

Ethnobotanical remedies to cough and cold as practiced by the *Tangkhum* tribe in the Ukhrul District of Manipur, India

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Abstract

The *Tangkhum*-Naga tribe dwells in the district of Ukhrul which is located in the eastern part of the state of Manipur. Recent (2011 – 2013) ethnomedicinal survey among this community revealed the use of 30 species of angiosperms, covering 26 genera and 18 families which they use to treat cough and cold. Some of the effective species used by the *Tangkhum* practitioners include *Acorus calamus* Linnaeus, *Alpinia galanga* (Linnaeus) Willdenow, *Blumeopsis flava* DC., *Cinnamomum zeylanicum* Blume, *Drymaria cordata* Willdenow, *Solanum nigrum* Linnaeus, *Swertia chirayita* (Roxburgh) Buch.-Hamilton ex C.B. Clarke, *Taxus baccata* Linnaeus and *Thalictrum foliolosum* DC. List of all the 30 species and their mode of application are presented and discussed in this article.

Key words: *Tangkhum*, cough and cold, conservation, Ukhrul, Manipur.

INTRODUCTION

Ukhrul, the homeland of *Tangkhum* Naga tribe lies between 23°13' N and 25°68' N Latitudes and 94°20' E and 94°25' E Longitudes, having an area of 4,544 km² of which 2,600 km² area is forest covered. It is a hilly region, surrounded by Myanmar in the east, Nagaland state in the north, Chandel and Senapati districts of Manipur in the south and west respectively. The region enjoys tropical, sub-tropical and temperate climate. The temperate climate of the district is health promoting with a minimum and maximum temperature of 3° C to 33° C. As per 2011 census, total population of Ukhrul district is 1,83,115 (Anonymous 2011).

Agriculture is the main occupation of the *Tangkhum*s of Ukhrul district, Manipur. Ukhrul is rich in floral diversity, most of which possesses medicinal properties. The natural medicinal herbs provide the major share of medicines for the treatment of their various ailments. The traditional healing system, which is preferred by tribal people, is passed on orally from generation to generation. This paper is the outcome of an attempt to collect and document information about ethnomedicinal plants used for the treatment of cough and cold by the people of *Tangkhum* community.

Though a good number of valuable research works on traditional medicinal practices in the North-East India have been published (Rao & Jamir 1982 a,b; Sinha 1987; Jamir & Rao 1990; Borthakur & Goswami 1995; Singh & Singh 1996; Bora 1999; Chaturvedi & Jamir 2007; Salam *et al.* 2009; Murthy & Vidyasagar 2013) but no one has studied the treatment of cough and cold by *Tangkhum* Naga tribe.

METHODOLOGY

Extensive ethnobotanical survey was conducted during 2011 – 2013 among the *Tangkhul*-Naga tribe for gathering information about the medicinal plants those are traditionally used by their healers for the treatment of cough and cold. Information was obtained through oral interviews and guided questionnaire administered to local herbalists, elder household heads and women. Information regarding vernacular name, mode of use, plant part used, were also collected. Specimens were processed following Jain & Rao (1977) and were identified using different literatures including Kanjilal *et al.* (1934 – 1940), Deb (1961 a, b) and confirmed by matching at ASSAM and at Manipur university herbarium. The questionnaires were designed following the methods of Parabia and Reddy (2002). For the correct nomenclature and family delimitation www.theplantlist.org has been consulted for all the recorded plants. Voucher specimens were deposited in the herbaria of the Department of Botany, Nagaland University, Lumami and in the Life Sciences Department of Manipur University.

RESULTS

As much as 30 species of medicinal plants are recorded during the present survey. These are enumerated below alphabetically in Table 1 along with their scientific names, family, references to voucher specimens, vernacular names, plant parts used and the mode of administration by *Tangkhul* Nagas.

