

# Ethnomedicinal knowledge of plants among the Tangkhul Nagas of Manipur

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## Abstract

The use and the knowledge of medicinal plants exist throughout the world, where human beings have been using these plants in curing all types of diseases and ailments in their traditional methods since the beginning of their very lives. While, its effectiveness have been proven beyond doubt and documented throughout several ethnic communities of the world, it has not been documented in the case of Tangkhul Naga community. Therefore, the present study is an attempt to identify and compile the knowledge of medicinal plants traditionally used by the Tangkhul Naga community of Manipur. *Methods:* An extensive questionnaire based survey was conducted among 80 key informants from 15 Tangkhul villages, along with the help of interview schedule. The informants included village elders, 'medicine men' or 'traditional healers', 'bone setters', 'divine healers' and health workers. *Result:* As many as 72 species of plants distributed in 69 genera belonging to 44 families were identified and reported by the informants. Out of which, highest number of plants belong to the Asteraceae family, followed by Lamiaceae, Solanaceae and Zingiberaceae families. While, leaves were found to be the most common parts used, decoction and juice were the most common method of preparing medicines and treatment to various ailments and diseases. *Conclusion:* The primary health care facilities provided by the government are virtually in a dysfunctional state in the overwhelming majority of the rural villages. Hence, people would still rely on their crude and traditional knowledge of using medicinal plants to treat various minor diseases and ailments. It still provides not only basic health care to an individual living in the rural villages, but also to the large section of the people of this community.

**Keywords:** Ethnomedicinal Plants; Manipur; Traditional Knowledge; Tangkhul Nagas.

## Introduction

The use of plants to cure and fight human diseases and ailments are probably as old as humankind. It has been part of our lives since the beginning of time. Countless of products and benefits that we obtained every day from plants are in fact crucial and also forms the very basis of human existence. For centuries, people of various cultures have been relying

on plants as their only remedy for all sorts of infirmities. Plants have been used in traditional medicine, resulting in the development of a large body of local knowledge. This knowledge base arises primarily from trial-and-error experiences and is rarely embedded in complete and systematic theories of medicine [1,2]. It also forms the basis of the present day biomedicine (or modern medicine). Its constituents continue to be a vital part of modern biomedicine, and are still considered an important

source of novel compounds in the field of drug discovery [3,4].

Just as it is to the rest of the world, traditionally plants and plant products are the primary source of medicine and a highly valued resource among the Tangkhul Nagas. The people of this tribe have long been using plant resources and its products for numerous needs such as food, medicine, firewood, timber, fodder, agricultural tools, etc. As they find their place of habitat (living) in and around the thickly forested area, every day they collect plants from various habitats (forest, scrub, grassland and cultivated fields), where they use to prepare their own medicines. From these experiences of diagnosing and treatment of diseases, people gain knowledge on the usefulness and harmful properties of plants. Such knowledge forms the basis for a better and complete utilization of the plant wealth. Unfortunately, this vast ethnomedicinal knowledge of plants have been increasingly pushed into the threat of disappearance completely from the memory of the people due to several factors, such as urbanization, land encroachment in the name of development, human greed, and disappearance of the traditional healers without transferring their knowledge to the younger generation [5]. Moreover, with the arrival and increasing dependency on modern biomedicine, even if the knowledge is handed down to the younger generation, they are least bothered, and in many cases the local knowledge of medicinal plants remains poorly documented in the scientific literature too [2].

Medicinal plant knowledge is, like all local knowledge, a 'social product' that is part of the specific cultural system [6]. Local knowledge is not always evenly distributed and not every member of the group necessarily knows the same knowledge. This is certainly true for medicinal plant knowledge, where usually a distinction can be drawn between specialists (traditional healers) who possess more in-depth knowledge, and lay persons [7]. Local knowledge of how medicinal plants are used may be a rich basis for the phytochemical, pharmacological, and clinical studies necessary to secure sustainable and rational use of these plants as a resource. Recognising the huge significance of the need to preserve the local knowledge of medicinal plants, the present study is an attempt to document the medicinal plants used by the Tangkhul Nagas.

