffea arabica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coix lacryma-jobi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coldenia procumbens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colocasia esculenta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combretum latifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commelina benghalensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>O</td>
<td>U</td>
<td>C</td>
<td>H</td>
<td>D</td>
<td>I</td>
<td>E</td>
<td>N</td>
<td>F</td>
<td>E</td>
<td>H</td>
<td>A</td>
<td>L</td>
<td>I</td>
<td>L</td>
<td>U</td>
<td>N</td>
</tr>
<tr>
<td>Commelina diffusa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corallocarpus epigaeus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corchorus capsularis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cordia obliqua</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coronopus didymus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corypha umbraculifera</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coscinium fenestratum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cosmostigma racemosum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costus pictus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costus speciosus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Couroupita guianensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crassocephalum crepidioides</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crataeva magna</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum asiaticum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum latifolium</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum viviparum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crossandra infundibuliformis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria calycina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria pallida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria retusa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria verrucosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croton laevigatus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croton malabaricus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croton tiglium</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cryptolepis buchananii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumis melo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumis prophetarum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumis sativus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucurbita maxima</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucurbita pepo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curculigo orchoides</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma amada</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma aromatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma caesia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma longa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma neilgherrensis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma oligantha var. lutea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1239
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>BO</th>
<th>BU</th>
<th>CH</th>
<th>DI</th>
<th>EN</th>
<th>FE</th>
<th>HA</th>
<th>LA</th>
<th>LI</th>
<th>LU</th>
<th>NE</th>
<th>PO</th>
<th>RE</th>
<th>RH</th>
<th>SK</th>
<th>UI</th>
<th>VE</th>
<th>WO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curcuma oligantha var. oligantha</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma pseudomontana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma zedoaria</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuscuta reflexa</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyanotis cristata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyathula prostrata</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cyclus circinalis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cynea peltata</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cymbidium aloifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cymbopogon citratus</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cymbopogon flexuosus</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cynodon dactylon</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cyanosus nariculatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyperus rotundus</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Dalbergia horrida var. horrida</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia lanceolariaria ssp. lanceolarii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia latifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia sissoo</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia volubilis</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datura metel</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datura stramonium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delonix elata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dendrobium barbatulum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dendrobium ovatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dendrocalamus strictus</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dendrophthoe falcata var. falcata</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Derris brevipes var. brevipes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Derris scandens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium gangeticum</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium heterocarpon</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium heterophyllum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium laxiflorum</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium motorium</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium ooeinense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>O</td>
<td>U</td>
<td>C</td>
<td>H</td>
<td>D</td>
<td>I</td>
<td>E</td>
<td>N</td>
<td>F</td>
<td>H</td>
<td>A</td>
<td>L</td>
<td>I</td>
<td>L</td>
<td>U</td>
<td>N</td>
<td>P</td>
</tr>
<tr>
<td>Desmodium triangulare</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium triflorum</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium triquetrum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dichrostachys cinerea</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dillenia indica</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dillenia pentagyna</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea alata</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea belophylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea bulbifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea hispida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea oppositifolia</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea pentaphylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea wallichii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diospyros buxifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diospyros candelleana</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diospyros malabarica</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diospyros montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploclisia glaucescens</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diplocyclos palmatus</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dipterocanthus patulus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dipterocarpus indicus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dodonaea viscosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dolichos trilobus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dracaena terniflora</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drosera indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drynaria quercifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drypetes roxburghii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecbolium ligustrinum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eclipta prostrata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Echiornis crassipes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeagnus conferta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeis guineensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeocarpus serratus var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeocarpus serratus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeocarpus sphaericus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeocarpus tuberculatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elephantopus scaber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elettaria cardamomum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1241
<p>| Plant Name                  | BO  | BU  | CH  | DI  | EN  | FE  | HA  | LA  | LI  | LU  | NE  | PO  | RE  | RH  | SK  | UI  | VE  | WO  |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Eleusine coracana          | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Eleusine indica            | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Embelia ribes              | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |
| Embelia tsjeriam-cottam    | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Emilia sonchifolia         | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |
| Ensete superbum            | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |
| Entada rheedei             | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Eranthemum roseum          | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Erycibe paniculata         | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Eryngium foetidum          | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Erythrina stricta          | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |
| Erythrina variegata        | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |
| Erythroxylum monogynum      | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Eucalyptus tereticornis     | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |
| Eupatorium triplinerve      | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |
| Euphorbia hirta             | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |
| Euphorbia nivalia           | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Euphorbia thymifolia       | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |
| Euphorbia tirucalli        | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |
| Evolulus alsinoides var. alsinoides | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |
| Evolulus nummularius        |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Exacum tetragonum           | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Excoecaria agallocha       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Fagraea ceylanica           | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus amplissima            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus arnottiana            | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus auriculata            | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus benghalensis var. benghalensis | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |
| Ficus callosa               | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus exasperata            | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus hispida               | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus microura              | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus racemosa              | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus religiosa             | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus tinctoria ssp. gibbosa|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus tsjahela              | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ficus virens                | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |</p>
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>BO</th>
<th>BU</th>
<th>CH</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>F</th>
<th>E</th>
<th>H</th>
<th>A</th>
<th>I</th>
<th>L</th>
<th>U</th>
<th>N</th>
<th>E</th>
<th>P</th>
<th>R</th>
<th>R</th>
<th>S</th>
<th>K</th>
<th>U</th>
<th>V</th>
<th>W</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flacourtia indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacourtia jangomas</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacourtia montana</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flemingia macrophylla</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flemingia strobilifera</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flemingia tuberosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flueggea leucopyrus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fomes fomentarius</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garcinia gummi-gutta var. gummi-gutta</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garcinia indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garcinia morella</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garcinia xanthochymus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gardenia jasminoides</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gardenia resinifera</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garuga pinnata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geissaspis cristata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geophila repens</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girardinia diversifolia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gliricidia sepium</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Globba sessiliflora</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glochidion zeylanicum var. zeylanicum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gloriosa superba</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycosmis pentaphylla</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gmelina arborea</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gmelina asiatica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gnetum edule</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gomphia serrata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gomphrena celosioides</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gossypium arboreum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gossypium barbadense</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gossypium hirsutum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grangea maderaspatana</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graptophyllum pictum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grewia glabra</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grewia nervosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grewia tiliifolia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>O</td>
<td>U</td>
<td>C</td>
<td>H</td>
<td>D</td>
<td>I</td>
<td>E</td>
<td>N</td>
<td>F</td>
<td>E</td>
<td>H</td>
<td>A</td>
<td>L</td>
<td>A</td>
<td>L</td>
<td>U</td>
<td>N</td>
<td>E</td>
<td>P</td>
<td>R</td>
<td>H</td>
<td>S</td>
<td>K</td>
</tr>
<tr>
<td>Gymnacranthera farquhariana</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gymnema sylvestre</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gymnostachyum febrifugum var. febrifugum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gynandropsis gynandra</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habenaria diphylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habenaria grandifloriformis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haldea cordifolia</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedychium coronarium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis auricularia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis corymbosa</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis herbasea</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis neesiana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helianthus annus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helicanthes elastica</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helicteres isora</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heliotropium indicum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemidesmus indicus var. indicus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hemigraphis colorata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterophragma roxburghii</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus hispidissimus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus mutabilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus radiatus</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus rosa-sinensis</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus rosa-sinensis var. rosa-sinensis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hibiscus rosa-sinensis var. schizopetalus</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hibiscus surattensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiptage benghalensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holarrhena pubescens</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holigarna arnottiana</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holigarna ferruginea</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holoptelea integrifolia</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holostemma ada-kodien</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homalocladium platycladum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homonoia retusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homonoia riparia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>O</td>
<td>U</td>
<td>C</td>
<td>H</td>
<td>D</td>
<td>I</td>
<td>E</td>
<td>N</td>
<td>F</td>
<td>E</td>
<td>H</td>
<td>A</td>
<td>L</td>
<td>I</td>
<td>L</td>
<td>U</td>
<td>N</td>
<td>E</td>
<td>P</td>
<td>O</td>
<td>R</td>
<td>R</td>
<td>H</td>
</tr>
<tr>
<td><em>Hopea parviflora</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hopea ponga</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hoya ovalifolia</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hugonia mystax</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Humboldtia brunonis</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hybanthus enneaspermus</em></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hydnocarpus alpina</em></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hydnocarpus macrocarpa</em></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hydnocarpus pentandra</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hydrocotyle javanica</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hydrocotyle sibthorpioides</em></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hygrophila ringens</em></td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hygrophila schullii</em></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hymenodictyon obovatum</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hymenodictyon orixense</em></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hyptis capitata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hyptis suaveolens</em></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ichneocarpus frutescens</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Impatiens flaccida</em></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Impatiens minor</em></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Imperata cylindrica</em></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Indigofera linnaei</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Indigofera tinctoria</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea aculeata</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea alba</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea aquatica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea asarifolia</em></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea batatas</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea marginata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea mauritiana</em></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea nil</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea obscura</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea pes-caprae</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ipomoea pes-caprae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea pes-tigridis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomoea triloba</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>O</td>
<td>U</td>
<td>C</td>
<td>H</td>
<td>D</td>
<td>E</td>
<td>N</td>
<td>F</td>
<td>E</td>
<td>H</td>
<td>A</td>
<td>L</td>
<td>I</td>
<td>L</td>
<td>U</td>
<td>N</td>
<td>E</td>
<td>P</td>
<td>R</td>
<td>R</td>
<td>S</td>
<td>K</td>
<td>U</td>
</tr>
<tr>
<td><em>Ixora brachiata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ixora coccinea</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ixora nigricans</em></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum angustifolium</em></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>var. angustifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum auriculatum</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum coarctatum</em></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum flexile</em> var. flexile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum grandiflorum</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum malabaricum</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>var. malabaricum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum multiflorum</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jasminum samboac</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jatropha curcas</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jatropha glandulifera</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jatropha gossypifolia</em></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Jatropha multifida</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Justicia adhatoda</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Justicia gendarussa</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Justicia nagpurensis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Justicia procumbens</em></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Justicia trinervia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Kaempferia galanga</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Kaempferia rotunda</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Kalanchoe pinnata</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Kammetia caryophyllata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Knema attenuata</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Kyllinga brevifolia</em> var. brevifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Kyllinga nemoralis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lablab purpureus</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lagenandra ovata</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lagenandra toxicaria</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>var. toxicaria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lagenaria siceraria</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lagerstroemia microcarpa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lagerstroemia speciosa</em></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lannea coromandelica</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1246
| Plant Name                      | B | O | C | H | D | E | N | F | H | A | L | I | L | U | N | E | P | R | H | S | K | U | V | W | O |
| Lantana camara var. camara     | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Laportea interrupta            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lawsonia inermis               | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Leea asiatica                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leea indica                    | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lemna perpusilla                |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lepidagathis incurva var. mucronata | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lepidagathis keralensis        | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lepidagathis prostrata         | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leptadenia reticulata          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leucas aspera                  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Leucas biflora                 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leucas lavandulifolia          | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Limnophila indica              |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Limnophila repens              | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Limonia acidissima             | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lindernia caespitosa           | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lindernia crustacea            | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Litsea coriacea                | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Litsea glutinosa               | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lobelia nicotianifolia         | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| var. nicotianifolia            |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Loeseneriella arnottiana       | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lophopetalum wightianum         | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ludwigia hyssopifolia          |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ludwigia octovalvis ssp. sessiliflora | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Luffa acutangula var. acutangula | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Luffa acutangula var. amara    | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Luffa cylindrica               | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lycopersicon esculentum        | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lygodium flexuosum             | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Macaranga peltata              | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Macrotyloma uniflorum          | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Madhuca longifolia var. latifolia | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

