

## Ethnomedicinal plants of Thadou tribe of Manipur (India) -1

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[Received revised 31.05.2013; Accepted 09.06.2013]

### Abstract

The *Thadou* tribe in Manipur is rich in traditional knowledge about the uses of medicinal plants. The paper presented 50 plants are used by Thadous against various ailments and are tabulated along with their correct botanical nomenclature, family, local name, parts used, mode of treatment and uses.

**Key words:** Thadou tribe, Manipur, traditional knowledge, medicinal plants.

### INTRODUCTION

As early as the Neanderthal man, plants were believed to have healing powers, but as no mode of recording events existed in prehistoric times, there were no data on the methods of treatment practiced in that period (Jain 1968). In spite of modern facilities, it is estimated that a total of 60 % of the world population and 80 % of the population in developing countries depend on traditional medicines (Baker *et al* 1995; Pieroni 2000). The tribal people used plants for treating different diseases in different ways as they live in isolated areas and maintained their own culture. The Indian subcontinent is inhabited by about 53.8 million tribal people belonging to nearly 550 communities and it is estimated that the predominant tribal areas comprise of about 15 % of the total geographical area of the country (Pal 2007).

Manipur is a small unique state of North East India which is geographically located between 23° 50' - 25° 42' N and 92° 59' - 94° 46' E spreading over an area of 22,327 sq km. Of the total area, about 1,545 sq km forms the central valley while the rest being a hilly terrain. The state is very rich in biodiversity and is a part of Indo-Mynmar Hotspot region. It is populated mainly by *Meiteis* with polyethnic population of *Aimol*, *Anal*, *Angami*, *Chiru*, *Chothe*, *Gangte*, *Hmar*, *Kabui*, *Koirao*, *Koireng*, *Kom*, *Lamkang*, *Lushai*, *Manipuri Muslims*, *Mao*, *Maram*, *Maring*, *Monsang*, *Moyon*, *Paite*, *Purum*, *Ralte*, *Sema*, *Simte*, *Sukte*, *Tangkul*, *Thadou*, *Vaiphei*, *Zou* and some other tribal communities who are still seeking for the official recognition of their ethnic names (Nabakumar 2004). Among them, the *Thadous* are one of the dominant tribes of Manipur. According to the 2011 census, the total *Thadou* population in Manipur was 1,90,595. They are also found in other states like Assam, Nagaland and Mizoram. The *Thadou* community developed their own science and wisdom through generations. The present paper aims at identifying various ethnomedicinal plants used by the *Thadou* tribe in Manipur. It may be

noted that, many reports are published on ethnomedicinal plants used by various tribes in Manipur like *Kom* tribe (Khatton *et al* 2012a,b), *Tangkhul Naga* tribe (Salam *et al* 2010, 2011, 2012), *Kabui Naga* tribe (Devi *et al* 2011a,b, 2012), *Chiru* tribe (Rajkumari *et al* 2012), *Mao Naga* tribe (Lokho 2012) and muslim community (Ahmad 2007). However, ethnomedicinal plants used by the *Thadou* tribe of Manipur has not been reported by any author and hence the present paper may be considered as the first time report on the subject.

## METHODOLOGY

Several field trips have been carried out to the various places of *Thadou* inhabited areas in Manipur. Sufficient information about various plants used by them for healing different types of ailments of human and domestic animals along with the mode of medicine preparation and its administration has been gathered by interacting with old tribal traditional medical practitioners, village heads, elderly ladies and others. The questionnaires were designed following the methods of Jain (1987) and Martin (1986). The informants are taken to the field and plant samples are collected which are subsequently identified and confirmed by consulting the herbarium specimens at ASSAM and available literature (Das & Mandal 2003; Das *et al* 2010; Lalkhohen 1999; Singh 2007; Singh *et al* 2003; Chauhan 2000). The herbarium specimens were deposited to Centre for Orchid Gene Conservation of Eastern Himalayan Region, KVK- sylvan, Hengbung, Senapati District, Manipur.