## Methodology

Tangkhul Naga tribe lives in the present North-

Eastern part of India and the North-Western part of Myanmar. They inhabit mainly in and around the Ukhrul district, one of the 9 districts of Manipur covering an areas of 4544 sq. km with a population of 183,115 [8]. The India State Forest Report (ISFR) of the Forest Survey India (2011), Dehradun, indicated that the total area under forest cover of Ukhrul district is 3549 sq. km (Very Dense forest – 181 sq. km, Moderately Dense forest – 988 sq. km, Open Forest Area of 2380 sq. km and scrub-1 sq. km). The total area under forest cover accounts for 78.10% of the geographical area of 4544 sq.km with rich biodiversity [9]. The people are Indo-mongoloid race, speaking Tibeto-Burman language. Generally, they are fair looking, medium body physique and stature, fun loving and generous people.

They have been living in their forested mountains – sowing and harvesting paddy, brewing rice beer, dancing, singing and hunting heads (abolished) for centuries. Village, community and family life are the most important assets of their lives in the past and in the present as well. They settled in villages which were economically and politically independent unit, and each village is well demarcated to avoid inter-village feuds. However, the present generation has witnessed and undergone tremendous and drastic change in their economics, politics, religious beliefs and practices, and also in their sociocultural settings. They are a community that has experienced transitions from 'tradition' to 'modernity', and the processes of change are still continuing.

Ethnomedicinal knowledge of plants were collected from 15 Tangkhul villages of Ukhrul district through questionnaire based survey conducted on 80 key informants (males-45, females-35) during the month of September to December 2012. All these key informants were older people of 50 years and above who hails from various backgrounds of professions, such as cultivators (33), bone setters (4), traditional 'medicine men' or healers (10), 'divine healers' (8), government health workers (11) and bureaucrats (14). Queries in the questionnaire included local name of the plants, uses, parts used, and modes of preparation and administration. During the field survey, each reported species of medicinal plants were photographed and sample specimens were collected for the preparation of herbarium. These plant specimens were then confirmed with the help of the herbaria of Botanical survey of India (BSI), Shillong, Meghalaya.

## Findings

In this study, a total of 72 plant species distributed

in 69 genera belonging to 44 families were reportedly used in treating numerous diseases and ailments that they experience on daily basis. These medicinal plants still form the basis of the people's (villagers) primary health care system alongside biomedicine. However, biomedicine were seldom their first choice of treatment in the case of minor diseases or ailments, instead, these are being treated with available plants or herbs. The results of the study are presented in alphabetical order by scientific names, followed by common names and local names, parts used and medicinal uses of the plant species (see Table 1). The largest number of reported plants species came from the family of Asteraceae (9 species), Lamiaceae (4 species), Solanaceae (4 species), Zingiberaceae (3 species) and others. The most common part used in preparation and treatment of disease is the leaves (38 species) of the plants followed by roots (14

species), fruits (11 species), flowers (7 species), whole plant, stems, barks etc. The study (also Table 1) also shows that almost all the identified plant species are used in treating multiple diseases and ailments. Some of the most commonly reported health problems and diseases that are being treated by the these plant species are skin diseases, migraine, digestive problems, respiratory problems, cold, cough, menstrual problems, diarrhoea, fever, food poisoning, allergy, inflammatory, anti-witch spells, nausea, stomach ache, internal and external burnt, asthma, diabetes, gastric problems, tonsillitis, womb (women) problems, sinusitis, headaches, bruises, sprains, mouth disease, earache, hypertension, constipation, snake bites, excessive bleeding from injury or wounds, joints or rheumatism, boil, scabies, sore throat, piles, mumps, kidney problems, stone case, etc.

