

ETHNO-MEDICINAL PLANTS FROM BISHNUPUR DISTRICT, MANIPUR, NORTH EASTERN INDIA

K. Yaiphabi Devi, S. Sanjay Singh, M. Haripriya Devi*, Arvind S. Dhabe and P. Kumar Singh**

Department of Botany, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad - 431004, Maharashtra, India,

¹P. G. Department of Botany, Manipur College, Imphal-795001, Manipur, India, ³ **Department of Life Sciences, Manipur University, Imphal -795003, Manipur, India,

ABSTRACT

An intensive survey of ethno-medicinal plants from Bishnupur District was conducted during September to October, 2018. During this survey 51 ethno-medicinal plants were collected, out of which 16 were found to be sold in market while 8 plants were used for socio-religious purposes. However, 35 were utilized by local healers to cure various medical conditions. Thus these plants were available to the peoples either from market or through local healers. Most of the villagers and tribes were found to be dependent on these ethno-medicinal plants, leading to their overexploitation, for which conservation steps are required,.

Keys words: Ethno-medicinal plant, distribution, medicinal value, Traditional knowledge, conservation.

Introduction:

Manipur, a state of north eastern India is ecologically distinct with hilly regions, dense forests, inaccessible terrains, rich biodiversity, endemic flora and fauna and cultural diversity (Singh *et al.*, 2012). Bishnupur district of Manipur State is a rich source of medicinal plants. The aim of present study was to investigate distribution of medicinal plants and their use and to by the people residing therein.

Material and Methods:

The surveys were carried out at 14 study sites *viz.* Nambol, Ngaikhong, Ngaikhongsiphai, Kwasiphai, Nachou, Potsangbam, Upokpi, Toupokpi, Ningthoukhong, Thinungei, Phubala, Sunusiphai, Naranseina and Thamnapokpi. The medicinal plants were collected, dried properly and mounted on herbarium sheet for the purpose of identification as suggested by Jain and Rao (1977). The voucher specimens were deposited to the Manipur University

Museum of Plants (MUMP), Manipur University, Canchipur. Traditional knowledge regarding their medicinal value was collected by traditional healers (*Maibas*) using a questionnaire (Martin, 2008; Parabia and Reddy, 2002, Devi *et al.*, 2017), along with the methods of the preparation of medicine. The authenticity regarding medicinal uses of specimens was verified by individuals through oral contact.

Results and Discussion:

The study revealed that 51 plant species belonging to 34 families were commonly used by the people of Bishnupur District for health care. Those were stomach disorder, stomach ulcer, skin diseases, fever, dysentery, diarrhoea, cough, boils, cuts and wounds, muscular pain, diabetes, menstrual disorders, jaundice, snake bites, constipation, liver enlargement, blood pressure, bronchitis, toothache, dropsy, urinary tract problems, ringworm, sore throat, small pox, backache, kidney diseases, headache, piles, leprosy,

hysteria, heart diseases, piles, eye infections, abortion, malaria, lung disease, beri-beri, intestinal worms, and leucorrhoea (Table 1). Among the plant parts, leaves were predominantly used followed by whole plant, bark, root, seeds and rhizome. The method of

application varied with the disease. The plants were used in the form of decoction, paste, juice etc. Majority of the medicines were administered orally. Those were prepared from a single plant or occasionally from the mixtures of plants.

Table 1 : Common Ethno-medicinal plants of Bishnupur District, Manipur,
(WE : Wild-edible, AV : Abstract value).