## RESULTS AND DISCUSSION

The *Thadou* tribe have acquired the knowledge of utilizing plants for healing different ailments for numerous generations. The information is restricted only to certain families in the community and it is passed on to next kith and kin of same family from the old people at the fag end of their life verbally as a secret without any written document. As a result, in this process, sometimes immature deaths to the people with traditional knowledge lead to the loss of knowledge along with them. However, the *Thadou* tribe prefers their traditional medicinal knowledge to a large extent which is still in practice in spite of the advancement and availability of allopathic treatment. They use plants which are conserved by them in their surroundings thereby preserving their traditional knowledge.

During the survey, a total of 50 species of ethnomedicinally important plants, distributed in 32 families has been recorded to tackle various ailments related to digestive system, urinal genital system, respiratory system, hepato-biliary system, hypertension, nervous system, bone dislocation, external injuries, bee sting, snake bite, flatulence, dental problems, diabetes, fever, gynaecological problems, nose bleeding, throat complaints, vomiting etc. Out of these, 2 species, *Clerodendrum colebrookianum*; *Colocasia esculenta* are used as antidiabetic, 3 species, *Solanum nigrum*; *Saccharum officinarum*, *Benincasa hispida* for kidney infection and 6 species viz. *Benincasa hispida*, *Bidens biternata*, *Carica papaya*, *Curcuma caesia*, *Mimosa pudica*, and *Passiflora edulis* are used against liver infection. An interesting observation is that *Phyllanthus emblica* and *Mikania micrantha* are used for treating cancer. Plants like *Eupatorium odoratum*, *Ageratum conyzoides* etc which are commonly available almost everywhere are used as first aid to arrest bleeding from cuts and wounds. It has been observed that some plants are used singly, while some are used mixing together. Similarly, certain plants are considered useful for one disease whereas most of the plants serve in multiple uses. Decoctions and infusions are the methods mostly employed in the traditional preparation. Due to destruction of their natural habitats by various activities like deforestation for 'jhum' cultivation, forest fires, urbanization etc, the population of the natural resources are depleting day by day thereby diminishing the population of medicinal plants in

the natural habitats. Thus the unavailability of the plants leads to the loss of the traditional knowledge for the younger generation thereby conservation through documentation is helpful to locate the species in other places. Hence it is an immediate need to make aware the local tribal people about the importance of medicinal plants occurring in their area and their sustainable utility keeping in view of the need for future generations.

The observed 50 plants are tabulated alphabetically along with their botanical names followed by families, local names, exsiccatae, plant parts used and their uses (Table 1).