**Table 1:** Ethnomedicinal plants used by the Tangkhul Nagas of Manipur

SI. No	Scientific name	Common name/ local name	Family	Parts used	Medicinal uses
1	<i>Abelmoschus moschatus</i>	Tropical jewel hibiscus/ Sohamni	Malvaceae	Leaves	Burns, earache, fever, hypertension, constipation, asthma, stomach-ache, worms, infertility complications, snake bites, diarrhoea, malaria, epilepsy and anti-inflammatory ointment.
2	<i>Achyranthes aspera</i>	Pricklychaff/ Achongrina	Amaranthaceae	Leaves, Roots	Toothache, breathing difficulties, cessation of postpartum bleeding, piles, skin itches and sores, and to prevent from feet swelling during pregnancy period.
3	<i>Acmella oleracea</i>	Spelenth/ Machine	Asteraceae	Leaves, flower	Toothaches and other oral diseases and anti against malarial agent.
4	<i>Acorus calamus</i>	Sweet Flag/Harvangashong	Acoraceae	Leaves	Cough, chest pain, stomach-ache, dysentery, fever, used as repellent for mites and flea that are parasites to fowls and domesticated animals.
5	<i>Adhatoda vasica</i>	Malabar nut/ Seraona	Acanthaceae	Leaves	Fever, cold, cough, stomach-ache, tuberculosis, malaria, varieties of skin diseases, asthma, massaging rheumatic swelling, etc.
6	<i>Ageratina adenophora</i>	Crofton weed/Naga- khawo	Asteraceae	Leaves	Treating wounds, bruise, boils, bites of venomous insects, scabies, other skin diseases, dyspepsia, gastritis and cough.
7	<i>Agrimonia eupatoria</i>	Church teeples/ Lungri	Rosaceae	Leaves	Diarrhoea (in small children), urinary tract problems, urinary bladder leakage (cannot hold urine), bed-wetting, adult incontinence and menstrual bleeding. Diarrhoea and dysentery.
8	<i>Alnus nepalensis</i>	Alder/ Nagvaithing	Betulaceae	Leaves, bark	
9	<i>Anaphalis nubigena</i>	Pearly everlasting/Lungkupi	Asteraceae	Leaves	It is considered one of the best in controlling bleeding wounds. Extract juice from the leaf is simple administered in the open wounds.
10	<i>Anaphalis contorta</i>	Western pearl everlasting/Lungkupi	Asteraceae	Whole	Blood coagulant
11	<i>Artemisia nilagirica</i>	Sagebrush/ Maharna	Asteraceae	Leaves	Malaria, antiseptic, digestive, disinfectant, ophthalmic, poultice and sedative.
12	<i>Bauhinia × blakeana</i>	Mountain Ebony/ Haojakwon/Bahuwon	Fabaceae	Leaves, flower	Digestion, constipation (anti-oxidant), leucorrhoea, treating diarrhoea and dysentery.

13	<i>Begonia coccinea</i>	Begonia Hook/ Khayawon	Begoniaceae	Flower	Blood circulation, elimination of toxins from the body, burns and toxic sores.
14	<i>Bidens pilosa</i>	Spanish needle/ Phanang	Asteraceae	Leaves	Inflammation, immunological disorders, digestive disorders (a very good anti-oxidant), metabolism, wounds, treating piles.
15	<i>Blumeopsis falcata</i>	/Haochak	Asteraceae	Leaves	Swollen limbs, cold and to treat piles.
16	<i>Borago of ficinalis</i>	Starflower/ Sirawon	Boraginaceae	Leaves, flower	Respiratory and cardiovascular disorders, gastrointestinal, stomach cramps, diarrhoea, asthma, bronchitis, kidney inflammation colds, flu, rheumatoid arthritis.
17	<i>Brassica juncea</i>	Mustard leaves/ Kayanghan	Brassicaceae	Leaves	Headache, migraine and dizziness. The seeds are crushed and placed on mumps and on the neck for swollen glands.
18	<i>Breynia retusa</i>	Saksetheirong	Phyllanthaceae	Leaves, stem	Astringent to the bowels, inflammations, conjunctivitis, women womb problems.
19	<i>Cannabis sativa</i>	Marijuana/ Cannabis/ ganja	Cannabaceae	Leaves	Recreational, appetizer, lactation by women.
20	<i>Capsicum frutescens</i>	Naga chilli/King chilli/ Umarok	Solanaceae	Fruits	Preventing heart diseases, cancers and blood vessels, including poor circulation, excessive blood clotting, high cholesterol.
21	<i>Centella asiatica</i>	Asiatic pennywort Kongrihan	Apiaceae	Leaves, roots	Stomach ulcer, urinary problems, dysentery, skin diseases (ointment), leprosy, and controlling blood pressure.
22	<i>Citrus limonum</i>	Lemon/ Champra	Rutaceae	Fruits	Anti-bacterial or insecticide treatment, migraine, vomit and digestion.
23	<i>Clerodendrum speciosum</i>	East Indian Glory Bower/ Kajuwon	Verbenaceae	Stem, roots	The leaf juice is used to destroy intestinal worms; treatment of skin diseases, and dysentery.
24	<i>Colocasia esculenta</i>	Yam/ Hangkorpai	Araceae	Roots	Extracted juice out of its roots is rubbed against the skin to prevent from swollen and to suppress the pain from a bee sting or insect bite.
25	<i>Cucumis sativus</i>	Cucumber/Karopthei	Cucurbitaceae	Fruits	Soothe the swelling and pain of the bee stung.
26	<i>Curcuma aromatica</i>	Wild turmeric/ Koktuiwon	Zingiberaceae	Roots	Stomach-ache.
27	<i>Curcuma longa</i>	Turmeric/ Yaingang	Zingiberaceae	Roots	Digestion and anaemia.
28	<i>Drymaria cordata</i>	Heartleaf/ Vanipi	Caryophyllaceae	Whole	Body sprain, sinusitis, skin diseases, headaches, female infertility and febrile conditions in children.
29	<i>Elsholtzia ciliata</i>	Vietnamese Balm/ Yongpa	Lamiaceae	Leaves	Tonsil, headache and blistered lips.
30	<i>Eryngium foetidum</i>	Spirit weed/ Kashat phatekhom	Apiaceae	Roots	The concoction of <i>Eryngium foetidum</i> and <i>Mimosa pudica</i> serves for kidney problems and stone case.
31	<i>Ficus religiosa</i>	Peepal/ Khaorathe	Moraceae	Fruit	Asthma, diabetes, diarrhoea, epilepsy, gastric problems, and inflammatory disorders.
32	<i>Galium aparine</i>	Goose Grass/ Kajusasa	Rubiaceae	Stem, leaves	Asthma, tuberculosis, acts as diuretic, lymphatic, tonsillitis, skin diseases, light wounds and burns.
33	<i>Goniotalamus cardiopetalus</i>	Ghat Goniotalamus/ Ngashi	Annonaceae	Leaves	" <i>Kameomeikapop</i> " (local term) commonly a skin disease burn or blister (ngaphar). A mixture of these two (grass and leaves) burnt ashes are applied to the infected area.
34	<i>Gynura bicolor</i>	Okinawan spinach/ Wothaola	Asteraceae	Leaves and	To control blood pressure, sugar levels, fevers, rash, kidney disease, diabetes mellitus and hyperlipidemia.
35	<i>Gynura cusimbua</i>	Hill Gynura/ Wothaola	Asteraceae	Leaves	Stop bleeding and quick healing, headache and used as sedative drug.
36	<i>Hedychium coronarium</i>	Hedichium/ Yaimu	Zingiberaceae	Flower	Digestion, nausea, vomiting, hiccups, asthma, internal injuries, antiseptic agent, poor blood circulation.

