Documentation on Traditional Herbal Medicinal Practices in Udalguri and Karbi Anglong, Assam

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Abstract

Traditional knowledge is abandoned by the particular community and passed to the next generation verbally. Due to the nature of knowledge flow traditional knowledge, needs to be documented so that we will not lose the knowledge and can use it for problem-solving activities for living beings and the benefit of the planet Earth. Documentation of Traditional Knowledge is a process of collecting, classifying, recording, preserving, and communicating the information in a readily accessible form which is an indispensable aspect of libraries. Traditional herbal medicine practices are an integral part of various communities inhabiting Assam. In this paper, an attempt has been made to document the traditional herbal medicinal practices in the Udalguri development block of Assam and Langsomepi development block of Karbi Anglong district, Assam with the idea to implement the strategies in libraries for documentation of the tacit knowledge.

Keywords: Documentation; Herbal Medicinal Practices, Libraries, Traditional Knowledge, Traditional Medicinal Plants; Herbal Medicine.

1. Introduction

Assam is the second largest state of the North-eastern region which covers a geographical area of about 78,438 sq. km. Assam is situated between 24°08´´-27°6´´N latitude and 89°42´´-96°01´´E longitudes and boundaries with Bhutan, Tibet, and Arunachal Pradesh in the north, Nagaland and Manipur in the east, Meghalaya and Mizoram in the South and Tripura, West Bengal and Bangladesh in the West. At present, the state has 35 districts, and as per the Census figures 2011, the state has a total population of 3,12,05,576. The population of Assam is characterized by diversified communities of people belonging to diverse tribes and sub-tribes, castes, and sub-castes. The major communities of Assam are Bodo, Kachari, Karbi, Mishing, Rabha, Sonowal kachari, Deori, Santhals, etc. Traditional herbal medicine practices are essential components among the communities in Assam.

In this paper authors attempt to document the traditional herbal medicinal practices of Bodo and Karbi tribes of Udalguri and Karbi Anglong district of Assam.

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2. Importance of Traditional Herbal Medicine and documentation of traditional herbal medicinal practices

Traditional medicine, using medicinal plants, plays a significant role in treating and preventing health issues, especially in tribal areas. Its holistic approach is widely popular for integrating plants into medicinal practices, preserving cultural heritage by passing down indigenous knowledge through generations. This traditional health-related knowledge, reflecting local beliefs and practices, is valued for its safety, efficacy, and cost-effectiveness, making it accessible to economically disadvantaged groups. Traditional medicines contribute compounds to modern medical practices, offering additional treatment options and improving overall healthcare outcomes. Scientific research validates and standardizes these remedies, enhancing their credibility and acceptance, while combining traditional knowledge with modern methods promotes innovative healthcare solutions and new therapeutic discoveries.

Many cultures have a strong heritage of herbal remedies but lack written documents, and most common route of passing this knowledge is oral. As a result, knowledge of traditional medicine in terms of medicinal practices is rapidly disappearing, with indication that the knowledge will be extinct in future generations. Therefore, systematic documentation is important to pave ways for preserving indigenous cultural heritage from being lost for the use of both present and future generations. Also, it is important for further discoveries and inventions of new medicines.

3. Objectives

The study's main objectives are:

1. to document the medicinal plants used by various communities in selected villages of two districts to treat different illnesses traditionally
2. to plan the various measures in place for the documentation of traditional herbal medicinal practices in libraries.

4. Methodology

Authors used survey methods for which a preliminary survey was carried out among two communities, i.e., Bodo, Karbi in 8 different villages in the Udalguri Development Block of the Udalguri district of the Bodoland Territorial Region (BTR) and Langsomepi development block of Karbi Anglong, Assam. The selected villages were chosen because they reside near the forest area and are well acquainted with the availability of medicinal plants and traditional herbal medicinal practices from generation to generation. Survey participants are traditional herbal practitioners or village headman of Bodo and Kabi communities of the selected areas. For this purpose, a pre-tested structured interview schedule was carried out in different villages. Data were collected through one-on-one interactive communication process by personally meeting and interacting with the traditional herbal medicinal practitioners and field observations from 2022 to 2023. Data were collected on traditional herbal medicinal practices by the various communities that inhabited in the selected

districts. Data gathered in the preliminary survey were analysed using tables with the interpretation of data used by Bodo and Karbi communities.