**Table 1.** Medicinal plants used by the *Thadou* tribe in Manipur

Botanical name [Family]; <i>Local name; Exsiccatae</i>	Parts used	Uses
<i>Acmella uliginosa</i> (Swartz) Cassini [Asteraceae]; <i>Ansache; Singson 0005</i>	Whole plant	Boiled plant is taken to expel intestinal worms
<i>Ageratum conyzoides</i> Linnaeus [Asteraceae]; <i>Loubuong; Singson 0010</i>	Leaves	Leaf paste is styptic and vermifuge
<i>Ananas comosus</i> (Linnaeus) Merrill [Bromeliaceae]; <i>Lengthei; Singson 0016</i>	Leaves, fruits	Leaf paste applied in chronic headache; leaf infusion taken orally in chest pain and intermittent fever; decoction of fruits & leaves taken in spasm; fruits taken to cure typhoid
<i>Artocarpus heterophyllus</i> Lamarck [Moraceae]; <i>Lamkhong; Singson 0018</i>	Latex	Applied to cure boils
<i>Benincasa hispida</i> (Thunberg) Cogniaux [Cucurbitaceae]; <i>Maipuong; Singson 0006</i>	Fruits	Boiled fruit is galactagogue; fruit extract antidysenteric and antiemetic; tamarind and sugar are added inside the fruit in equal amount and keep for 3 days and taken in kidney stone and
<i>Bidens biternata</i> (Loureiro) Merrill & Sherff [Asteraceae]; <i>Ponkap/Manchep; Singson 0019</i>	Leaves	Decoction is diuretic, used in liver infection
<i>Blumeopsis flava</i> Linnaeus (Asteraceae); <i>Puhlou; Singson 0017</i>	Leaves	Leaf paste prevent wounds from worsening
<i>Bombax ceiba</i> Linnaeus [Bombacaceae]; <i>Pang; Singson 0029</i>	Bark	Decoction with stem-bark of mango taken to cure dysentery
<i>Brucea javanica</i> Merrill [Simaroubaceae]; <i>Toilheng; Singson 0020</i>	Fruits, leaves, bark	Leaf infusion taken against diarrhea; bark extract as bowel tonic; bark is eaten to cure stomachache
<i>Cannabis sativa</i> Linnaeus [Cannabaceae]; <i>Kanja; Singson 0032</i>	Leaves	Cooked leaves are eaten to cure dysentery
<i>Carica papaya</i> Linnaeus [Caricaceae]; <i>Thingchangmai; Singson 0021</i>	Fruits	Decoction of green-fruit with salt is diuretic; seeds anthelmintic; ripe fruit seeds antidysenteric; flower pedicel is antiemetic and eaten against liver enlargement
<i>Centella asiatica</i> (Linnaeus) Urban [Apiaceae]; <i>Changkongche; Singson 0001</i>	Whole plant	Plant decoction is carminative, hpotensive, appetizer, prescribed in gastritis and stomach trouble

Botanical name [Family]; <i>Local name; Exsiccatae</i>	Parts used	Uses
<i>Citrus medica</i> , Linnaeus [Rutaceae]; <i>Sehthuh; Singson 0030</i>	Fruits	Carminative
<i>Citrus sinensis</i> (Linnaeus) Osbeck [Rutaceae]; <i>Sehlhum; Singson 0012</i>	Leaves, fruits	Leaf infusion given orally in sinus pain; Fruit juice taken internally to cure bee stings
<i>Clerodendrum colebrookianum</i> Walpers [Lamiaceae]; <i>Anphui; Singson 0033</i>	Leaves	Leaf infusion is anti-dandruff; boiled leaves taken in diabetes and high blood pressure
<i>Colocasia esculenta</i> (Linnaeus) Schott [Araceae]; <i>Bal; Singson 0035</i>	Rhizome, petiole, stem	Rhizome is eaten against diabetes; sap applied over bee stings
<i>Costus speciosus</i> (Koenig ex Retzius) Smith [Zingiberaceae]; <i>Ngencha; Singson 0047</i>	Stem	Extract applied in ear infection
<i>Cucurbita pepo</i> Linnaeus [Cucurbitaceae]; <i>Mai; Singson 0038</i>	Seeds	Roasted seeds given as vermifuge
<i>Curcuma aeruginosa</i> Roxburgh [Zingiberaceae]; <i>Ailaivom; Singson 0011</i>	Rhizome	Eaten along with maize grain to cure liver enlargement; extract taken against dysentery
<i>Curcuma longa</i> Linnaeus [Zingiberaceae]; <i>Ai-eng; Singson 0031</i>	Rhizome	Paste applied over wounds; eaten against stomachache; cooked rhizome with crab is eaten against asthma; infusion of rhizome taken in dysentery
<i>Elsholtzia communis</i> (Coll. & Hemsley) Diels [Lamiaceae]; <i>Lengmasel; Singson 0034</i>	Leaves, inflorescence	Leaf and inflorescence eaten against tonsilitis
<i>Eryngium foetidum</i> Linnaeus [Apiaceae]; <i>Pathikhom; Singson 0007</i>	Whole plant	Paste applied for intermittent headache
<i>Eupatorium odoratum</i> Linnaeus [Asteraceae]; <i>Longlen; Singson 0004</i>	Leaves	Leaf paste is styptic
<i>Euphorbia antiquorum</i> Linnaeus [Euphorbiaceae]; <i>Zildon; Singson 0015</i>	Stem and leaves	Stem paste cures pile
<i>Ficus glomerata</i> Roxburgh [Moraceae]; <i>Theichang; Singson 0050</i>	Milky latex	Latex is applied over boils
<i>Houttuynia cordata</i> Thunberg [Saururaceae]; <i>Aithanglow; Singson 0002</i>	Whole plant	Plant eaten to check excessive menstrual discharge, nose bleeding and goitre
<i>Lablab purpureus</i> (Linnaeus) Sweet; [Fabaceae]; <i>Bepi; Singson 0049</i>	Fruits	Boiled fruit is eaten to cure common cold
<i>Mentha arvensis</i> Linnaeus [Lamiaceae]; <i>Not known; Singson 0039</i>	Whole plant	Eaten to cure asthma
<i>Mikania micrantha</i> Kunth [Asteraceae]; <i>Maotamgui; Singson 0003</i>	Whole plant	Leaf infusion with turmeric taken orally in cancer; Decoction is diuretic; plant extract and paste applied over cuts and wounds; also antidiarrhoeic, antidyenteric and antimalaria