37	<i>Houttuynia cordata</i>	Chameleon plant/ Ngayungna	Saururaceae	Roots	Antiviral, antibacterial, stomach ache, gas formation.
38	<i>Hydrocotyle himalaica</i>	Himalayan Pennywort/ Aka kongrihan	Araliaceae	Leaves	Fever, wounds, boils,bruises, colds, coughs, hepatitis, scabies, jaundice, sinusitis and sore throat.
39	<i>Juglans regia</i>	Walnut/ Shilangthei akor	Juglandaceae	Seeds	The bark and the leaves of this tree are widely used for fishing in the river, because of its toxicity to fish.
40	<i>Lantana camara var. aculeata</i>	Tickberry/ Ngaveikashat	Verbenaceae	Leaves	Antibacterial, antipyretic, carminative and in the treatment of respiratory infections, cold and cough.
41	<i>Melastoma malabathricum</i>	Malabar Melastom/ Konghipamkhong	Melastomataceae	Leave, roots	Sinus, cold, bronchitis, tonsillitis, women's womb problems, diarrhoea, dysentery, cuts and wounds, toothache, stomach-ache and anti-inflammatory.
42	<i>Mentha spicata.</i>	Mint/ Suirihan	Lamiaceae	Leaves	Stomach-ache, chest pains, appetizer and also good for digestive complexities.
43	<i>Mimosa pudica</i>	Touch me not/ Vashina	Mimosaceae	Roots	The concoction of <i>Eryngium foetidum</i> and <i>Mimosa pudica</i> serves for kidney problems and stone case.
44	<i>Mussaenda glabrata</i>	Dhobi Tree/Kongharwon	Rubiaceae	Leaves	Cough, fever, wounds, ulcers, leucoderma, pruritus, jaundice, herbal shampoo. Especially, women wombs problems.
45	<i>Nicotiana tabacum</i>	Tobacco/ Haomeikhari	Solanaceae	Leaves, Tobacco water	Quick eruption of boil, wounds, injuries toothache and to neutralise poisons of snake or scorpion.
46	<i>Ocimum tenuiflorum</i>	Tulsi/ Yongpa	Lamiaceae	Leaves	Stress, improve stamina and endurance, coughs and flu, antioxidant, antibiotic, antifungal, tonsillitis, etc.
47	<i>Olea europaea</i>	Olive/Fashongthei	Oleaceae	Fruits	Piles, urinary track problems, women wombs problems and diabetes.
48	<i>Oroxylum indicum</i>	Broken Bones Tree/Raikhaithing	Bignoniaceae	Seeds	Liver tonic, bleeding nose, kidney problems, gastritis, skin diseases, joints or rheumatism.
49	<i>Oxalis corniculata</i>	Creeping woodsorrel/ Sithur	Oxalidaceae	Leaves	Severed as a coagulant in umbilicalcut, prevent bacterial infection. It is also used for cleaning stained nails.
50	<i>Phoenix sylvestris</i>	Wild Date Palm/ Khaneithei	Arecaceae	Fruits	Diarrhoea and dysentery.
51	<i>Physalis peruviana</i>	Cape Gooseberry/Raitingthei	Solanaceae	Leaves	Diarrhoea, dysentery, jaundice, anti-inflammation and antioxidant.
52	<i>Pinus kesiya</i>	Pine tree/Matan-gchor	Pinaceae	Raisin	Scabies, dried skin, etc.
53	<i>Plantago major</i>	Broadleaf plantain/ Hanvathan	Plantaginaceae	Leaves	Chronic diarrhoea, chronic digestive disturbance, liver functioning, anti-inflammatory, analgesic, anti-oxidant, antibiotic, immune-modulating.
54	<i>Persicaria chinensis</i>	Knotweed/ Khaisahan	Polygonaceae	Roots	Inflammations of the mouth and upper respiratory tract, liver and kidney disorders etc.
55	<i>Pratia nummularia</i>	Roundleaf Star Creeper/ Khaireothei	Campanulaceae	Fruits, whole	Treating diabetic patients
56	<i>Prunus persica</i>	Peach/ Mayangthei	Rosaceae	Leaves, fruits	Increases the immune system, skin diseases, cold and cough.
57	<i>Quercus lithocarpus</i>	Oak Tree/ Silimthing	Fagaceae	Leaves, seeds	Eye problem, dysentery, diarrhoea, blister on lips, tongue, etc.
58	<i>Rhododendron arboreum</i>	Nilgiri Rhododendron/ Kokluiwon	Ericaceae	Flower	It is considered a remedy when a bone of a fish is stuck in the throat by applying the leave on the throat.
59	<i>Rhus chinensis</i>	Rhussemialata/ Khamkhuithei	Anacardiaceae	Fruits	Coughs, diarrhoea, dysentery and to stop intestinal, uterine bleeding, antiviral, antibacterial, anticancer, anti-diarrheal and antioxidant properties.