1247
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>B</th>
<th>O</th>
<th>C</th>
<th>H</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>F</th>
<th>H</th>
<th>A</th>
<th>L</th>
<th>L</th>
<th>N</th>
<th>P</th>
<th>R</th>
<th>R</th>
<th>S</th>
<th>K</th>
<th>U</th>
<th>V</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madhuca neriifolia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Maesa indica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mallotus philippensis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>var. philippensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mammea suriga</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mangifera indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Manihot esculenta</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manilkara hexandra</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manilkara zapota</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maranta arundinacea</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Marrubium vulgaris</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Marsilea minuta</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melastoma malabathricum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melia azedarach</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melia dubia</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Melicope lunu-ankenda</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon angustifolium</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon grande</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memecylon randerianum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Memecylon umbellatum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mentha piperita</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentha spicata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merremia turpethum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Merremia umbellata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merremia vitifolia</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mesua ferrea var. ferrea</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Michelia champaca</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Micrococcus mercurialis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miliusa tomentosa</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Millingtonia hortensis</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mimosa pudica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Minusops elengi</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mirabilis jalapa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mitragyna parvifolia</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Molineria trichocarpa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mollugo pentaphylla</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Momordica charantia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>var. charantia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1248
| Plant Name                        | B   | O   | U   | C   | H   | D   | E   | N   | F   | E   | H   | A   | L   | I   | L   | U   | N   | E   | P   | R   | R   | S   | K   | U   | V   | W   |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Momordica charantia var. muricata| 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Momordica dioica                 | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Monochoria vaginalis             | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Morinda citrifolia               | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Morinda pubescens                |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Morinda umbellata                |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Moringa pterygosperma            | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Morus alba                       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Mucuna pruriens var. pruriens    | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Mucuna pruriens                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Mukia maderaspatana              | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Muntingia calabura               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Murraya koenigii                 | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Musa paradisiaca                 | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Mussaenda betilla                | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Myristica beddomei ssp. beddomei |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Myristica fragrans               | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Myristica malabarica             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Mysopyrum smilacifolium          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Naravelia zeylanica              | 1   | 1   | 1   |     | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Naravelia alata                  | 1   | 1   | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Naringi crenulata                | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Nelumbo nucifera                 | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Neolamarckia cadamba             | 1   | 1   | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Nerium oleander                  | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Nervilia aragoana                | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Nervilia crociformis             | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Nicotiana tabacum                | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Nothapodytes nimmoniana           | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Nyctanthes arbor-tristis         | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Nymphaea nouchali                | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Nymphaea pubescens               | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ochlandra travancorica           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Occhna obtusata                  | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ochreinauclea missionis          | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ocimum americanum                | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ocimum basilicum var. basilicum  | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

1249
| Plant Name                      | B  | O  | U  | C  | H  | D  | E  | N  | F  | E  | H  | A  | L  | I  | L  | U  | N  | E  | P  | R  | R  | S  | K  | U  | V  | W  | O  |
|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Ocimum gratissimum            | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
| Ocimum kilimandscharicum      |    | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Ocimum tenuiflorum            | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
| Olea dioica                   |    | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Ophiorrhiza mungos            | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Ophiorrhiza rugosa var. prostrata | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Opuntia stricta var. dillenii |    | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Ormocarpum cochinense         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Oroxyllum indicum             | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Orthosiphon aristatus         | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Oryza sativa                  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Osbeckia brachystemon         | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Osbeckia muralis             | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Otacanthus caeruleus          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Oxalis corniculata           | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Paederia foetida              |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pajanelia longifolia         | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pancratium triflorum          |    | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pandanus canaranus            | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pandanus odoratissimus        | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Parahemionitis cordata        | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Paramignya monophylla         | 1  | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Passiflora foetida var. foetida | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pavetta indica var. indica    |    | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pavetta indica var. tomentosa | 1  | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pavonia odorata               | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pavonia zeylanica             | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pedalium murex                | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Peperomia pellucida           | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pergularia daemia             | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Persea macrantha              |    | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Persicaria chinensis          | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Phoenix sylvestris            | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pholidota imbricata           | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Phragmites karka              | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Plant Name                      | B | O | U | C | H | D | I | E | N | F | H | A | L | I | L | U | N | P | R | R | S | K | U | V | W | O |
| Phyla nodiflora                | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Phyllanthus acidus             | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Phyllanthus airy-shawii        | 1 | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Phyllanthus amarus             | 1 | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Phyllanthus emblica            | 1 | 1 | 1 |   | 1 | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Phyllanthus kozhikodianus      |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Phyllanthus maderaspatensis    |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Phyllanthus reticulatus        | 1 | 1 |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Phyllanthus tenellus           |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Phyllanthus urinaria           | 1 | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Phyllocephalum scabridum      |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Physalis angulata              | 1 | 1 | 1 |   | 1 | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Physalis peruviana             | 1 | 1 | 1 |   | 1 |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Piper betle                    | 1 | 1 | 1 |   | 1 | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Piper chaba                    |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Piper longum                   | 1 | 1 | 1 |   |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Piper nigrum var. nigrum       | 1 | 1 | 1 |   |   | 1 |   | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Piper triocicum                | 1 | 1 | 1 |   |   | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pistia stratiotes              | 1 | 1 | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plectranthus amboinicus        | 1 | 1 | 1 |   | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plectranthus amboinicus        | 1 | 1 | 1 |   | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plectranthus vettiveroides     | 1 | 1 | 1 |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plumbago indica                | 1 | 1 |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plumbago zeylanica             | 1 | 1 | 1 |   | 1 |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plumeria alba                  | 1 | 1 | 1 |   | 1 |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plumeria rubra                 | 1 | 1 | 1 |   | 1 |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pogostemon deccanensis         | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pogostemon heymaues            | 1 | 1 | 1 | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pogostemon paniculatus         | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pogostemon purpurascens        | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pogostemon quadrifolius        | 1 | 1 | 1 |   |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Polyalthia longifolia          | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Polycarpaea corymbosa          | 1 | 1 |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pongamia pinnata               | 1 | 1 | 1 | 1 |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Portulaca oleracea var. oleracea | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