Botanical name [Family]; <i>Local name; Exsiccatae</i>	Parts used	Uses
<i>Mimosa pudica</i> Linnaeus [Mimosaceae]; <i>Nohnom/Ham jahse</i> ; <i>Singson 0045</i>	Roots	Root decoction with the rhizome of <i>Cyperus rotundus</i> and flintstone is orally administered to remove stone
<i>Musa paradisiaca</i> Linnaeus [Musaceae]; <i>Changlong</i> ; <i>Singson 0044</i>	Stem	Stem extract with crab is given orally for liver infection; cut stem placed in contact with the snake bite portion to absorb venom; stem decoction is also given to snake-bite victim if he has stomach pain
<i>Mussaenda roxburghii</i> Hooker f. [Rubiaceae]; <i>Baibehponkhon</i> ; <i>Singson 0046</i>	Petaloid floral bracts	Applied to suppurate boils
<i>Oroxylum indicum</i> (Linnaeus) Ventenat [Bignoniaceae]; <i>Bahlong</i> ; <i>Singson 0036</i>	Bark, seeds	Seeds anthelmintic; bark decoction antipyretic, bowel tonic and orally administered in neuralgia
<i>Paederia foetida</i> Linnaeus [Rubiaceae]; <i>Veinamgui</i> ; <i>Singson 0043</i>	Leaves, roots, whole plant	Leaves and roots are chewed to cure toothache and gum complaints; root paste with salt is applied over ringworm; twining stem is used to bind body part where bone dislocated
<i>Parkia roxburghii</i> G. Don [Mimosaceae]; <i>Jonglha</i> ; <i>Singson 0014</i>	Leaves, pod peels, bark	Pod peels vulnerary; bark, leaves and fruits are antidiarrhoeic and antidysenteric
<i>Passiflora edulis</i> Sims [Passifloraceae]; <i>Sapthei</i> ; <i>Singson 0022</i>	Fruits	Fruits are prescribed in liver enlargement
<i>Phlogacanthus thyrsoiflorus</i> Nees [Acanthaceae]; <i>Theidam</i> ; <i>Singson 0048</i>	Leaves	Fresh leaves are massaged in back pain and waist pain; leaves are boiled for steam bath against muscle pain
<i>Phyllanthus emblica</i> Linnaeus; [Euphorbiaceae]; <i>Sohlhu</i> ; <i>Singson 0023</i>	Fruits, bark	Fruits kept in air tight bottle for 1 week, some sugar added to it then its extract is taken to treat cancer; bark anthelmintic, applied in injuries; bark decoction with the bark of <i>Brucea javanica</i> is taken against bowel complaint; bark extract cures dysentery and diabetes; fruit extract taken in lung troubles
<i>Podophyllum hexandrum</i> Royle [Podophyllaceae]; <i>Sielkhupdon</i> ; <i>Singson 0009</i>	Stem	Stem is eaten raw against piles
<i>Psidium guajava</i> Linnaeus [Myrtaceae]; <i>Kolthei</i> ; <i>Singson 0013</i>	Fruits, young twigs	Ripe fruits applied over wounds; young twig antidiarrhoeic, antidysenteric and also is eaten to cure stomachache