Table 1. Plant species used for the treatment of cough and cold by the people of *Tangkhul* tribe in Ukhrul district of Manipur

Botanical name [Family]; Exsiccatae	Vernacular name	Mode of uses
<i>Acorus calamus</i> Linnaeus [Acoraceae]; Salam- 937	<i>Oak-hidak</i>	Two or three fresh rhizomes are pounded and the juice of about two teaspoonfuls with honey is given in severe cough
<i>Alangium chinense</i> (Loureiro) Harms [Cornaceae]; Salam- 943	<i>Kokan</i>	Fresh leaves of about 200g are boiled in two liters of water for 25 minutes and the decoction of about 200ml is taken twice daily for a week in malaria fever, cough and cold
<i>Allium sativum</i> Linnaeus [Amaryllidaceae]; Salam- 502	<i>Hanam</i>	A pounded bulb mixed with honey is given in cold and cough
<i>Alpinia galanga</i> (Linnaeus) Willdenow [Zingiberaceae]; Salam-1847	<i>Huirao</i>	Crushed rhizome 30g boiled with 1litre of water, 2g of beer heart and 3g of opium for 30mins and the decoction is given 1/2 cup thrice a day for one week against dry cough
<i>Andrographis paniculata</i> (Burman f.) Nees [Acanthaceae]; Salam- 951	<i>Vubati</i>	Fresh leaf is chewed raw for curing whooping cough
<i>Blumeopsis flava</i> (DC.) Gagnepain [Asteraceae]; Salam-308	<i>Uri</i>	Decoction of its leaves mixed with honey from a stingless bee (2-3ml) is taken twice daily for one week against dry cough
<i>Cinnamomum verum</i> J.Presl [Lauraceae]; Salam- 907	<i>Sakomthing</i>	About 5ml of bark decoction is taken orally once daily in cough
<i>Citrus hystrix</i> DC. [Rutaceae]; Salam- 996	<i>Heiripok</i>	Juice obtained is taken 2 teaspoon twice daily for whooping cough for 7 days
<i>Clerodendrum glandulosum</i> Lindley [Lamiaceae]; Salam- 548	<i>Nareihan</i>	Decoction of the fresh leaf is prescribed against cough
<i>Clerodendrum indicum</i> (Linnaeus) Kuntze [Lamiaceae]; Salam-3505	<i>Charoi utong</i>	Decoction obtained by boiling the root of <i>C. indicum</i> with rhizome of <i>Zingiber officinale</i> in equal amount is prescribed three teaspoon twice daily for one week in cough. Decoction of whole plant is taken orally for one week

