

Ethnomedicinal plants used by the *Phom-Naga* tribe in Longleng district of Nagaland, India

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Abstract

Longleng district in Nagaland, India is endowed with rich flora and fauna including valuable medicinal plants. The present paper reports sixty-six species of ethnomedicinal plants used by the *Phom-Naga* tribe in Nagaland for treatment of various diseases that plaque to human being.

Key words: Ethnomedicinal plants, *Phom-Naga* tribe, Nagaland

INTRODUCTION

Longleng district of the Indian state of Nagaland is the homeland of the *Phom-Naga* tribe. The district is bounded on the North by Sibsagar district of Assam, on the South by Tuensang district, on the East by Mon district and in the West by Mokokchung district of Nagaland.

The Longleng district is an abode of fascinating landscape, lush greenish blue mountains and forests. Heavy rainfall for about four to five months (May to September) in a year accompanied by intense solar radiation through clear sky and foggy suspension and high humidity makes the district an ideal repository of a rich biodiversity and natural habitat of different species including medicinal plants.

Tamlu, Yongya and Sakshi are the three important sub-divisions in the district. The department of tourism has identified the village of Pongo as a festival destination of the *Phoms*. Mongyu is a festival marking the end of the old year and beginning of the summer. It is also a time of prayer and dedication for the seeds sown and for the one already sprouting. The *Phom* tribes also use different types of instrument made up of wood as communication instruments with different sound beats signifying different meanings.

Although, a good number of ethnobotanical studies have been contributed during the last 2 - 3 decades from the North-Eastern region of India, including Bora (1999), Borthakur (1976, 1981 a,b.), Borthakur & Goswami (1995), Das & Pandey (2007), Devi (1989), Kar & Borthakur (2008), Nath *et al* (2009), Puri (1983), Rao & Jamir (1982), Sumitra *et al* (2009), Tag *et al* (2008) and Tiwari *et al* (2009). However, only a few valuable accounts of medicinal plants have been contributed from the state of Nagaland, such as Jamir (1997), Jamir & Rao (1990), Jamir *et al* (2008), Lanusunep & Jamir (2010), but practically nothing has been studied from the *Phom-Naga* tribes. Thus, the present studies deals with the first hand investigation of 66 species of ethno-medicinal plants used by the *Phom-Naga* tribe in Longleng district of Nagaland.

METHODOLOGY

In the present study, an intensive ethno-medicinal plants survey were conducted during last two years (2009 – 2010) among the *Phom-Naga* tribes for cure of various diseases and ailments through interviews and interactions with the village elders, Goan Bora, local medicine men, etc. All the collected specimens were properly poisoned so as to protect from the pathogens, insects, etc.

78 Ethnomedicinal plants used by the *Phom-Naga* tribe in Nagaland and mounted on the mounting sheets following the field and herbarium methods (Jain & Rao 1977). Thereafter, the plants were identified with the help of available literature, flora books, and from the herbarium, and then deposited at the Herbarium, department of Botany, Nagaland University, Lumami, Nagaland.

RESULTS

During the present survey 66 species of plants have been recorded to use by the *Phom-Naga* people. The plants are presented in Table 1 alphabetically for their scientific names along with family, reference to voucher specimen, local names, useful parts and uses.