60	<i>Ribes uvacrispa</i>	Gooseberry/ Shaksethei	Grossulariaceae	Fruit	Eyesight, cough, indigestion; teeth sensitivity, loose-motion when constipated.
61	<i>Rubus ellipticus</i>	Yellow Himalayan raspberry/ Karathei	Rosaceae	Fruits, roots	Anti-diabetic, excessive menstrual bleeding and infant tongue infection.
62	<i>Sambucus nigra</i>	Elderberry/ Hokmeina	Adoxaceae	Stem, bark, leaves, flower	Bruises, sprains, wounds, congestion, as an expectorant to relieve a dry cough, viral infections, fever and flu.
63	<i>Solanum erianthum</i>	Velvet Nightshade/ Khamen	Solanaceae	Fruits	Haemorrhoids and scrofula, dysentery, fever, diarrhea, digestive problems, anti-inflammatory and to treat arthritis.
64	<i>Solanum tuberosum</i>	Potato/ Mayangpai	Solanaceae	Roots	Apply to burnt injury as soother.
65	<i>Sonchus oleraceus</i>	Milky tassel/ Chaohan	Asteraceae	Leaves	Its extracted milky juice is applied to scabies, bleeding wounds.
66	<i>Swertia perennis</i>	Felworts/ Ramkuinine	Gentianaceae	Leaves	Anti-diarrhoea and fever
67	<i>Taxus wallichiana</i>	Himalayan Yew/ Kameomeilathing	Taxaceae	Leaves	Used in preparation of many medicines by the ethnomedical practitioners.
68	<i>Urtica dioica</i>	Stinging needle/ Lenghui	Urticaceae	Leaves	Mumps, energy booster, sexual arousal.
69	<i>Viburnum grandiflorum</i>	Grand Viburnu/ Khuramlothei	Adoxaceae	Leaves	Ear problems, antispasmodic, asthma.
70	<i>Zea mays</i>	Corn/maize/ Khamathei	Poaceae	Seeds	Teeth sensitivity, bleeding gum, anti-allergic and anti-food poisoning.
71	<i>Zingiber officinale</i>	Ginger/ Hui	Zingiberaceae	Roots	Anti-food poisoning, fever, cough clearing the throat.
72	<i>Perilla frutescens</i>	Beefsteak plant/ Hanshina	Lamiaceae	Leaves	Antidote to food poisoning, antioxidant, anti-allergic and anti-inflammatory.