Botanical name [Family]; Exsiccatae	Vernacular name	Mode of uses
<i>Curcuma angustifolia</i> Roxburgh [Zingiberaceae]; <i>Salam-1810</i>	<i>Koktuiwon</i>	Rhizome is boiled, a pinch of salt is added and thus the decoction ½ glass is given twice daily for 2 or 3 days in cough
<i>Drymaria cordata</i> (Linnaeus) Willdenow ex Schultes [Caryophyllaceae]; <i>Salam-515</i>	<i>Biviyena</i>	Fresh leaf juice mixed with honey (1-2teaspoonful) is taken twice daily to get relief from whooping cough.
<i>Elsholtzia blanda</i> (Bentham) Bentham [Lamiaceae]; <i>Salam-506</i>	<i>Ngarikna</i>	Fresh leaves and flowers are eaten raw with chilly chutney and are considered good for relieving cough
<i>Justicia adhatoda</i> Linnaeus [Acanthaceae]; <i>Salam- 918</i>	<i>Sipchang</i>	Leaves are boiled along with rhizome of <i>Zingiber officinale</i> and given in chronic bronchitis, cold and cough
<i>Lantana camara</i> Linnaeus [Lamiaceae]; <i>Salam- 530</i>	<i>Nganam shirong</i>	Fresh leaf is also eaten raw to cure whooping cough
<i>Lygodium japonicum</i> (Thunberg) Swartz [Lygodiaceae]; <i>Salam- 528</i>	<i>Chao-ma-libna</i>	The fresh whole plant is pounded and the juice obtained is given 2 teaspoonfuls thrice daily for one week as expectorant in cough
<i>Mussaenda roxburghii</i> Hooker f. [Rubiaceae]; <i>Salam-1866</i>	<i>Kongrawon</i>	A glassful of leaf decoction with sugar crystals is given cough and fever
<i>Ocimum americanum</i> Linnaeus [Lamiaceae]; <i>Salam- 1858</i>	<i>Sari</i>	A handful of fresh young shoot boiled in 2 litres of water for 30 minutes and the decoction of about 300ml is taken twice daily to cure whooping cough
<i>Phlogacanthus thyrsoformis</i> (Roxburgh ex Hardwicke) Mabberley [Acanthaceae]; <i>Salam- 512</i>	<i>Sipchang</i>	Boiled extract of the leaf (3-4ml) is prescribed in cough
<i>Phlogacanthus tubiflorus</i> Nees [Acanthaceae]; <i>Salam-1884</i>	<i>Sipchang Kahunga</i>	Red flowers are eaten raw with chilly chutney and are considered good for relieving cough
<i>Scutellaria discolor</i> Colebrook [Lamiaceae]; <i>Salam-1885</i>	<i>Yenakha</i>	A half cup decoction of the whole plant is taken twice daily for 7 days against cough
<i>Sida acuta</i> Burman f. [Malvaceae]; <i>Salam-3548</i>	<i>Uhan</i>	Juice obtained by crushing the leaves 2-3 teaspoon is mixed with one spoon of honey and given twice daily in whooping cough
<i>Solanum anguivi</i> Lamarck [Solanaceae]; <i>Salam- 536</i>	<i>Kapkhathei</i>	Fresh fruits are eaten raw in cough and fever by all the communities in Manipur
<i>Solanum americanum</i> Miller [Solanaceae]; <i>Salam- 533</i>	<i>Hantehan</i>	Root decoction (10-20 ml) is taken twice daily for a period of 3-4 days in cough
<i>Solanum torvum</i> Swartz [Solanaceae]; <i>Salam- 545</i>	<i>Kapkhathei</i>	Fresh fruits are eaten raw in cough
<i>Swertia chirayita</i> (Roxburgh) Buch.- Hamilton ex C.B. Clarke [Gentianaceae]; <i>Salam-3563</i>	<i>Langchung</i>	Whole plant decoction is a remedy for cough
<i>Taxus wallichiana</i> Zuccarini [Taxaceae]; <i>Salam-534</i>	<i>Kathinaom-atang</i>	About 5ml of leaf decoction is given twice daily for 5 days against cough and fever
<i>Thalictrum foliolosum</i> DC. [Ranunculaceae]; <i>Salam-3574</i>	<i>Kharuri</i>	About 200g root is boiled with 1.5 litres of water and the decoction 250ml is given twice daily for one week in cold and cough
<i>Xylosma longifolia</i> Clos [Flacourtiaceae]; <i>Salam- 3595</i>	<i>Nongleisang</i>	A half cup decoction of the leaf is given once daily for 5-7 days in cough
<i>Zingiber officinale</i> Roscoe [Zingiberaceae]; <i>Salam-540</i>	<i>Hui</i>	Roasted rhizome juice 2 teaspoon is mixed with 2 or 3 drops of honey and used as expectorant in dry cough.

DISCUSSION

From the present study, 30 species of plants belonging to 18 families and 26 genera were collected and recorded for their medicinal values for the treatment of cough and cold.

Lamiaceae represented the maximum of six species followed by Acanthaceae with four species, Zingiberaceae and Solanaceae with three species, and the rest 14 families represented by single species. Among the plant parts, leaves are predominantly used followed by whole plant, rhizome, root, stem, bark, fruits and seeds. The plant parts are commonly used in the form of decoction and juice. The collected data shows that majority of the medicines are taken orally. For preparation of medicine they generally use single plant. Also, it is clearly evident from the study that the knowledge of plants and their usage is limited to elderly *Khanongs* (Local healers). Since the younger generation is not interested in learning the state of art and secrets of traditional technology, as well as their tendency to migrate to cities to discard their traditional life style, so, there is a high risk of losing this wealth of knowledge as the traditional culture is disappearing quite fast. Some plant species like *Swertia chirata*, *Taxus baccata*, *Thalictrum foliolosum*, etc. are now becoming very scarce and their distribution have become very restricted in some pockets only due to over exploitation, thereby, it needs immediate conservation in order to prevent extinction in the district. Hence, the authors stress upon the urgent need of survey, conservation and protection of the medicinal plants from the region.

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