1251
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>B</th>
<th>O</th>
<th>U</th>
<th>C</th>
<th>H</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>F</th>
<th>H</th>
<th>A</th>
<th>L</th>
<th>U</th>
<th>N</th>
<th>P</th>
<th>R</th>
<th>R</th>
<th>S</th>
<th>K</th>
<th>U</th>
<th>V</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pothos scandens</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pouzolzia wightii var. wightii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pouzolzia zeylanica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premna latifolia var. viburnoides</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premna serratifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosopis juliflora</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protasparagus gonocladus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protasparagus racemosus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseuderanthemum malabaricum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psidium guajava</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psilanthus travancorensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychotria dalzellii</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychotria flavida</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterocarpus marsupium</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterocarpus santalinus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterospermum acerifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterospermum diversifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Punica granatum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quassia indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quisqualis indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quisqualis malabarica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rauvolfia serpentina</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rauvolfia tetraphylla</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reissantia indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remusatia vivipara</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhaphidophora pertusa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhinacanthus nasutus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhizophora mucronata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhynchosystis retusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ricinus communis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosa damascena</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosa indica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotula aquatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rourea minor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1252
| Plant Name                  | B | O | U | C | H | D | E | N | F | H | A | L | I | U | N | E | P | R | H | S | K | U | V | E | W | O |
| Rubia cordifolia           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Ruella tuberosa            | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ruta chalepensis           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Saccharum munja            | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Saccharum officinarum      | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Saccharum spontaneum       | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salacia chinensis         | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Salacia fruticosa         | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salacia oblonga           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Salvadoria persica        | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salvinia molesta          | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Samanea saman             | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sansevieria cylindrica    | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sansevieria roxburghiana  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Santalum album            | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sapindus emarginatus      | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sapindus trifoliatus      | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sapium insigne            | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Saraca asoca              | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sarcostemma viminale      | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sarcostigma kleinii       | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sauropus androgynus       | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Scaevola sericea          | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Schleichera oleosa        | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Scirpoides lithosperma ssp. lithosperma | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Scleropyrum pentandrum    | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Scoparia dulcis           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sebastiana chamaelea      | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Seidenfia rheedei         | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Selaginella delicatula    | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Selaginella involvens     | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Semecarpus anacardium     | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Senna alata               | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna angustifolia        | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna auriculata          | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna hirsuta             | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna occidentalis        | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

1253
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>B</th>
<th>O</th>
<th>U</th>
<th>C</th>
<th>H</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>F</th>
<th>E</th>
<th>H</th>
<th>A</th>
<th>L</th>
<th>L</th>
<th>U</th>
<th>N</th>
<th>P</th>
<th>R</th>
<th>H</th>
<th>S</th>
<th>K</th>
<th>U</th>
<th>V</th>
<th>E</th>
<th>W</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senna siamea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Senna sophera</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna surattensis</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Senna tora</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sesbania orientale</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sesbania sesban</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida acuta</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida alnifolia</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida cordata</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida cordifolia</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida mysorensis</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida rhombifolia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sida rhomboidea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smilax zeylanica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smithia conferta</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smithia sensitiva</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum americanum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum erianthum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum lasiocarpum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum melongena</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum purpureum</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum violaceum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spermacoce articularis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spermacoce hispida</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spermacoce latifolia</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spilanthes calva</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spilanthes paniculata</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spondias pinnata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>O</td>
<td>C</td>
<td>H</td>
<td>D</td>
<td>E</td>
<td>N</td>
<td>F</td>
<td>H</td>
<td>A</td>
<td>L</td>
<td>U</td>
<td>L</td>
<td>N</td>
<td>E</td>
<td>P</td>
<td>R</td>
<td>H</td>
<td>S</td>
<td>K</td>
<td>U</td>
<td>V</td>
<td>W</td>
<td>O</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stachyphrynium spicatum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stachytarpheta indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sterculia foetida</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sterculia guttata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereospermum colais var. colais</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereospermum suaveolens</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Streblus asper</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strobilanthes ciliatus</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strychnos colubrina</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strychnos nux-vomica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strychnos potatorum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swertia corymbosa</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symphorema involucratum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sympliococ cochinichinensis ssp. laurina</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symplocos racemosa</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synedrella nodiflora</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium aquum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium aromaticum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium caryophyllatum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium cumini var. cumini</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium hemisphericum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium jambos</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium travancoricum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syzygium zeylanicum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tabernaemontana divaricata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tabernaemontana heyneana</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tacca leontopetaloides</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tagetes erecta</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talinum triangulare</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamarindus indica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamilnadia uliginosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarenna asiatica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tecoma stans</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1255
<p>| Plant Name                  | B | O | U | C | H | D | I | E | N | F | H | A | L | I | L | U | N | E | P | R | H | S | K | U | V | W | O |
| Tectona grandis            | 1 | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Tephrosia purpurea         | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Tephrosia tinctoria        | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Terminalia bellirica       | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Terminalia catappa         | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Terminalia chebula         | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Terminalia cuneata         | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Terminalia elliptica       | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Terminalia paniculata      | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Theobroma cacao            | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Thespesia lampas           | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Thespesia populnea         | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Thevetia peruviana         | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Thottea siliquosa          | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Thunbergia fragans         | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Thunbergia grandiflora     | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Thunbergia mysorensis      | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Tinospora cordifolia       | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Tinospora sinensis         | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Todalia asiatica          | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Toona ciliata              | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Torenia bicolor            | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Tragia involucrata         | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Trema orientalis           | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Trewia nudiflora           | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Trianthema portulacastrum  | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Tribulus terrestris        | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Trichopus zeylanicus       | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Trichocereus anguina       | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Trichosanthes anguina      | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Trichosanthes cucumerina   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Trichosanthes tricuspidata | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Tridax procumbens          | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Triumfetta rhomboidea      | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Turnera subulata           | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Turnera ulmifolia          | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Tylophora fasciculata      | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |</p>
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>BO</th>
<th>BU</th>
<th>CH</th>
<th>DI</th>
<th>EN</th>
<th>FE</th>
<th>HA</th>
<th>LA</th>
<th>LI</th>
<th>LU</th>
<th>NE</th>
<th>PO</th>
<th>RE</th>
<th>RH</th>
<th>SK</th>
<th>UI</th>
<th>VE</th>
<th>WO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tylophora indica var. indica</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Tylophora tetrapetala var. tetrapetala</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Uraria rufescens</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Urena lobata ssp. lobata</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Urena lobata ssp. sinuata</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Urginea indica</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Utricularia reticulata</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Uvaria narum</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vanda tessellata</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vateria indica</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Ventilago denticulata</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Ventilago maderaspatana</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vernonia anthelmintica</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vernonia cinerea</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vetiveria zizanioides</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vigna dalzelliana</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vigna mungo</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vigna pilosa</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vigna radiata var. radiata</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vigna radiata var. sublobata</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vigna unguiculata ssp. unguiculata</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vitex altissima</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vitex leucoxyylon</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vitex negundo</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Vitex trifolia</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Wattakaka volubilis</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Wedelia chinensis</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Wedelia trilobata</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Wendlandia thyrsoida</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Withania somnifera</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Woodfordia fruticosa</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Wrightia tinctoria</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Xanthosoma sagittifolium</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Xenostegia tridentata ssp. hastata</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>O</td>
<td>U</td>
<td>C</td>
<td>H</td>
<td>D</td>
<td>E</td>
<td>N</td>
<td>F</td>
<td>E</td>
<td>H</td>
<td>A</td>
<td>L</td>
<td>I</td>
<td>L</td>
<td>U</td>
<td>N</td>
<td>E</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Xenostegia tridentata ssp. tridentata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xylosia xilocarpa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zanonia indica</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zanthoxylum ovalifolium</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zanthoxylum rhetsa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zea mays</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zingiber cernuum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zingiber neesanum</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zingiber officinale</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zingiber roseum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zingiber zerumbet</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus glabrata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus Mauritiania</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus oenoplia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus rugosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus xylopyrus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zornia diphyllea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zornia gibbosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bazaar Medicines</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aconitum chasmanthum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aconitum heterophyllum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allium cepa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allium sativum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amomum subulatum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anacyclus pyrethrum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anethum graveolens</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angelica glauca</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquilaria Agallocha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arachis Hypogaea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berberis aristata</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boswellia serrata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boswellia thurifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brassica nigra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canarium vulgare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carum carvi</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cedrus deodara</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum tamala</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commiphora myrrha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1258
<p>| Plant Name                  | B  | O  | U  | C  | H  | D  | I  | E  | N  | F  | E  | H  | A  | L  | I  | L  | U  | N  | E  | P  | O  | R  | H  | S  | K  | U  | V  | E  | W  | O  |
|----------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Commiphora wightii         | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Coriandrum sativum         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Crocus sativus             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Cuminum cyminum            |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Decalepis hamiltonii       | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Elaeocarpus ganitrus       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Ferula asafoetida          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Foeniculum vulgare         |    | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Fritillaria roylei         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Glycyrrhiza glabra         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Guizotia abyssinica        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Hordeum vulgare            |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Hyoscyamus niger           | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Inula racemosa             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Lilium polyphyllum         |    | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Linum usitatissimum        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Nardostachys jatamansi     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Nigella sativa             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Papaver somniferum         | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Phoenix dactylifera        |    | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Picrorrhiza scrophulariifolia|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pimpinella anisum          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pinus sylvestris           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Piper cubeba               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pistacia integerrima       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Plantago ovata             | 1  |    | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Prunus dulcis              |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Psoralea corylifolia       |    | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Quercus infectoria         |    | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Raphanus sativus           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Rheum australe             | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Salix caprea               |    | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Saussurea lappa            |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Setaria italica            |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Shorea robusta             | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Taxus baccata              | 1  |    | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Trachyspermum ammi         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |</p>
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>BO</th>
<th>BU</th>
<th>CH</th>
<th>DI</th>
<th>EN</th>
<th>FE</th>
<th>HA</th>
<th>LA</th>
<th>LI</th>
<th>LU</th>
<th>NE</th>
<th>PO</th>
<th>RE</th>
<th>RH</th>
<th>SK</th>
<th>UI</th>
<th>VE</th>
<th>WO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigonella foenum-graecum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Triticum aestivum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Valeriana jatamansi</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Vitis vinifera</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### Table 12. Utility of plants for different diseases