5. Literature Review:

Some of the contributions towards documentation of traditional herbal medicinal practices are Borthakur S K (1992) on native phytotherapy for child and women disease from Assam. Borthakur et.al. (1996) surveyed and documented herbal remedies of the Nepalese of Assam. Saikia et al.; Borthakur (1997) reported 25 plants in the folklore and folk life of the Karbis (Mikirs) of Assam; Hajra & Baishya (1997) reported ethnobotanical note on 29 plants on the Miris (Mishings) of Assam plains. Das (2006) worked on use of medicinal plants by different communities of Cachar district of Assam and enlisted 245 medicinally important plant species. Buragohain & Konwar (2007) studied on the plants which are used by Indo-Mongoloid communities of Upper Assam to cure various skin diseases and reported 68 plants. Borah et al. (2009) reported 12 plants that are used for the treatment of diabetes by the ethnic people of Lakhimpur & Sonitpur of Assam. Gogoi & Islam (2010) enlisted 49 plants that are practiced traditionally by the local inhabitants of Upper Brahmaputra Valley of Assam. Namsa et al. (2011) reported 22 plants that are used for their anti-malarial properties in Sonitpur district in Assam; Paul, S et. al (2013) studied the utilization of some medicinal plants by Bodo people of Manas Biosphere reserve in the treatment of malaria. Bailung B and Puzari, M (2016) studied ethnomedicine practices among Ahom communities. Fifteen villages of three districts of upper Assam were surveyed and documented 68 plant species used by the Ahom communities as medicine using direct interaction and observation methods. Nath et.al (2016) documented the ethno-medico knowledge of the Dimasa tribe of Barak Valley of Assam. Borborah, K, et.al (2016) documented the use of Musa balbisiana as medicine to treat 9 diseases by Koch, Kacharis, Deoris, Mishings, Rabha hasongs, Bodos, Kukis, Dimasas, Hmarstribes. Bailungetal (2016) documented the use of 68 medicinal plants to cure 50 diseases by the Ahom community people. Tamuli & Ghosal (2017) surveyed and documented 50 plants use in curing skin diseases by 10 major ethnic groups from the hill, plains as well as riverbank area of Assam (Lushai, Chorei, Karbi, Dimasa, Jaintia, Rabha, Sonowal Kachari, Tai- Shyam, Deori, and Mishing). Bora et al. (2016) documented 101 plants used in female healthcare-related diseases by various communities of Assam. Panging & Sharma (2017) documented 33 plants used for various diseases by Mising/Miri Communities. Bora et al. (2016) recorded 47 plants used by Ahom, Keot, Koch Rajbangshi, Rabha, Kalita, Adibashi, Muslim to cure dysentery, diarrhea and cholera. Saikia (2016) also documented 30 plants used by Thengal-Kacharis in 13 diseases (Pneumonia, Malaria, Earache, Malaria, Gastric, Piles, Seminal disorder, Dysuria, Diarrhoea, Fever, Cough, Vomiting, Abscess of Breast, Blood dysentery. Borah, P (2017) reported 32 Plants used by the Moran tribe of Assam for Various reproductive health problems. Sonowal & Sonowal, (2017) reported 31medicinal plants used for curing Cough and Cold, Constipation, Dysentery, Eczema/Skin infection, Gastric, Jaundice, Menstrual disorder, Pneumonia, Sinusitis, Toothache, Tonsillitis, Stomach ache/indigestion, Urinary trouble by Mising tribe. Sarma,J, & Devi, A (2017) also documented 51 plants in various diseases. Bhattacharyya & Bhattacharya (2016) documented 60 medicinal plants used in different diseases by Thengal Kachari tribes of the Jorhat district of Assam. Bharali et al. (2017) documented 38 medicinal plants use to cure stomach disorders by the

