



## Ethnobotany of medicinal plants used by the tea tribes of Dibrugarh district, Assam, India

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### Abstract

The present study was carried out in order to understand the ethnobotany of medicinal plants used in human health management traditionally in various diseases prevalent among the tea tribes of Dibrugarh district, Assam. Survey was conducted in tea garden areas dwelled by the local tea tribes and data was collected through personal communication, interviews, discussions and observation. A total of 20 plant species were recorded in the month of January 2020. All the recorded plant species were generally used for the ailment of common problems of daily life like cough, fever, headache, body pain, heart, dysentery etc and sometimes used for other diseases like jaundice, pneumonia, etc after diagnosis. Plant parts like leaf, bark, root, fruit, seeds etc were found to be used by different methods of preparation like direct raw consumption with water, paste, juice, curry or by mixing with other items. The investigation revealed the inherited knowledge of utilization of medicinal plants by the people from their elders, family, friends or others members of their community. The study focuses on the potentials of ethno medicinal research because there is a need for conservation of our biodiversity and documentation of these species will benefit mankind and further pharmaco-chemical investigations may be carried out for the development of drugs to fight human diseases.

**Keywords:** documentation, ethnobotany, medicinal plants, human health, traditional knowledge, conservation

### 1. Introduction

Usage of plants since antiquated occasions for different human needs speak to a long history of human connection with the earth. Restorative plants utilized as a wellspring of essential medicinal services show the rich indigenous information on the inborn and the provincial populace. Throughout the hundreds of years, conventional societies around the globe have figured out how to utilise phytomedicines to battle ailment and look after wellbeing [1]. Home grown restorative plants assume a significant job in the rustic regions and different privately created drugs are as yet being utilised as family solutions for various afflictions. The expansion being used of customary treatments requests all the more logically solid proof for the standards behind treatments and for viability of medicines [2].

In Assam, there are in excess of 200 therapeutic plants that have excellent promising incentive inspite if their wide uses in the nation itself. Various kinds of plants have been utilised for the infirmity of various sorts of infection [3]. An ethno-semantic minority, the number of inhabitants of the tea tribes is fundamentally rustic in nature and assessed to be around 18% of Assam's all out populace. They are neither a solitary ethnic clan nor a solitary station yet are the individuals of different ethno-phonetic starting points from various areas of eastern India made out of many clans and

standings. They live in lines of tea gardens set up by the tea grower where they have free access to clinical treatment. However, many a times they lean towards conventional afflictions after diagnosis [4]. The innate and rustic individuals of the district despite everything practise their own customary social insurance framework. They have an immense and in-depth understanding about plants, both ordinary and non-customary for food and for medication [5]. Various ethno therapeutic examinations among various ethnic gatherings have been concentrated by various specialists from various pieces of NE India such as Saikia *et al.* (2010) [6], Sonowal and Baruah (2011) [7], Deka *et al.* (2012) [8], Sarma *et al.* (2013) [9], Nath (2014) [10], etc. Be that as it may, the ethnomedicinal practices of the tea clans of the state are inadequately known. Therefore, the investigation was done to report the act of ethnobotany of the restorative plants common among the individuals so that they can be protected and conserved for future use and broader study.

### 2. Methodology

**Study Area:** The tea tribes are multi-ethnic tea garden workers with many sub-tribes mainly found in those districts of upper Assam with many tea gardens. Dibrugarh hosts many old tea gardens and hence consists of a large

number of people from this community. Five tea estates were randomly selected where study was feasible.

**Data Collection:** Information on different ethno-medicinal plants viz. their local names; parts used; methods of preparation; route of administration and application in the treatment of a particular disease were recorded from five different tea estates of the district. For the purpose of the study, extensive personal interviews, observations and in-depth discussions were held with the local leaders, senior citizens and local medical practitioners. Participant observation method was followed while visiting homestead plantations of the traditional practitioners and surrounding plant resources.