<table>
<thead>
<tr>
<th>Diseases</th>
<th>No. of Plants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone</td>
<td>66</td>
<td>6.6</td>
</tr>
<tr>
<td>Burn</td>
<td>82</td>
<td>8.19</td>
</tr>
<tr>
<td>Children</td>
<td>268</td>
<td>26.77</td>
</tr>
<tr>
<td>Digestive</td>
<td>750</td>
<td>74.93</td>
</tr>
<tr>
<td>ENT</td>
<td>456</td>
<td>45.55</td>
</tr>
<tr>
<td>Fever</td>
<td>276</td>
<td>27.57</td>
</tr>
<tr>
<td>Hair</td>
<td>99</td>
<td>9.89</td>
</tr>
<tr>
<td>Ladies</td>
<td>388</td>
<td>38.76</td>
</tr>
<tr>
<td>Liver</td>
<td>280</td>
<td>27.97</td>
</tr>
<tr>
<td>Lung</td>
<td>275</td>
<td>27.47</td>
</tr>
<tr>
<td>Nervine</td>
<td>249</td>
<td>24.88</td>
</tr>
<tr>
<td>Poison</td>
<td>255</td>
<td>25.47</td>
</tr>
<tr>
<td>Repellent</td>
<td>68</td>
<td>6.79</td>
</tr>
<tr>
<td>Rheumatism</td>
<td>433</td>
<td>43.26</td>
</tr>
<tr>
<td>Skin</td>
<td>539</td>
<td>53.85</td>
</tr>
<tr>
<td>Urinary</td>
<td>281</td>
<td>28.07</td>
</tr>
<tr>
<td>Veterinary</td>
<td>167</td>
<td>16.68</td>
</tr>
<tr>
<td>Wound</td>
<td>458</td>
<td>45.75</td>
</tr>
</tbody>
</table>

### Fig. 6. Plants with maximum therapeutic efficacy

<table>
<thead>
<tr>
<th>Plants</th>
<th>No. of diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achyranthes aspera</td>
<td>59</td>
</tr>
<tr>
<td>Ocimum camphoratum</td>
<td>55</td>
</tr>
<tr>
<td>Leucas aspera</td>
<td>45</td>
</tr>
<tr>
<td>Mosa parviflora</td>
<td>45</td>
</tr>
<tr>
<td>Cynodon dactylon</td>
<td>44</td>
</tr>
<tr>
<td>Tinospora cordifolia</td>
<td>43</td>
</tr>
<tr>
<td>Cynra peintata</td>
<td>41</td>
</tr>
<tr>
<td>Catcus nudiflora</td>
<td>40</td>
</tr>
<tr>
<td>Aconcarthia indica</td>
<td>39</td>
</tr>
<tr>
<td>Eclipta prostrata</td>
<td>39</td>
</tr>
</tbody>
</table>
Table 13. Usage of plants for different diseases

<table>
<thead>
<tr>
<th>No. of Diseases</th>
<th>No. of Plants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>105</td>
<td>10.49</td>
</tr>
<tr>
<td>2 — 9</td>
<td>516</td>
<td>51.55</td>
</tr>
<tr>
<td>10 — 19</td>
<td>264</td>
<td>26.37</td>
</tr>
<tr>
<td>20 — 29</td>
<td>84</td>
<td>8.39</td>
</tr>
<tr>
<td>30 — 39</td>
<td>24</td>
<td>2.4</td>
</tr>
<tr>
<td>40 — 49</td>
<td>6</td>
<td>0.6</td>
</tr>
<tr>
<td>50 and above</td>
<td>2</td>
<td>0.19</td>
</tr>
</tbody>
</table>
Table 14. Administration media for medicinal plants of *Tulunadu*

| Plant Name                  | B | M | B | R | U | D | C | M | C | O | C | U | G | H | O | H | O | L | M | I | R | R | W | T | C |
| Natural Medicines           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| *Abelmoschus esculentus*    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Abelmoschus manihot*       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Abelmoschus moschatus*     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Abrus precatorius*         | 2 | 1 | 1 | 1 | 5 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| *Abrus pulchellus*          | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Abutilon indicum*          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Acacia caesia*             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Acacia catechu*            |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 2 | 1 |   |   |   |   |   |   |   |   |
| *Acacia farnesiana*         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acacia nilotica*           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acacia sinuata*            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acacia torta*              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acalypha ciliata*          |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 1 | 1 |   |   |   |   |   |   |   |   |
| *Acalypha fruticosa*        |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   | 1 |
| *Acalypha indica*           |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 1 | 1 |   |   |   |   |   |   |   | 1 |
| *Acampe praemorsa*          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Acanthus ilicifolius*      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Achyranthes aspera*        | 1 | 2 | 2 | 2 | 5 | 1 | 8 | 4 | 6 | 3 | 1 | 1 | 3 | 1 |   |   |   |   |   |   |   |   |   |
| *Acorus calamus*            | 1 | 1 |   |   | 1 | 1 | 3 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| *Acronychia pedunculata*    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Adansonia digitata*        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Adenanthera pavonina*      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Adenia hondala*            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Adiantum capillus-veneris*  | 1 |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   | 1 |
| *Adiantum caudatum*         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Adiantum lunatum*          |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 | 1 | 1 |   |   |   |   |   |   |   | 1 |
| *Aegle marmelos*            | 2 | 1 | 1 | 2 |   |   |   |   |   |   |   |   |   | 1 | 2 |   |   |   |   |   |   |   |   | 2 |
| *Aerva lanata*              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Aeschynomene indica*       |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   | 1 |
| *Agave americana*           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| *Ageratum conyzoides*       | 2 | 1 |   |   |   |   |   |   |   |   |   |   |   | 2 | 1 |   |   |   |   |   |   |   |   | 1 |
| *Aglai'a elaeagnoida*       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Ailanthus excelsa*         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   | 1 | 1 |
| *Ailanthus triphysa*        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| *Alangium salvifolium ssp. hexapetalum* |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Plant Name                      | B | M | R | U | C | D | C | O | C | U | G | H | O | H | M | L | J | M | R | R | T | C |
| Albizia chinensis              | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Albizia lebbeck                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Albizia odoratissima           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Allamanda cathartica           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Allophylus cobbe               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Allophylus serratus            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Alocasia macrorrhiza           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Aloe vera                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Alpinia calcarata              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Alpinia galanga                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Alseodaphne semecarpifolia var. semecarpifolia |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Alstonia scholaris             | 2 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| Alstonia venenata              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Alternanthera bettzickiana     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Alternanthera brasiliiana      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Alternanthera sessilis         |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| Alternanthera tenella          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Alysicarpus vaginalis          |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Amaranthus spinosus            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Amaranthus tricolor            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Amaranthus viridis             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Amorphophallus bulbifer        | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Amorphophallus commutatus      | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Amorphophallus paonifolius var. campanulatus |   | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| Amorphophallus paonifolius var. paonifolius |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ampelocissus indica            |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 |
| Ampelocissus latifolia         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Anacardium occidentale         |   | 2 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Anamirta coeculus              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ananas comosus                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Anaphyllyum wightii            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Andrographis paniculata        |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Anisochilus carnosus           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Anisomeles indica              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Anisomeles malabarica          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plant Name                          | B | M | R | U | C | D | O | C | U | G | H | O | H | M | H | O | L | J | M | R | C | R | T | C |
| Annona muricata                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Annona reticulata                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Annona squamosa                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Anodendron paniculatum             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Antiaris toxicaria                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Antidesma acidum                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Antidesma ghaesembilla              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Antidesma montanum                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Aphaniamixis polymasthnya          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Aporosa lindleyana                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ardisia solanacea                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Areca catechu                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Arenga wightii                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Argemone mexicana                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Argyreia elliptica                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Argyreia nervosa                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Arisaema tortuosum                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Aristochloia indica                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Aristochloia tagala                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Artemisia vulgaris var. indica     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Artemisia vulgaris var. nilagirica |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Artocarpus gomezianus ssp. zeylanicus |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Artocarpus heterophyllus           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Artocarpus hirsutus                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Artocarpus incisus                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Arundo donax                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Asclepias curassavica               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Asplenium trichomanes              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Asystasia dalzelliana              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Asystasia gangetica                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Atalantia monophylla               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Averrhoa bilimbi                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Averrhoa carambola                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Avicennia marina                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Azadirachta indica                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Azima terracantha                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plant Name                          | BM | BR | BU | CD | CM | CO | CU | GH | GO | HM | HO | L | J | MI | RC | RW | TC |
|------------------------------------|----|----|----|----|----|----|----|----|----|----|----|---|---|---|----|----|----|----|
| Baccaurea courtallensis            |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bacopa monnieri                    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Baliospermum montanum              |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bambusa bambos                     |    |    | 1  | 2  |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Barleria cristata                  |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Barleria prionitis                 |    |    | 2  |    | 1  |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Barringtonia racemosa              | 3  |    |    | 1  | 1  |    |    |    |    | 3  | 2  | 4  |   |   |   |    |   |   |
| Basella alba                       | 2  |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bauhinia acuminata                 |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bauhinia malabarica                |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bauhinia phoenicea                 |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bauhinia purpurea                  |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bauhinia racemosa                  |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bauhinia scandens var. anguina     |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bauhinia tomentosa                 |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bauhinia variegata                 |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Begonia malabarica                 |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Benincasa hispida                  | 1  |    | 3  |    | 2  | 1  |    |    |    |    |    |   |   |   |    |    |   |    |
| Benkara malabarica                 |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bidens biternata                   |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Biophyllum reinwardtii             | 1  |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bixa orellana                      |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Blepharis asperrima                |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Blepharis repens                   |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Boehmeria glomerulifera            |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Boerhavia diffusa                  | 1  |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Boerhavia erecta                   | 1  |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bombax ceiba                       |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bombax insigne                     |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Borassus flabellifer               |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bougainvillea spectabilis          |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Brassica juncea                    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Breynia retusa                     |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Breynia vitis-idaea                |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Briedelia retusa                   |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Briedelia scandens                 | 1  |    |    | 2  |    | 1  | 1  |    |    |    |    |    |   |   |   |    |    |   |    |
| Buchanania lanzan                  |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Bulbophyllum sterile               |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |   |    |
| Plant Name                  | B | M | R | U | D | C | O | C | U | G | H | O | H | M | L | J | M | R | C | R | W | T | C |
| Butea frondosa             | 4 | 1 | 4 | 3 | 2 | 3 |
| Caesalpinia bonduc         | 1 | 2 |
| Caesalpinia coriaria       |   |   |
| Caesalpinia cristia        | 2 | 1 |   | 1 | 1 |
| Caesalpinia mimosoides     | 1 | 1 |   | 2 | 1 | 1 |
| Caesalpinia pulcherrima    |   |   |
| Caesalpinia sappan         | 1 |
| Caesalpinia spicata        |   |   |
| Cajanus cajan              |   | 1 |
| Cajanus scarabaeoides      |   |   |
| Calacanthis grandiflorus   |   |   |
| Calamus rotang             |   |   |
| Callicarpa tomentosa       |   |   |
| Calophyllum calaba         |   |   |
| Calophyllum inophyllum     |   |   |
| Calotropis gigantea        | 2 | 1 | 1 | 4 | 2 | 2 | 7 | 1 |
| Calycocpterus floribunda   | 5 |   | 1 | 6 |
| Camellia sinensis          |   | 1 |
| Cananga odorata            |   |   |
| Canavalia cathartica       |   |   |
| Canna indica               |   | 1 |
| Cannabis sativa ssp. indica|   |   |
| Canthium coromandelicum    | 1 | 1 | 1 |
| Canthium rheedel           |   |   |
| Capparis floribunda        | 1 | 1 |
| Capsicum annuum            | 1 | 2 | 1 | 1 |
| Capsicum frutescens        | 1 | 1 | 1 | 1 |
| Carallia brachiata         | 1 |
| Cardioespernum halicacabum | 2 | 1 | 2 |
| Careya arborea             | 1 | 1 |
| Carica papaya              | 2 |
| Carissa carandas           |   |   |
| Carissa congesta           |   |   |
| Caryota urens              | 1 | 1 | 2 | 2 | 1 |
| Casearia ovata             | 1 | 1 |
| Cassia fistula             | 4 | 2 | 1 | 1 | 3 | 3 |
| Cassytha filiformis        | 1 | 1 | 1 | 1 |
| Casuarina litorea          |   |   |
| Plant Name                        | B | M | B | R | U | D | C | M | C | O | C | U | G | H | G | O | H | M | H | O | L | J | M | R | C | R | W | T | C |
| Catharanthus pusillus            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Catharanthus roseus              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| Catunaregam spinosa              | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| Cayratia mollissima              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Ceiba pentandra                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Celastrus paniculatus            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Celosia argentea                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Celtis timorensis                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Centella asiatica                | 2 |   |   | 4 |   | 6 |   | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Centratherum punctatum           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Centrosera molle                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cerbera odollam                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cereus pterogonus                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Ceropegia candelabrum             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| var. candelabrum                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cestrum nocturnum                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Chaenomecrista mimosoides        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Chassalia candelabrum var. candelabrum |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Chassalia curviflora var. longifolia |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Chassalia curviflora var. ophioxyloides |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cheilanthes farinosa             |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Chenopodium ambrosioides          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Chisionanthus mala-elengi ssp. mala-elengi |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Chionemorpha fragrans            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Chromolaena odorata              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Chrysanthemum indicum            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Chrysophyllum cainito             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cicely arcticum                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cinchona succirubra              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cinnamomum camphora              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cinnamomum malabatrum             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| Cinnamomum verum                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cipadessa baccifera              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cissampelos pareira var. hirsuta |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cissus discolor                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cissus elongata                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Cissus latifolia                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |

1268
<p>| Plant Name                  | BM | BR | BU | CD | CM | CO | CU | GH | GO | HM | HO | L | M | R | RC | RW | TC |
|----------------------------|----|----|----|----|----|----|----|----|----|----|----|   |   |   |    |    |    |
| Cissus quadrangularis      | 1  | 1  | 3  |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Cissus repanda             |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Cissus repens              |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Citharexylum spinosum      | 1  |    |    | 2  |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Citrullus colocynthis      |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Citrullus lanatus          |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Citrus aurantifolia        | 1  | 1  | 1  | 4  | 1  | 2  | 11 | 4  |    |    |    |    |   |   |   |    |    |    |
| Citrus aurantium           | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Citrus limon               |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Citrus maxima              |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Citrus medica              | 1  |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Citrus reticulata          | 1  |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Cleistanthus collinus      |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Clematis gouriana          |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Cleome burnmannii          |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Cleome viscosa             | 1  | 1  | 1  | 1  |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Clerodendrum inerme        |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Clerodendrum phlomidis     |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Clerodendrum serratum      |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Clerodendrum viscousom     | 1  | 2  | 2  | 6  | 1  | 1  | 2  | 3  |    |    |    |    |   |   |   |    |    |    |
| Clinacanthus nutans        |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Clitoria ternatea var. pleniflora | 1 | 3 |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Clitoria ternatea var. ternatea | 1 | 3 |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Coccinia grandis           | 1  | 3  |    | 1  | 1  | 2  | 1  |    |    |    |    |    |   |   |   |    |    |    |
| Cocculus hirsutus          |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Cocos nucifera             |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Coffea arabica             |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Coix lacryma-jobi          |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Coldenia procumbens        |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Colocasia esculenta        |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Combretum latifolium       | 1  |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Commelina benghalensis     |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Commelina diffusa          |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Coralllocarpus epigaeus     |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Corchorus capsularis       |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Cordia obliqua              | 2  | 1  |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |
| Coronopus didymus           |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |    |    |    |</p>
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>B M</th>
<th>B R</th>
<th>B U</th>
<th>C D</th>
<th>C M</th>
<th>C O</th>
<th>C U</th>
<th>G H</th>
<th>G O</th>
<th>H M</th>
<th>H O</th>
<th>L J</th>
<th>M I</th>
<th>R C</th>
<th>R W</th>
<th>T C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corypha umbraculifera</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Coscinium fenestratum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cosmostigma racemosum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Costus pictus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costus speciosus</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Couroupita guianensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Crocoscelphalum crepidioides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crataeva magna</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum asiaticum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Crinum latifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crinum viviparum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crossandra infundibuliformis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria calycina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria pallida</td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria retusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crotalaria verrucosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croton laevigatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Croton malabaricus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Croton tiglium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Cryptolepis buchananii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumis melo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cucumis prophetarum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumis sativus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cucurbita maxima</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cucurbita pepo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curculigo orchiodes</td>
<td>1</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma amada</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Curcuma aromatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma caesia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Curcuma longa</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma neilgherensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma oligantha var. lutea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma oligantha var. oligantha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma pseudomontana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curcuma zedoaria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cuscuta reflexa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cyanotis cristata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B M</td>
<td>B R</td>
<td>B U</td>
<td>C D</td>
<td>C M</td>
<td>C O</td>
<td>G H</td>
<td>G O</td>
<td>H M</td>
<td>H O</td>
<td>L J</td>
<td>M I</td>
<td>R C</td>
<td>R W</td>
<td>T C</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Cyathula prostrata</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cycas circinalis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyclea peltata</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cymbidium aloifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cymbopogon citratus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cymbopogon flexuosus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cynodon dactylon</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cynoglossum zeylanicum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyperus rotundus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Dalbergia horrida var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>horrida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia lanceolaria ssp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lanceolaria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia latifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia sissoo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalbergia volubilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datura metel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datura stramonium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delonix elata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dendrobium barbatulum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dendrochium ovatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dendrocalamus strictus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dendrophthoe falcata var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>falcata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Derris brevipes var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>brevipes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Derris scandens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium gangeticum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium heterocarpon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium heterophyllum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium laxiflorum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium motorium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium oojeinense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium triangulare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium triflorum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desmodium triquetrum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dichrostachys cinerea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea alata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea annulata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea elephantipes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea esculenta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea nipponica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea unilocularis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>M</td>
<td>R</td>
<td>U</td>
<td>C</td>
<td>D</td>
<td>C</td>
<td>O</td>
<td>C</td>
<td>U</td>
<td>G</td>
<td>H</td>
<td>G</td>
<td>O</td>
<td>H</td>
<td>M</td>
</tr>
<tr>
<td>Dioscorea belophylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea bulbifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea hispida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea oppositifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea pentaphylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioscorea wallichii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diospyros buxifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diospyros candolleana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diospyros malabarica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diospyros montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploclisia glaucescens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diplocyclos palmatus</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dipteracanthus patulus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dipterocarpus indicus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dodonaea viscosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dolichos trilobus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dracaena terniflora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drosera indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drynaria quercifolia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drypetes roxburghii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecbolium ligustrinum var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ligustrinum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eclipta prostrata</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eichhornia crassipes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeagnus conferta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeis guinensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeocarpus serratus var.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>serratus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeocarpus sphaericus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeocarpus tuberculatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elephantopus scaber</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elettaria cardamomum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eleusine coracana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eleusine indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embelia ribes</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embelia tsjeriam-cottam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emilia sonchifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensete superbum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entada rheedei</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>M</td>
<td>R</td>
<td>U</td>
<td>C</td>
<td>D</td>
<td>C</td>
<td>O</td>
<td>C</td>
<td>U</td>
<td>G</td>
<td>H</td>
<td>G</td>
<td>O</td>
<td>H</td>
<td>O</td>
</tr>
<tr>
<td>Eranthemum roseum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erycibe paniculata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eryngium foetidum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erythrina stricta</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erythrina variegata</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erythroxylum monogynum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eucalyptus tereticornis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eupatorium triplinerve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euphorbia hirta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euphorbia nivulia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euphorbia thymifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euphorbia tirucalli</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evolvulus alsinoides var. alsinoides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evolvulus nummularius</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exacum tetragonum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excoecaria agallocha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fagraea ceylanica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus amplissima</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus arnottiana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus auriculata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus benghalensis var. benghalensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus callosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus exasperata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus hispida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus microcarpa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus racemosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus religiosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus tinctoria ssp. gibbosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus tsjahela</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ficus virens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacourtia indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacourtia jangomas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacourtia montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flemingia macrophylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flemingia stroblifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flemingia tuberosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flueggea leucopyrus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1273
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>B</th>
<th>M</th>
<th>R</th>
<th>C</th>
<th>D</th>
<th>C</th>
<th>O</th>
<th>C</th>
<th>U</th>
<th>G</th>
<th>H</th>
<th>O</th>
<th>H</th>
<th>O</th>
<th>L</th>
<th>M</th>
<th>R</th>
<th>R</th>
<th>T</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fomes fomentarius</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Garcinia gummi-gutta var. gummi-gutta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Garcinia indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Garcinia morella</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Garcinia xanthochymus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gardenia jasminoides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gardenia resinifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Garuga pinnata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Geissaspis cristata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Geophila repens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Girardinia diversifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gliricidia sepium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Globa sessiliflora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Glochidion zeylanicum var. zeylanicum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gloriosa superba</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Glycosmis pentaphylla</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gmelina arborea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gmelina asiatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gnetum edule</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gomphia serrata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gomphrena celosioide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gossypium arboreum</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gossypium barbadense</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gossypium hirsutum</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Grangea maderaspatana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Graptophyllum pictum</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Grewia glabra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Grewia nervosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Grewia tilifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gymnacranthera farquhariana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gymnema sylvestre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gymnostachyum febrifugum var. febrifugum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gynandropsis gynandra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Habenaria diphylla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Habenaria grandifloriformis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>M</td>
<td>R</td>
<td>U</td>
<td>C</td>
<td>D</td>
<td>M</td>
<td>O</td>
<td>C</td>
<td>U</td>
<td>G</td>
<td>H</td>
<td>G</td>
<td>O</td>
<td>H</td>
<td>M</td>
<td>H</td>
<td>O</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>Haldina cordifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedychium coronarium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis auricularia</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis corymbosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis herbacea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedyotis neesiana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helianthus annus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helicanthes elastica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helicteres isora</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heliotropium indicum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemidesmus indicus var. indicus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemigraphis colorata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterophragma roxburghii</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus hispidissimus</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus mutabilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus radiatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus rosa-sinensis var. rosa-sinensis</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus rosa-sinensis var. schizopetalus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibiscus surattensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiptage benghalensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holarrhenia pubescens</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holigarna arnottiana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holigarna ferruginea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holoptelea integrifolia</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holostemma ada-kodien</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homaloicladium platycladum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homonoia retusa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homonoia riparia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopea parviflora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopea ponga</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoya ovalifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hugonia mystax</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humboldtia brunonis</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hybanthus enneaspermus</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydnocarpus alpina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydnocarpus macrocarpa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydnocarpus pentandra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>M</td>
<td>R</td>
<td>U</td>
<td>C</td>
<td>D</td>
<td>M</td>
<td>O</td>
<td>C</td>
<td>U</td>
<td>G</td>
<td>H</td>
<td>O</td>
<td>H</td>
<td>M</td>
<td>H</td>
<td>J</td>
<td>L</td>
<td>M</td>
<td>R</td>
</tr>
<tr>
<td>Hydrocotyle javanica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrocotyle sibthorpioides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hygrophila ringens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hygrophila schulli</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hymenodictyon obovatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hymenodictyon orixense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyptis capitata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyptis suaveolens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ichnocarpus frutescens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impatiens flaccida</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Impatiens minor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imperata cylindrica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigofera linnaei</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea aculeata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ipomoea alba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea aquatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea asarifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea batatas</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea marginata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea mauritiana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea nil</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea obscura</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea pes-caprae ssp. pes-caprae</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea pes-tigridis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipomoea triflora</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ixora brachiata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ixora coccinea</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ixora nigricans</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum angustifolium var. angustifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum auriculatum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum coarctatum</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum flexile var. flexile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum grandiflorum</td>
<td>5</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasminum malabaricum var. malabaricum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1276
| Plant Name                  | B | M | R | U | C | D | M | C | O | C | U | G | H | G | O | H | M | H | O | L | J | M | R | C | R | W | T | C |
| Jasminum multiflorum        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Jasminum sambac             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Jatropha curcas             | 1 |   | 1 | 1 | 1 | 1 | 4 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Jatropha glandulifera       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Jatropha gossypifolia       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Jatropha multifida          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Justicia adhatoda           |   | 2 | 10|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Justicia gendarussa         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 1 |   |   |   |   |   |   |
| Justicia nagpurensis        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Justicia procumbens         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Justicia trinervia          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Kaempferia galanga          | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 |
| Kaempferia rotunda          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Kalanchoe pinnata           |   | 6 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Kammetia caryophyllata      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Kingiodendron pinnatum      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Knema attenuata             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Kyllinga brevifolia var.    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| brevifolia                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Kyllinga nemoralis          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lablab purpureus            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lagenandra ovata            | 1 |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| Lagenandra toxicaria var.   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| toxicaria                   | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| Lagenaria siceraria         |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Lagerstroemia microcarpa    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lagerstroemia speciosa      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Lannea coromandelica        |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Lantana camara var. camara  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Laportea interrupta         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Lawsonia inermis            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 6 |
| Leeca asiatica              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leeca indica                | 2 |   | 2 | 1 | 1 |   |   | 1 | 2 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lemna perpusilla             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lepidagathis incurva var.   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| micronata                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lepidagathis keralensis     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lepidagathis prostrata      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leptadenia reticulata       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leucas aspera               | 1 |   | 1 | 2 |   |   |   |   | 8 | 4 | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