Nepali community in Nagaon and Sonitpur districts of Assam. P. Gogoi, (2017) surveyed by interacting with the village head, traditional healers and old age people of Lakhimpur District of Assam for the treatment of various diseases and ailments and documented 19 types of diseases including anemia, cough, eczema, pneumonia, gastric problem etc. have been reported to be cured by using these 21 plants species. A similar study carried out in Dhemaji district of Assam reported the use of 64 indigenous plants for the treatment of various common illness such as indigestion, dysentery, diarrhoea, cold and cough (M. Gogoi et al., 2019). Neeta Basumatary, (2014) also documented 44 species belonging to 34 families and these medicinal plants were used by the Bodo-Kachari tribes of Karbi Anglong district of Assam for the treatment of various ailments like cough, fever, dysentery, indigestion, headache, stomach-ache, diarrhoea, skin diseases, bone fracture, etc.

6. Finding and Analysis

The data collection was carried out to document the traditional herbal medicinal practices of Bodo and Karbi herbal practitioners and compiled and documented the name of the plants, uses, methods of preparation, mode of application, probable dosage, and duration of treatment. Data gathered in the survey were analysed using tables and diagrams with the interpretation of data used by two communities. A survey was carried out on eight villages in which 28 different medicinal plants were compiled and recorded involving 8 practitioners belonging to Bodo and Karbi tribes.

Table 1: Documentation Traditional Herbal Medicinal Practices to treat various diseases

Sl. No.	Uses	Plants name (Local)	Plants Name (Scientific)	Parts used /Mode of Preparation and uses	Tribes/Indigenous communities
1	Head ache	Era-gach/Indi	Ricinus communis L.	Part use: Fresh leaf. Method of preparation :Leaf boiled and juice extract from the boiled leaf and given to drink	Bodo
2	Headache	a)Thalir athia/ Athiyakol and b) Jomlakhuti/ Burhitokon/ Belauri	a)Musa balbisiana and b)Hellenia sipeciosa (J.Koeing) S.R.Dutta	Part use: The core of the plant bodyMethod of preparation: A little amount of central core from both stem and Costusspeciosus are grind and paste on the human head externally.	Bodo
3	Pain during irregular period	Era-Gach/Indi	Ricinus communis L.	Part use:LeafMethod of preparation: Leaf boiled and juice extract from the boiled leaf and given to drink	Bodo
4	Body pain	Piyaj, Sambram	Allium cepa L.	Part use: BulbMethod of preparation: Pieces of bulb mixed with one spoon of mustard oil and roasted. And applied on infected area externally.	Bodo

5	Body Pain	Gogol bon	Typha domingensis	Party use: Flower and Shoot. Method of preparation: Flowers dried,	Bodo
			Pers.	burning them taken heat on foot.Young shoots are given to eat	
6	Body/muscles Pain/ sudden stomach pain	Khanari	Crinum pratens	Part use:Leaf, Tuber.Method of preparation:On the upper side of the fresh leaves polished with mustard oil and hit in a pan and massaged the muscles.2/3 times a day.Also, in sudden stomach pain 1 cup of decoctions of the tuber is given to drink.	Bodo
7	Pain in bee bites and scorpion bites	Oll kosu	Amorphophallus paeniifolius (Denst.) Nicolson	Part use: Corm.Method of preparation: Juice of the corm is given to apply on the area externally.	Bodo
8	To get relief from the pain of insect bites	Tengesi Shak	Oxalis corniculate L.	Part use: Leaf.Method of preparation: Juice of leaf given to apply on the skin externally.	Bodo
9	Pain due to insect bites, honeybee, and scorpion sting.	Thaso gwswm	Colocasia esculenta (L.) Schott	Part use: Whole plant.Method of preparation: Culinary, Ground corm is applied to the area for relief of pain	Bodo
10	Ear ache, sprains.	Sambram gufur, Nohoru,Raisung bakai	Allium sativum L.	Part use: Bulb.Method of preparation: 4 pieces mixed with kalajira and fried in mustard oil and given to massages. Juice of raw bulb. Eating bulb1 to 2 pieces every day with a meal.	Bodo
11	Ear ache,	Hagrani Sambram	Crinum defixum Kar Gawl.	Part use: Bulb, Leaves.Method of preparation: Bulb is covered in sudden burnt area of the body. Juice of leaves applied a minimum of twice a day	Bodo
12	Stomach pain.	a)Khayahagrab) Jomlakhuti/ Burhitokon	a)Cyperusrotundus, b)Costusspeciosus	Part use: Rhizome.Method of preparation: Mixture of its rhizome with Costusspeciosus and bark of Azarichta indica are grind and boiled to make juice.Two to four spoons of decoction were prescribed.	Bodo