Table 1: Ethno-medicinal plants used by the *Phom-Naga* tribe of Nagaland

Botanical name [Family] Voucher specimen	Local name	Parts used	Disease/ailment treated
<i>Achyranthes aspera</i> Linnaeus [Amaranthaceae] KL-174	<i>Kotembü</i>	Entire plant	Diuretic
<i>Adiantum philippense</i> Linnaeus [Adiantaceae] KL-167	<i>Phümbö</i>	Aerial part	Fever, dysentery, malaria
<i>Ageratum conyzoides</i> Linnaeus [Asteraceae] KL-103	<i>Asok aso</i>	Leaves, roots	Leaves in cuts & sores; roots anthelmintic, anti-allergic
<i>Albizia chinensis</i> (Osbeck) Merrill [Mimosaceae] KL-104	<i>Mokok-sung</i>	Bark	Bark paste is wrapped around injured part that supports as bandage
<i>Albizia lebbek</i> (Linnaeus) Bentham [Mimosaceae] KL-176	<i>Nok polang</i>	Leaves, seeds	Improves womb weakness
<i>Allium cepa</i> Linnaeus [Alliaceae] KL-106	<i>Lothi</i>	Bulb	Typhoid; improves blood circulation
<i>Allium chinense</i> G. Don [Alliaceae] KL-107	<i>Koang lothi</i>	Bulb	Early stages of cancer
<i>Allium hookeri</i> Thwaites [Alliaceae] KL-180	<i>Tongpa</i>	Rhizome, leaves	Leukaemia; a vermifuge
<i>Allium tuberosum</i> Rottler ex Sprengel [Alliaceae] KL-109	<i>Lothi</i>	Leaves, roots	Epilepsy
<i>Alocasia macrorrhiza</i> (Linnaeus) G. Don [Araceae] KL-164	<i>Avilavo nü</i>	Leaves, roots	Inflammatory diseases; a vermifuge
<i>Alnus nepalensis</i> D. Don [Betulaceae] KL-111	<i>Süngyang süugta</i>	Leaves	Dysentery, diarrhoea
<i>Alstonia scholaris</i> (Linnaeus) R. Brown [Apocynaceae] KL-112	<i>Kolisung</i>	Seeds	Constipation
<i>Amaranthus spinosus</i> Linnaeus [Amaranthaceae] KL-165	<i>Ak alo</i>	Leaves, inflorescence	Weak womb in women
<i>Areca catechu</i> Linnaeus [Arecaceae] KL-114	<i>Koyü</i>	Seeds	A vermifuge
<i>Arisaema tortuosum</i> (Wallich) Schott [Araceae] KL-171	<i>Ao- motogo</i>	Roots, seeds	Gastritis, indigestion
<i>Artemisia indica</i> Willdenow [Asteraceae] KL-116	<i>Shisok</i>	Stem	Soothing sore throat; a source of vitamin
<i>Artemisia nilagirica</i> (Clarke) Pampam [Asteraceae] KL-117	<i>Nya ho long tang</i>	Entire plant	Appetizer, source of vitamin; in dog bites
<i>Artocarpus heterophylla</i> Lamarck [Moraceae] KL-166	<i>Polong</i>	Seeds, bark	Cancer, asthma