1277
| Plant Name                                      | B | M | R | U | D | C | M | O | C | U | G | H | O | H | M | H | O | L | I | M | R | C | R | W | T | C |
| Leucas biflora                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leucas lavandulifolia                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Limnophila indica                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Limnophila repens                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Limonia acidissima                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lindernia caespitosa                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lindernia crustacea                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Litsea coriacea                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Litsea glutinosa                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lobelia nicotianifolia var. nicotianifolia    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Loeseneriella arnottiana                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lophopetalum wightianum                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ludwigia hyssopifolia                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ludwigia octovalvis ssp. sessiliflora          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Luffa acutangula var. acutangula              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Luffa acutangula var. amara                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Luffa cylindrica                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lycopersicon esculentum                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lygodium flexuosum                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Macaranga peltata                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Macrotyloma uniflorum                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Madhuca longifolia var. latifolia             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Madhuca neriifolia                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Maesa indica                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mallotus philippensis var. philippensis        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mammea suriga                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mangifera indica                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Manihot esculenta                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Manilkara hexandra                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Manilkara zapota                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Maranta arundinacea                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Marrubium vulgaris                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Marsilea minuta                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Melastoma malabathricum                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Melia azedarach                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plant Name                  | B | M | R | U | C | D | M | O | C | U | G | H | G | O | H | M | H | O | L | J | M | R | C | R | T | C |
| Melia dubia                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Memecylon lunu-ankenda     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Memecylon angustifolium    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Memecylon grande           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Memecylon randerianum      |   | 1 |   |   |   |   | 1 |   | 1 |   | 4 |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |
| Memecylon umbellatum       |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mentha piperita            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mentha spicata             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Merremia turpethum         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Merremia umbellata         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Merremia vitifolia         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mesua ferrea var. ferrea   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Michelia champaca          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Micrococcus mercurialis    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Miliusa tomentosa          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Millingtonia hortensis     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mimosia pudica             |   | 1 |   |   |   |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Minusops elengi            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Mirabilis jalapa           |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mitragyna parvifolia       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mollineria trichocarpa     |   | 1 |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mollugo pentaphylla        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Momordica charantia var.   |   | 1 |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| charantia                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Momordica charantia var.   |   | 1 |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| muricata                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Momordica dioica           |   | 1 |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Monochoria vaginalis       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Morinda citrifolia         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Morinda pubescens          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Morinda umbellata          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Moringa pterygosperma      |   | 3 |   |   |   |   | 5 |   |   | 3 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Morus alba                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Mucuna pruriens var.       |   | 1 |   |   |   |   | 2 |   |   | 2 |   | 3 |   | 2 |   | 8 |   |   |   |   |   |   |   |   |
| pruriens                   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mukia maderaspatana        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Muntingia calabura         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Murraya koenigii           |   | 2 |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4  |
| Musa paradisiaca           |   | 2 |   | 1 |   | 3 |   | 1 |   | 2 | 2 | 4 | 2 | 5 | 1 | 1 |   |   |   |   |   |   |   |   |
| Mussaenda belilla          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6  |