## Discussion

Scientists in many parts of the world have carried out extensive research and have proven to the humanity on the effectiveness of the ethnomedicinal plants identified by the various ethnic or the tribal communities of the world. It is believed that tribal communities across the world are the reservoirs of vast ethnomedical knowledge which also form the basis of the Chinese, the Indian and the modern biomedicine. Since they are effective in treating several health problems and diseases, ethnomedicinal plants are still very popular and widely used by the people of the present study population in its crude and raw forms. Almost everybody has some knowledge of treatment methods mostly of minor diseases or ailments (cough, skin diseases, fever, first-aid injuries or wounds, boils scabies, etc.). However, not all the populations are gifted with the knowledge, technique and precision to prepare medicines or to treat certain diseases and ailments in which case requires the expertise of the 'medicine men' or the 'traditional healers' (Khanong). According to Katewa *et al* [10] this ethnomedical knowledge acquired through the ages of practice and experience is usually passed on from

generation to generation as a guarded secret of certain families. Therefore, it is necessary to popularise the identity and utility of these medicinal plants.

The findings in the present study also suggested that the leaves are the major portion of the plant used in the treatment of various health problems and diseases consistent with several previous studies [11-16]. The methods of preparation of medicines can be broadly divided into four categories, viz. plant parts applied as a paste, juice extracted from the fresh parts of the plant, and plants used to prepare a decoction in combination with water and powder made from fresh or dried material. It is also observed that majority of the medicinal plants are used in more than one form of preparation, and fresh part of the plant is found to be that most commonly used object for the preparation of medicine. Similar findings have also been observed in previous studies [16,17].

Mode of administration of medicines can be also broadly divided into two methods; external applications and internal consumption taken orally. For instance, in the treatment of diseases and health problems like skin diseases, allergy, inflammation and burnt, bruises, eara che, anti-witch spells, excessive bleeding from injury or cuts, joints or rheumatism, boil, scabies, piles, mumps, etc.

medicines are administered externally in the form of powder, paste and liquid. Whereas, in the case of diseases or health problems like, migraine, digestive problems, respiratory problems, cold, cough, menstrual problems, diarrhoea, fever, food poisoning, nausea, stomach ache, asthma, diabetes, gastric problems, tonsillitis, womb (women) problems, sinusitis, headaches, mouth disease, hypertension, constipation, snake bites, sore throat, kidney problems, stone case, etc. they are taken orally in the form of liquid.

### Conclusion

In the present Tangkhu society, the importance and the usefulness of ethnomedicinal plants are most visible in treating minor diseases and health problems (cough, fever, skin diseases, fever, first-aid to physical injuries or wounds, boils scabies, digestive problems, etc.). However, diseases and ailments which people believed are serious and beyond their ability to treat are referred to modern medical treatment. It is interesting to note that when people around the world are making the best use of modern medical facilities and health care technology, ethnomedicinal plants continue to remain as the basis of their primary health care system, which is partly due to unavailability of modern medicines in the rural villages, inaccessible due to expensive nature of modern medical treatment and a strong cultural belief and attachment to the power of ethnomedicines.

Although medicinal plants, especially for those people who are still living in the rural villages still play a pivotal role in their primary healthcare system, it is facing the possibilities of having to disappear completely in the future generation. The reasons due to increasing population, deforestation, land encroachment (for development projects) and the lack of conservation policy have resulted irreparable lost and depletion to the once rich biodiversity and medicinal plants of the region. Secondly, it is very unfortunate that elders and traditional healers are dying one after another without passing their knowledge to the younger generation, partly due to migration of the younger generations to the nearby towns and metropolitan cities in the pursuits of better living, comfort and the feeling of complacency for having modern biomedicine. This same feeling has led them to lose interest in learning their traditional medical knowledge systems which they thought are no longer necessary in this highly advanced world. If the present depletion trend of

local medicinal knowledge continues without any effort from the people and the government, there is a high chance that with the present generation of the elders (50 years and above) dying one after another the vast knowledge of ethnomedicine will also disappear along with them. Thus the need for documentation and conservation of medicinal plants became an imperative measure.

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