Botanical name [Family] Voucher specimen	Local name	Parts used	Disease/ailment treated
<i>Asparagus racemosus</i> Willdenow [Asparagaceae] KL-119	<i>Pongi-jo</i>	Root	Diabetes, epilepsy
<i>Azadirachta indica</i> A. Jussieu [Meliaceae] KL-120	<i>Tangmo</i>	Leaves	Heart problems
<i>Bambusa tulda</i> Roxburgh [Poaceae] KL-168	<i>Nüet</i>	Shoot	Piles
<i>Bauhinia glauca</i> (Wallich ex Bentham) Bentham [Caesalpiniaceae] KL-122	<i>Nok-polang</i>	Roots	Problems of womb in women
<i>Begonia palmata</i> D. Don [Begoniaceae] KL-170	<i>Kochi naro</i>	Leaves	A febrifuge
<i>Brugmansia suaveolens</i> (Willdenow) Berchtold & Presler [Solanaceae] KL-124.	<i>Ako jang</i>	Leaves	Weak memory
<i>Cajanus cajan</i> (Linnaeus) Huth [Fabaceae] KL-125	<i>Maha jang</i>	Seeds, leaves	Womb cancer
<i>Canna edulis</i> Linnaeus [Cannaceae] KL-169	<i>Ongtsü on</i>	Leaves	Treats toothache along with <i>Solanum myriacanthum</i>
<i>Cannabis sativa</i> Linnaeus [Cannabaceae] KL-172	<i>Phang</i>	Leaves	Cuts and wounds; an appetizer
<i>Catharanthus roseus</i> Linnaeus [Apocynaceae] KL-175	<i>Ampok naro</i>	Leaves, flower	Cancer, diabetes
<i>Centella asiatica</i> (Linnaeus) Urban [Apiaceae] KL-181	<i>Jelo alük</i>	Entire plant	Cough, malaria; improves hair growth
<i>Citrus limon</i> Linnaeus [Rutaceae] KL-177	<i>Nok ak</i>	Leaves, seeds	Headache, dysentery
<i>Colocasia esculenta</i> (Linnaeus) Schott (Araceae) KL-200	<i>Shitsü nü</i>	Leaves, stem, rhizome	Vermifuge, laxative
<i>Celosia argentea</i> Linnaeus [Amaranthaceae] KL-133	<i>Phenlo naro</i>	Flower	Gastric problems
<i>Coriandrum sativum</i> Linnaeus [Apiaceae] KL-2301	<i>Dunia</i>	Aerial part	Blood purifier; indigestion
<i>Costus speciosus</i> J.E. Smith [Costaceae] KL-2307	<i>Yempi tongsa</i>	Stem	Jaundice, headache, fever; a germicide
<i>Crotalaria pallida</i> Aiton [Fabaceae] KL-2309	<i>Naga dal</i>	Leaves, bark	Jaundice
<i>Curculigo orchoides</i> Gaertner [Hypoxidaceae] KL-145	<i>Achi kelok</i>	Rhizome	Gastric problem & venereal diseases
<i>Curcuma angustifolia</i> Roxburgh [Zingiberaceae] KL-2308	<i>Haldi</i>	Rhizome	Body ache, swelling body parts, cuts & wounds
<i>Curcuma aeruginosa</i> Roxburgh [Zingiberaceae] KL-2304	<i>Phaü hüng</i>	Rhizome	Tuberculosis, cancer, toothache
<i>Dioscorea bulbifera</i> Linnaeus [Dioscoreaceae] KL-2303	<i>Phang phang</i>	Tubers	Piles, dysentery
<i>Drymaria cordata</i> (Linnaeus) Roemer & Schultes [Caryophyllaceae] KL-142	<i>Phiphi</i>	Leaves	Snake and insect bites, sinus problem
<i>Elsholtzia blanda</i> Bentham [Lamiaceae] KL-140	<i>Sangjembe</i>	Leaves	Stomach-ache, nervous tension, constipation
<i>Euphorbia royleana</i> Boissier [Euphorbiaceae] KL-182	<i>Owma</i>	Latex	Toothache, burns