**Data Analysis:** The data collected was systematically organized and analyzed to draw a clear and updated picture of the ethno-medicinal use of plants. Plant species were

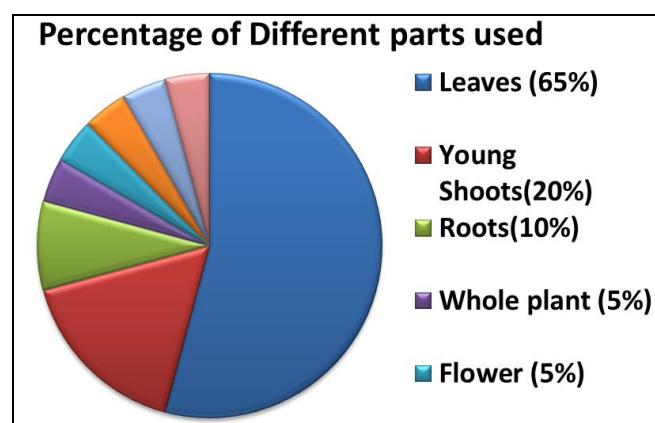
identified and verified with the help of standard literatures on the local flora. The documented plant species are arranged according to their scientific name. It is followed by family; English and vernacular names; parts used; therapeutic uses and method of herbal medicine preparations. Before data collection, prior consent of the knowledge holders was taken. The objective of the study was clearly explained and efforts were made to take them into confidence that this study is to document and preserve their traditions and knowledge on use of ethno-medicinal plants. After verbally taking their due permission, the data pertaining to this study has been collected.

### 3. Results

Presentation of summarised data is presented below (Table 1).

**Table 1:** Medicinal uses of plants utilized by tea tribes, Dibrugarh district

Sl. No	Name of the species	Local name	Part used	Uses/ailments treated
1	<i>Leucas aspera</i> L.	Durun bon	Leaves, young shoot	Sinusitis, Loss of appetite
2	<i>Enydra fluctuans</i>	Helechi	Leaves	Ring worms
3	<i>Centella asiatica</i> (Linn.) Urban Apiaceae	Bormanimuni	Whole plant	Dysentery, stomach disorders, memory booster
4	<i>Clerodendrum colebrookianum</i> Walp Verbenaceae	Nefafu	Leaves	Hypertension
5	<i>Colocasia esculenta</i> Linn. Araceae	Kola Kachu	Leaves and roots	Pharyngitis.
6	<i>Eclipta prostrata</i> Roxb. Compositae	Keheraj	Leaves	Hair tonic, dropsy, elephantiasis.
7	<i>Aloe vera</i> (Linn.) Liliaceae	Salkuwori	Leaves	Skin burn, piles, white discharge
8	<i>Spilanthes paniculata</i> Asteraceae	Suhanibon	Flowers	Gum pain.
9	<i>Vitex negundo</i> (Linn.) Verbenaceae	Pasatia	Leaves	Fever, body weakness, Rheumatic arthritis, Itching, smoothen hair.
10	<i>Sapindus mukrossi</i>	Monisal	Seed	Tonsilytis, Remove lice
11	<i>Tagetes erecta</i>	Narji phul	Leaves	Minor cuts and injuries
12	<i>Nicotiana tobaccum</i>	Dhapat	Leaves	Tooth ache
13	<i>Terminalia orjeina</i>	Arjun	Bark	Teeth problem, cardiac tonic
14	<i>Adhatoda vesica</i> nees	Bahak	Leaves	Cough, bronchitis
15	<i>Commelina benghalensis</i>	Kana simalu	Young shoots	Eye problem
16	<i>Piper longum</i> Linn.	Pipoli	Fruits, leeves, young shoots	Influenza
17	<i>Tagetes erecta</i>	Narji phul	Young shoots	Epistaxis
18	<i>Ocimum gratissimum</i>	Ramtulokhi	Leaves	Asthma
19	<i>Cucurma longa</i>	Halodhi	Rhizome	Bone fracture
20	<i>Ricinus communis</i>	Era	Leaves, roots	Mumps, lactation



**Fig 1:** Percentage of different plant parts used

### 4. Discussion

A total of 20 plant species used for the treatment of various ailments like Sinusitis, Loss of appetite, Ring worms, Dysentery, stomach disorders, memory booster, Hypertension,

Pharyngitis, Hair tonic, dropsy, elephantiasis, Skin burn, piles, white discharge, Gum pain, Fever, body weakness, Rheumatic arthritis, Itching, smoothen hair, Minor cuts and injuries, Asthma, Bone fracture, etc were recorded. Different parts of plant like seed, leaf, bark, root, etc are used for treatment of different ailments (Figure 1). Many a times, people were found to be reluctant to share their knowledge because of their conservative beliefs and uninterested in sharing their knowledge. This may be treated as an important factor for proper exploration and further documentation of the ethnic herbal treatments to carry on to its future generations.

### 5. Conclusion

The present study assumes significance since the ethno-medicinal utilization of most of the recorded plant species play an important role in providing primary health care to the community. Total documentation of the medicinal plants utilized by them is still far from complete. More comprehensive and exploratory scientific studies need to be undertaken in order to draw out the complete picture.

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