13	Influenza, cold and cough, fever	Sambram gufur, Nohoru	Allium sativum L.	Part use: Bulb.Method of preparation: 3 to 4 pieces mixed with kalajira (Cuminum sp.) and fried until it becomes brown for massages. Raw bulb Juice has been given to consume. Bulb1 to 2 pieces prescribed every day with a meal.	Bodo
14	Cough.	1.Rwimali/ Anaros 2.Khuser	1.Ananas comosus 2.Saccharam officinarum	Part use: Shoot and stem. Method of preparation: A shoot of Ananas comosus is grinding and mixing in1 glass juice of Saccharam officinarum(Sugarcane) properly and filtering of the mixture is used.Dosage: 2 spoonsful twice a day after meal.	Bodo
15	Rejoin in bone fracture	Thaso manai	Alocasia indica (Lour.) Spach	Part use: Tuber.Method of preparation: Tuber mixed with tuber of Homalomenaaromatica and whole plant of Equisetum are ground together with a few drops of water and wrapped infected part of bone until it dried.	Bodo
16	bone fracture	Thaso thukhru	Homalomena aromatica (Spreng.)Schott	Part use: Tuber. Method of preparation: Sufficient amount of tuber and Alocasia indica, Equisetum, and Aloeveraare grind together then paste over fractured bone and wrapped tightly for 3daysand use until re-join.	Bodo
17	Jaundice	Satmul	Asparagus racemosus	Part use: Roots. Method of preparation: Decoction of roots are prescribed to drink on empty stomach in the morning	Bodo
18	Fever, hiccough	Chong amok (Karbi)	Centella Asiatica (Linn.)	Part use: Whole plant.Method of preparation: Leaves are crushed together with other plants i.e. (bark), Oxaliscorniulata (leaf),Mode of Application: Fresh leave paste is given orally twice	Karbi
19	Malaria fever, whooping cough	Jok-an	Phlogocanthus thyrsiflorus Nees.	Part use: Leaves, flowersMethod of preparation: Its flowers can be cooked and eaten as vegetables. Leaves and flower extracts is orally taken.Mode of application with probable dosage: Cooked flowers can be taken with rice or 30 mlof leaves and flowers extracts is taken orally thrice a day. Duration: 3-7 days until cured.	Karbi
20	Use as painkiller	Haan moisa	Vernonia volkemaefalia DC.vern.	Part use: LeavesMethod of preparation: Leaves are crushed and extract juice.Mode of application with probable dosage: 20-30 ml Juice is taken orally.Duration: 3days	Karbi