Botanical name [Family]; <i>Local name; Exsiccatae</i>	Parts used	Uses
<i>Punica granatum</i> Linnaeus [Punicaceae]; <i>Kolbuthei; Singson 0024</i>	Fruits, young twigs	Fruits punctured filled with almond oil and then tied properly and heated and eaten to cure chest pain; young twigs antidiarrhoeic; fruits eaten against dysentery
<i>Rhus semialata</i> Murray [Anacardiaceae]; <i>Khongma; Singson 0028</i>	Fruits	Fruits eaten to cure diarrhoea
<i>Saccharum officinarum</i> Linnaeus [Poaceae]; <i>Kolchu; Singson 0037</i>	Stem	Extract purify blood, cures liver and kidney infections; extract with ginger cures chest pain and common cold
<i>Sapindus emarginatus</i> Vahl [Sapindaceae]; <i>Bulung; Singson 0040</i>	Fruits	Pounded seeds mixed with salt wrapped in cloth and placed on painful areas to cure toothache; fruit pulp is used in dandruff
<i>Schima wallichii</i> (DC.) Korthals [Theaceae]; <i>Khieng; Singson 0042</i>	Bark, leaves, fruits	Bark infusion applied over injuries; young twigs and fruits used in scorpion sting and spider bite; leaf extract applied and given orally in snake bite
<i>Solanum myriacanthum</i> Dunal [Solanaceae]; <i>Hanaling/Lingkang; Singson 0027</i>	Fruits	Smoke of pounded dried fruits is inhaled to treat tonsillitis; smoke of crushed dried fruits together with mustard oil is inhaled to cure tooth decay; heated fruits are inserted into the anus to expel body worms
<i>Solanum nigrum</i> Linnaeus [Solanaceae]; <i>Anjouche; Singson 0025</i>	Whole plant	Fruit extract and plant decoction are administered in kidney infection and in stone case respectively; plant decoction used to treat frequent urination
<i>Solanum virginianum</i> Linnaeus [Solanaceae]; <i>Anjangkha; Singson 0026</i>	Fruits	Fruits eaten against intermitent headache, high blood pressure; seeds relieve toothache
<i>Tamarindus indica</i> Linnaeus [Caesalpiniaceae]; <i>Mangge; Singson 0041</i>	Fruits	Fruits and sugar in equal amount are filled in the emptied fruit of <i>Beninncasa hispida</i> , closed properly, then the extract is taken after 3 nights for treating liver diseases; seeds cut into halves and kept in contact with snake bitten area to remove venom
<i>Zingiber officinalis</i> Roscoe [Zingiberaceae]; <i>Thing; Singson 0008</i>	Rhizome	Heated rhizome eaten in chest pain and common cold; extract mixed with sugarcane extract taken against neuralgia and chest pain; rhizome infusion is galactogogue; pounded rhizome with salt and chimney soot inserted into the anus against piles; crushed rhizome with lime applied along the extremities of waist to relieve pain

### Acknowledgements

Our thanks are due to Mr. Haokholet. Kipgen, President (FEEDS & KVK, Hengbung) for facilities and encouragement; and to the Department of Biotechnology, Government of India for their financial support to carry out the study on medicinal and aromatic plants of Manipur Hills. Authors are also grateful to village folks who rendered co-operation in every ways and shared their knowledge generously.

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