1279
| Plant Name                      | B | B | R | U | C | D | C | O | U | G | H | O | H | M | H | O | L | J | M | I | R | C | R | W | T | C |
| Myristica beddomei ssp. beddomei |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Myristica fragrans             | 5 | 1 |   |   |   |   | 1 |   |   | 8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Myristica malabarica           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Myxopyrum smilacifolium        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Naravelia zeylanica            |   |   |   |   |   |   |   | 1 |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Naregamia alata                | 3 | 2 | 2 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Naringi crenulata              | 1 |   |   |   |   | 5 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Nelumbo nucifera               |   |   |   |   |   | 1 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Neolamarckia cadamba           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Nerium oleander                | 1 |   |   |   |   |   |   | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Nervilia aragoana              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Nervilia crocifloris           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Nicotiana tabacum              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Nothapodytes nimmoniana        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Nyctanthes arbor-tristis      | 1 |   |   |   |   | 2 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Nymphaea nouchali              |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Nymphaea pubescens             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ochlandra travancorica         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ochnea obtusata                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ochreinauclea missionis        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Ocimum americanum              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ocimum basilicum var. basilicum|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Ocimum gratissimum             | 2 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ocimum kilimandscharicum       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ocimum tenuiflorum             | 1 | 1 |   | 1 | 1 | 5 | 4 | 4 | 15 | 10 | 6 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |
| Olea diotica                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Ophiophriza mungos             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 |
| Ophiophriza rugosa var. prostrata |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 |
| Opuntia striata var. dillenii  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ornocarpum cochinheinense      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Oroxyllum indicum              | 3 | 1 | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Orthosiphon aristatus          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Oryza sativa                   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| Osbeckia brachystemon          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Osbeckia muralis              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Otacanthus caeruleus           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Oxalis corniculata             | 2 |   |   |   |   |   |   | 1 | 2 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |

1280
<p>| Plant Name                          | B | M | R | U | C | D | C | O | C | U | G | H | G | O | H | M | H | O | L | J | M | I | R | W | T | C |
| <em>Paederia foetida</em>                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Pajanelia longifolia</em>             | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Pandanus camanaranus</em>             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 | 2 |   |   |   |   |   |   |   |   |   |   |   |
| <em>Pandanus odoratissimus</em>           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |
| <em>Parahemionitis cordata</em>           | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Paramignya monophylla</em>            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Passiflora foetida var. foetida</em>  | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Pavetta indica var. indica</em>       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Pavetta indica var. tomentosa</em>    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 2 |   |   |   |   |   |   |   |   |   |   |   |
| <em>Pavonia odorata</em>                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Pavonia zeylanica</em>                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Pedalium murex</em>                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Peperomia pellucida</em>              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Pergularia daemia</em>                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Persea macrantha</em>                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Persicaria chinensis</em>             | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phoenix sylvestris</em>               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Pholidota imbricata</em>              | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phragmites karka</em>                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 2 | 2 |   |   |   |   |   |   |   |   |   |   |
| <em>Phyla nodiflora</em>                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phyllanthus acidus</em>               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phyllanthus airy-shawii</em>          |   | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phyllanthus amarus</em>               | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phyllanthus emblica</em>              | 6 | 2 | 1 | 1 | 3 | 1 | 4 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phyllanthus kozhikodianus</em>        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phyllanthus maderaspatensis</em>      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phyllanthus reticulatus</em>          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phyllanthus tenellus</em>             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phyllanthus urinaria</em>             | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Phyllocephalum scabridum</em>         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Physalis angulata</em>                | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Physalis peruviana</em>               | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Piper betle</em>                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 2 | 1 | 1 |   |   |   |   |   |   |   |   |   |
| <em>Piper chaba</em>                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Piper longum</em>                     | 2 |   | 1 |   | 4 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <em>Piper nigrum var. nigrum</em>         | 1 | 1 | 6 | 6 | 2 | 1 | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |</p>
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>B</th>
<th>M</th>
<th>R</th>
<th>U</th>
<th>C</th>
<th>D</th>
<th>O</th>
<th>C</th>
<th>G</th>
<th>H</th>
<th>O</th>
<th>H</th>
<th>L</th>
<th>M</th>
<th>I</th>
<th>R</th>
<th>W</th>
<th>T</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piper triocicum</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pistia stratiotes</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pithecellobium dulce</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plectranthus amboinicus</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plectranthus vettiveroides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbago indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbago zeylanica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumeria alba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumeria rubra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon deccanensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon heyneanus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon paniculatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon purpurascens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogostemon quadrifolius</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyalthia longifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polycarpaea corymbosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pongamia pinnata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portulaca oleracea var. oleracea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pothos scandens</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pouzolzia wightii var. wightii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pouzolzia zeylanica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premna latifolia var. viburnoides</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premna serratifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosopis juliflora</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protasparagus gonocladus</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protasparagus racemosus</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudarthria viscidia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseuderanthemum malabaricum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psidium guajava</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psilanthus travancorensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychotria dalzellii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychotria flavida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterocarpus marsupium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterocarpus santalinus</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterospermum acerifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pterospermum diversifolium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Punica granatum</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1282
<p>| Plant Name                    | B | M | R | U | C | D | C | O | C | U | G | H | G | H | M | H | O | L | J | M | R | C | R | W | T | C |
| Quassia indica               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Quisqualis indica           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Quisqualis malabarica       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rauvolfia serpentina        | 1 |   | 6 | 2 | 1 | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rauvolfia tetraphylla       |   | 2 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Reissantia indica           |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Remusatia vivipara         |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rhaphidophora pertusa       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rhinacanthus nasatus        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rhizophora mucronata        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rhynchostylis retusa        | 1 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ricinus communis            | 1 |   | 9 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rosa damascena              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rosa indica                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rotula aquatica             |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rouea minor                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rubia cordifolia            | 2 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ruellia tuberosa            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ruta chalepensis            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Saccharum munja             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Saccharum officinarum       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Saccharum spontaneum        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salacia chinensis           |   | 1 | 4 | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salacia fruticosa           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salacia oblonga             |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salvadoria persica          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salvinia molesta            |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Samanea saman               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sansevieria cylindrica      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sansevieria roxburghiana    |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Santalum album              | 1 | 2 | 1 | 4 | 4 | 7 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sapindus emarginatus        |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sapindus trifoliatus        |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sapium insigne              | 2 | 1 |   | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Saraca asoca                | 1 | 2 | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sarcostemma viminalis       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sarcostigma kleinii         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sauropsus androgynus        | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plant Name                              | B | M | C | R | U | D | B | L | N | C | O | U | G | H | G | M | O | H | L | M | I | R | W | T | C |
| Scaevola sericea                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Schleicheria oleosa                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Scleria lithosperma ssp. lithosperma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Scleropyrum pentandrum                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Scoparia dulcis                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sebastiana chamaelea                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Seidenfia rheedei                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Selaginella delicatula                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Selaginella involvens                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Semecarpus anacardium                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna alata                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna angustifolia                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna auriculata                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna hirsuta                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna occidentalis                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna siamea                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna sophora                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna surattensis                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Senna tora                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sesamum orientale                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sesbania grandiflora                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sesbania sesban                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sida acuta                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sida alnifolia                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sida cordata                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sida cordifolia                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sida mysoensis                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sida rhombifolia                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sida rhomboidea                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Smilax zeylanica                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Smithia conferta                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Smithia sensitiva                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Solanum americanum                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Solanum erianthum                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Solanum lasiocarpum                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Solanum melongena                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Solanum torvum                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Solanum trilobatum                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plant Name                        | B | M | R | U | C | D | C | O | C | U | G | H | O | H | M | H | O | L | J | M | R | C | R | W | T | C |
| Solanum tuberosum               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Solanum violaceum ssp. multiflorum | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Solanum violaceum ssp. violaceum |   | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Solanum virginianum             |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Solena amplexicaulis            |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sorghum halepense               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Spatholobus parviflorus         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Spermacoce articularis          |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Spermacoce hispida              |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Spermacoce latifolia            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sphaeranthus indicus            |   | 5 |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Spilanthes calva               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Spilanthes paniculata          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Spondias pinnata                |   | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Stachyphrynium spicatum         |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Stachytarpheta indica           |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sterculia foetida               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sterculia guttata               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Stereospermum colais var. colais |   | 1 |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Stereospermum suaveolens        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Streblus asper                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Stroblanthes ciliatus           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| Strychnos colubrina              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Strychnos nux-vomica             |   | 3 | 2 | 1 |   |   |   | 1 | 3 | 1 |   | 3 |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |
| Strychnos potatorum              |   |   |   | 2 | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Swertia corymbosa                |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Symphorema involucratum          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Symplocos cochinchinensis ssp. laurina |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Symplocos racemosa               |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Synedrella nodiflora             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Syzygium aqueum                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Syzygium aromaticum              |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Syzygium caryophyllatum          |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4 |
| Syzygium cumini var. cumini      |   |   |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Syzygium hemisphericum           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Syzygium jambos                  |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |</p>
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>B M</th>
<th>B R</th>
<th>B U</th>
<th>C D</th>
<th>C M</th>
<th>C O</th>
<th>C U</th>
<th>G H</th>
<th>G O</th>
<th>H M</th>
<th>H O</th>
<th>L J</th>
<th>M I</th>
<th>R C</th>
<th>R W</th>
<th>T C</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Syzygium travancoricum</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Syzygium zeylanicum</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tabernaemontana divaricata</em></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tabernaemontana heyneana</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Taccia leontopetaloides</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tagetes erecta</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Talinum triangulare</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tamarindus indica</em></td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tamilnadia uliginosa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tarenna asiatica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Tecoma stans</em></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tectona grandis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tephrosia purpurea</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tephrosia tinctoria</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Terminalia bellirica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><em>Terminalia catappa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Terminalia chebula</em></td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td><em>Terminalia cuneata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Terminalia elliptica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Terminalia paniculata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Theobroma cacao</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Thespesia lampas</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Thespesia populnea</em></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>Thevetia peruviana</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Thottea siliquosa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Thunbergia fragrans</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Thunbergia grandiflora</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Thunbergia mysorensis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Tinospora cordifolia</em></td>
<td>1</td>
<td>1</td>
<td></td>
<td>11</td>
<td>11</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tinospora sinensis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Toddalia asiatica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Toona ciliata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Torenia bicolour</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tragia involucrata</em></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trema orientalis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trewia nudiflora</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Triandthera portulacastrum</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tribulus terrestris</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>BM</td>
<td>BR</td>
<td>BU</td>
<td>CD</td>
<td>CM</td>
<td>CO</td>
<td>CU</td>
<td>GH</td>
<td>GO</td>
<td>HM</td>
<td>HO</td>
<td>L</td>
<td>J</td>
<td>M</td>
<td>RC</td>
<td>RW</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Trichopus zeylanicus ssp. travancoricus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichosanthes anguina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichosanthes cucumerina</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichosanthes tricuspidata var. tricuspidata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tridax procumbens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triumfetta rhomboidea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnera subulata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnera ulmilolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylophora fasciculata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylophora indica var. indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylophora tetrapetala var. tetrapetala</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uraria rufescens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urena lobata ssp. lobata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urena lobata ssp. sinuata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urginea indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utricularia reticulata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uvaria narum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vanda tessellata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vateria indica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilago denticulata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilago maderaspatana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vernonia anthelmintica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vernonia cinerea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vetiveria zizanioides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna dalzelliana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna mungo</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna pilosa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna radiata var. radiata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna radiata var. sublobata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigna unguiculata ssp. unguiculata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitex altissima</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitex leucoxylon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitex negundo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitex trifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wattakaka volubilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>M</td>
<td>R</td>
<td>U</td>
<td>C</td>
<td>D</td>
<td>C</td>
<td>M</td>
<td>O</td>
<td>C</td>
<td>U</td>
<td>G</td>
<td>H</td>
<td>G</td>
<td>O</td>
<td>H</td>
</tr>
<tr>
<td>Wedelia chinensis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Wedelia trilobata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Wendlandia thyrsoides</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withania somnifera</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodfordia fruticosa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wrightia tinctoria</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xanthosoma sagittifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xenostegia tridentata ssp. hastata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xenostegia tridentata ssp. tridentata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xyria xylolarpa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zania indica</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zantheroxylum ovalifolium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zanthoxylum rhetsa</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zea mays</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zingiber cernuum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zingiber neesanum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zingiber officinale</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zingiber roseum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zingiber zerumbet</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus glabrata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus mauritiana</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus oenoplia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus rugosa</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zizyphus xylopyrus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zornia diphylla</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zornia gibbosa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bazaar Medicines</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aconitum chasmanthum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aconitum heterophyllum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allium cepa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allium sativum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anomum subulatum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anacyclus pyrethrum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anethum graveolens</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angelica glauca</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquilaria agallocha</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arachis hypogaea</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1288
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>B M</th>
<th>B R</th>
<th>U</th>
<th>C</th>
<th>D</th>
<th>C M</th>
<th>C O</th>
<th>C U</th>
<th>G</th>
<th>H</th>
<th>G O</th>
<th>H M</th>
<th>H O</th>
<th>L</th>
<th>J</th>
<th>M</th>
<th>C</th>
<th>R</th>
<th>C W</th>
<th>T</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berberis aristata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boswellia serrata</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boswellia thurifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brassica nigra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canarium vulgare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carum carvi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cedrus deodara</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamomum tamala</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commiphora myrrha</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commiphora wightii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coriandrum sativum</td>
<td>1</td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crocus sativus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuminum cyminum</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decalepis hamiltonii</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaeocarpus ganitrus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferula asafoetida</td>
<td>6</td>
<td></td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foeniculum vulgare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fritillaria roylei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycyrrhiza glabra</td>
<td>1</td>
<td></td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guizotia abyssinica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hordeum vulgare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyoscyamus niger</td>
<td>1</td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inula racemosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lilium polyphyllum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linum usitatissimum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nardostachys jatamansi</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nigella sativa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Papaver somniferum</td>
<td>2</td>
<td></td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phoenix dactylifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Picrorrhiza scrophularisfolia</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pimpinella anisum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinus sylvestris</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piper cubeba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pistacia integerrima</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plantago ovata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prunus dulcis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psoralea corylifolia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quercus infectoria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>B</td>
<td>M</td>
<td>R</td>
<td>U</td>
<td>D</td>
<td>C</td>
<td>M</td>
<td>O</td>
<td>C</td>
<td>U</td>
<td>G</td>
<td>H</td>
<td>O</td>
<td>H</td>
<td>L</td>
<td>M</td>
<td>R</td>
<td>R</td>
<td>T</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>Raphanus sativus</td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rheum australe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salix caprea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saussurea lappa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setaria italica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorea robusta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxus baccata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trachyspermum ammi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trigonella foenum-graecum</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Triticum aestivum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valeriana jatamansi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitis vinifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Table 15. Administration media for medical formulations