21	Ailments treated: Jaundice	Dido sudo	Amaranthus spinosus L.	Part use: RootsNaming of plants based on habits: Plant use in the form of: Fresh.Method of preparation: Roots of Amarantha are crushed together with Mango (bark) and extract Juice. Mode of application with probable dosage: 50 ml of juice is given orallyDuration: One week or until cured	Karbi
22	Toothache and it is also actas local anesthesia	Bapchuki	Spilanthes acmella Murr	Part use: Leaves, flowers and barksMethod of preparation: Leaves, flowers and barks is crushed into pasteMode of application with probable dosage: Ailments treated: Duration: 3 days or until cured.	Karbi
23	Ailments treated: Jaundice	Nopak ban	Oroxylum indicum (Linn.) Benth. Ex Kurz.	Cultivation status: Wild varietyPart use: BarksNaming of plants based on habits: TreeMethod of preparation: Fresh roots are crushed and extract juiceMode of application with probable dosage: 50 ml of juice is taken orally before food.Duration: One week or until cured.	Karbi
24	Ailments treated: Jaundice	Shonaru	Cassia fistula Linn.	Method of preparation: Roots are grinded and extract juiceMode of application with probable dosage: 50 ml of juice extract is taken orallyDuration: One week or until cured.	Karbi
25	Ailments treated: Cough, asthma	Nonthe-parlin	Desmodiaum latifolium DC.	Part use: RootsMethod of preparation: Fresh roots are crushed together with houttuynia cordata (entireplant) and extract juice.Mode of application with probable dosage: 30-50 ml of juice is taken orallyDuration: 3-7 days	Karbi
26	Ailments treated: Whooping cough	Hedem	Pongamia pinnata Linn.	Part use: SeedsMethod of preparation: Seeds are grinded into fine powder and mixed in lukewarm waterMode of application with probable dosage: 30-50 ml of prepared medicine is taken orallyDuration: 3-7 days	Karbi
27	Ailments treated: cough, bronchitis	Tulahi	Ocimum kilimandscharicum Guerke.	Part use: Whole plantPlant use in the form of: Fresh.Method of preparation: Leaves are crushed together and extract juice, it is then mixed withhoney, Houttynia cordata extract (leaf), ginger extract (rhizome).Mode of application with probable dosage: 30-50 ml juice is taken orallyDuration: 3-7 days	Karbi

It is found that 13 different types of pain (Headache, pain during irregular menstruation periods, body pain, Pain due to insect bites, Earache, stomach pain and toothache) are treated by the traditional herbal practitioners by using 12 different types of plants.

It is found that 6 different types of plants are used in the treatment of Influenza, cold and cough, fever, asthma, Whooping cough, bronchitis and malaria by traditional herbal practitioners.

To treat Jaundice 4 plants are used by traditional herbal practitioners of Bodo and Karbi communities.

To treat bone fracture 2 plants are used by traditional herbal practitioners in Bodo and Assamese communities.

It is also observed that libraries of selected areas were not adopting any planning for documenting the traditional herbal medicinal practices and which is also very essential for protecting such type of rich traditional herbal knowledge by libraries with a proper strategy for collection, organisation, preservation and communication. Through the efforts of the library professionals it will help preserve cultural heritage and facilitate the integration of traditional knowledge into broader educational, scientific and policy frameworks.

Documentation here is referred to the art of gathering, compiling, recording and presenting any intellectual activity into digital or audio-visual format. Hence these findings will be documented or recorded on the importance of medicinal plants and its practices in order to sustain the future of traditional herbal medicinal practices.

7. Conclusions

In conclusion, the preservation and responsible utilization of traditional herbal medicinal practices are imperative to uphold cultural heritage and advance public health initiatives. Establishing a robust collection development policy and documentation framework within libraries is paramount to achieve this goal. Through strategic implementation of knowledge management strategies, libraries can serve as pivotal institutions in safeguarding this invaluable knowledge. By conducting field surveys, gathering comprehensive data, and employing modern documentation techniques such as photography and videography with community consent, libraries can compile a rich repository of traditional herbal medicinal practices. This digital or offline archive, maintained with stringent access policies, not only ensures the perpetuation of traditional knowledge but also facilitates its dissemination to benefit both communities and practitioners. Also, we can improve the strategies towards documentation of traditional herbal medicinal practices by adopting AI technologies such as, in image recognition to identify medicinal plants from photos by analyzing the plant image and extract features for accurate identification and also Natural Language Processing (NLP) and machine translation for translating and interpreting cross-cultural understanding and preservation.

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