Botanical name [Family] Voucher specimen	Local name	Parts used	Disease/ailment treated
<i>Equisetum ramosissimum</i> Desfontaines [Equisetaceae] KL-136	<i>Tetet naro</i>	Entire plant	Rheumatic pain, hair growth
<i>Ficus altissima</i> Blume [Moraceae] KL-178	<i>Hamsu</i>	Fruits	Appetizer
<i>Ficus carica</i> Linnaeus [Moraceae] KL-148	<i>Momo</i>	Fruits	Womb tumour
<i>Fragaria nilgerrensis</i> Schlechtendal ex J. Gay [Rosaceae] KL-196	<i>Chumen</i>	Fruits	Source of vitamin
<i>Gossypium arboreum</i> Linnaeus [Malvaceae] KL-199	<i>Pemba</i>	Seeds	Measles, allergies; refrigerant
<i>Hibiscus rosa-sinensis</i> Linnaeus [Malvaceae] KL-179	<i>Lejing</i>	Leaves	Dysentery, gastric problems, indigestion
<i>Jatropha curcas</i> Linnaeus [Euphorbiaceae] KL-184	<i>Pah meli</i>	Branch stem	Used for brushing during toothache
<i>Kalanchoe pinnata</i> (Lamarck) Persoon [Crassulaceae] KL-191	<i>Yongkum pükum</i>	Leaves	Wounds, insect bites, gall bladder stone
<i>Lasia spinosa</i> (Linnaeus) Thwaites [Araceae] KL-198	<i>Sham-hüh</i>	Aerial part	Anthelmintic
<i>Mangifera indica</i> Linnaeus [Anacardiaceae] KL-2305	<i>Ashoi</i>	Leaves	Jaundice, stomach ache
<i>Mikania cordata</i> (Burman f.) Robinson [Asteraceae] KL-195	<i>Jang aso</i>	Leaves, stem	Insect bites, itches, wounds; stops bleeding
<i>Mimosa pudica</i> Linnaeus [Mimosaceae] KL-192	<i>Vaü thüng</i>	Leaves	Wounds, insects bites, jaundice, urinary problem
<i>Musa paradisiaca</i> Linnaeus [Musaceae] KL-185	<i>Ngü</i>	Latex	Dysentery
<i>Nicotiana tabacum</i> Linnaeus [Solanaceae] KL-2306	<i>Mükü</i>	Seeds	Cough, fever
<i>Ocimum basilicum</i> Linnaeus [Lamiaceae] KL-197	<i>Chionum</i>	Leaves	Cough, skin diseases, insect stings
<i>Oxalis corniculata</i> Linnaeus [Oxalidaceae] KL-188	<i>Meih sü</i>	Entire plant	Jaundice, dysentery, diarrhoea
<i>Phyllanthus emblica</i> Linnaeus [Euphorbiaceae] KL-2302	<i>Phanga aliak</i>	Fruits	Cough; source of vitamin improving eye sight
<i>Piper betle</i> Linnaeus [Piperaceae] KL-193	<i>Bülou</i>	Leaves	As antiseptics in cuts and wounds; coughs
<i>Psidium guajava</i> Linnaeus [Myrtaceae] KL-189	<i>Kong kai</i>	Leaves	Dysentery; germicidal
<i>Ricinus communis</i> Linnaeus [Euphorbiaceae] KL-183	<i>Benben</i>	Leaves	Rheumatic body parts, blood clotting, bone fracture
<i>Solanum myriacanthum</i> Dunal [Solanaceae] KL-187	<i>Lengkok</i>	Seeds	Toothache; germicidal
<i>Spilanthes acmella</i> Linnaeus [Asteraceae] KL-190	<i>Pakang thüng</i>	Inflorescence	Toothache; germicidal
<i>Tagetes erecta</i> Linnaeus [Asteraceae] KL-194	<i>Lichüng chü</i>	Leave	Headache, boils, muscular pain
<i>Zingiber officinale</i> Roscoe [Zingiberaceae] KL-186	<i>Cheng</i>	Rhizome	Rheumatic pain, womb tumour

DISCUSSION AND CONCLUSION

In the present paper, a total of 66 species of medicinal plants belonging to 60 genera and 40 families have been recorded. A maximum of 6 species in Asteraceae, 4 species each of Araceae, Liliaceae and Zingiberaceae, 3 species each of Amaranthaceae, Moraceae, Mimosaceae and Solanaceae, 2 species each of Apocynaceae, Apiaceae, Anacardiaceae, Fabaceae, Lamiaceae, Euphorbiaceae and Malvaceae and the rest 21 families are represented by single species.

Sixty six ethno-medicinal plants used by the Phom-Naga, a district aboriginal tribe of Nagaland in Longleng district are enumerated. This plants list is not exhaustive as there might be definitely more plants and information could be added after thorough and detail investigation of the region. However, it is serious to note that the present studies have revealed that the rich flora and fauna are depleting at a very high rate, owing to various factors like rampant destruction of forests, wild fire, over exploitation, 'Jhum' or 'Shifting cultivation' and various other human socio-economic developmental activities. Therefore, the author stresses upon the very urgent need of conservation and protection of the valuable wealth of medicinal plants from the region.

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