<table>
<thead>
<tr>
<th>Medium</th>
<th>Preparations</th>
<th>No. of Plants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter milk</td>
<td>207</td>
<td>119</td>
<td>8.05</td>
</tr>
<tr>
<td>Breast milk</td>
<td>14</td>
<td>14</td>
<td>0.54</td>
</tr>
<tr>
<td>Butter</td>
<td>80</td>
<td>61</td>
<td>3.11</td>
</tr>
<tr>
<td>Curd</td>
<td>31</td>
<td>23</td>
<td>1.21</td>
</tr>
<tr>
<td>Coconut milk</td>
<td>55</td>
<td>49</td>
<td>2.14</td>
</tr>
<tr>
<td>Coconut oil</td>
<td>208</td>
<td>136</td>
<td>8.09</td>
</tr>
<tr>
<td>Cow urine</td>
<td>35</td>
<td>24</td>
<td>1.36</td>
</tr>
<tr>
<td>Ghee</td>
<td>176</td>
<td>120</td>
<td>6.85</td>
</tr>
<tr>
<td>Gingelly oil</td>
<td>166</td>
<td>109</td>
<td>6.46</td>
</tr>
<tr>
<td>Hot water</td>
<td>62</td>
<td>42</td>
<td>2.41</td>
</tr>
<tr>
<td>Honey</td>
<td>378</td>
<td>187</td>
<td>14.71</td>
</tr>
<tr>
<td>Lime juice</td>
<td>239</td>
<td>142</td>
<td>9.3</td>
</tr>
<tr>
<td>Milk</td>
<td>653</td>
<td>266</td>
<td>25.41</td>
</tr>
<tr>
<td>Rice cooked water</td>
<td>56</td>
<td>46</td>
<td>2.18</td>
</tr>
<tr>
<td>Rice washed water</td>
<td>144</td>
<td>111</td>
<td>5.6</td>
</tr>
<tr>
<td>Tender coconut water</td>
<td>66</td>
<td>39</td>
<td>2.57</td>
</tr>
</tbody>
</table>
Fig. 7. Gender of informants

Fig. 8. Knowledge source of informants
**Fig. 11. Age of the informants**

<table>
<thead>
<tr>
<th>Age</th>
<th>No. of informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>below 40</td>
<td>1</td>
</tr>
<tr>
<td>40 – 49</td>
<td>29</td>
</tr>
<tr>
<td>50 – 59</td>
<td>40</td>
</tr>
<tr>
<td>60 – 69</td>
<td>54</td>
</tr>
<tr>
<td>70 – 79</td>
<td>57</td>
</tr>
<tr>
<td>80 and above</td>
<td>34</td>
</tr>
</tbody>
</table>

**Fig. 12. Occupation of the informants**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>No. of informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>115</td>
</tr>
<tr>
<td>Bhuta performer</td>
<td>6</td>
</tr>
<tr>
<td>Coclie</td>
<td>11</td>
</tr>
<tr>
<td>Employee</td>
<td>14</td>
</tr>
<tr>
<td>House wife</td>
<td>34</td>
</tr>
<tr>
<td>Practitioner</td>
<td>22</td>
</tr>
<tr>
<td>Others</td>
<td>13</td>
</tr>
</tbody>
</table>
Fig. 13. Mother tongue of the informants

Fig. 14. Specialization of the informants