Sl. No.	Scientific name Family, Local name & Collection No.	Price (Rupees)		Part Used	Traditional ethno -medicinal value, formulation for various ailments
		Local Market	From Healer		
1.	<i>Alisma plantago-aquatica</i> L., Alismataceae, <i>Kouthum</i> , MUMP-1754.	10/bundle	With same money	Rhizome WE	Rhizomes in beri-beri.
2.	<i>Alpinia galanga</i> (L.)Willd. Zingiberaceae, <i>Kanghu</i> , MUMP-0791.	10-20/Flower 4-5 in bundles	With same money	Leaves,rhizome, flower WE	Leaves in bloods pressure, carminative, astringent and antiseptic. Inflorescence in tonsillitis. Leaf paste in dizziness. Leaf decoction in cough and dyspepsia.
3.	<i>Alpinia nigra</i> (Gaertn.) Burt., Zingiberaceae, <i>Pullei</i> , MUMP-1977.	10/ 4 -5 twigs	With same money	Rhizome WE	Boiled rhizome is used to cure cough, fever and dizziness.
4.	<i>Amaranthus viridis</i> L., Amaranthaceae, <i>Chengkruk</i> , MUMP-1763.	10/ 4 -5 twigs	With same money	Shoot WE	Shoot extract is used in case of poisonous bites and also as emollient.
5.	<i>Artemisia nilagirica</i> (C.B.Clarke) Pamp. Asteraceae, <i>Laibakngou</i> , MUMP1280.	Not selling in the market	Get from Healer	Leaves	Used to cure stomach ulcer.
6.	<i>Asparagus filicinus</i> Buch.-Ham., Liliaceae, <i>Nungarei</i> , MUMP-004366.	Not selling in the market	Get from Healer	Whole plant	Used against small pox.
7.	<i>Bauhinia purpurea</i> L., Leguminosae, <i>Chingthrao</i> , MUMP-1755.	Not selling in the market	Get from Healer	Bark	Bark extract is used in poisonous bites, leprosy and also in menstrual problems.
8.	<i>Bixa orellana</i> L., Bixaceae, <i>Ureiom</i> , MUMP0512.	Not selling in the market	Get from Healer	Leaves, seed	Leaves are used in jaundice. Leaves are used against poisonous bites. Seeds are astringent. The pulp surrounding the seed is a mosquito repellent, and is useful to treat dysentery.

9.	<i>Blumeopsis flava</i> (DC.) Gagnep., Asteraceae, <i>Haochak</i> , MUMP-004365.	Not selling in the market	Get from Healer	Leaves	Leaf extracts in bronchial congestion, cold, catarrh, cough and effective in skin diseases. Hot fomented plant is applied as bandage against backache. Leaf is used with mustard oil for dropsy.
10.	<i>Bonnaya brachiata</i> L., Scrophulariaceae, <i>Kihomman</i> , MUMP-004364.	Not selling in the market	Get from Healer	Whole plant	Whole plant decoction in kidney and urinary complaints due to calculi formation.
11.	<i>Caesalpinia bonducella</i> (L.) Fleming, Caesalpiniaceae, <i>Tinshibi</i> , MUMP-004363.	Not selling in the market	Get from Healer	Leaves	Poisonous plant, seed paste in fever and excessive body temperature. Leaves are emmenagogue, febrifuge, intestinal worms and fevers.
12.	<i>Cardiospermum helicacabum</i> L., Sapindaceae, <i>Pok-laobi</i> , MUMP-0366.	Not selling in the market	Get from Healer	Leaves, Root	Leaves are used as poultice in rheumatism, rubifacient. Root extract is diuretic, laxative, emetic and applied in
13.	<i>Cayaponia laciniosa</i> (L.) C. Jefferey, Cucurbitaceae, <i>Kwak-thabi</i> , MUMP-1962.	Not selling in the market	Get from Healer	Tender twig, leaves	Tender twig extract is used in cuts, wounds, skin infection and burns. Boiled leaves are eaten and used in inflammation.
14.	<i>Clerodendrum indicum</i> (L.) Kuntze Lamiaceae, <i>Kuthap</i> , MUMP-0779.	Not selling in the market	Get from Healer	Leaves WE	Leaf paste is useful for skin diseases. Leaf paste is taken to cure cough and dysentery. Leaves are used for rheumatic pains and high blood pressure
15.	<i>Codariocalyx motorius</i> (Houtt.) H. Ohashi, Leguminosae, <i>Lam-hawai</i> , MUMP-0367.	Not selling in the market	Get from Healer	Leaves, seed	Leaves are used in ulcers and seed are astringent, insecticidal with aphrodisiac property.
16.	<i>Commelina benghalensis</i> L., Commelinaceae, <i>Wangdengkhoibi</i> , MUMP-0041.	Not selling in the market	Get from Healer	Whole plant	Plant extracts in leprosy, cough and applied against muscular pain. Leaf decoction paste is applied in boils and burns.
17.	<i>Crassocephalum crepidioides</i> (Benth.) S. Moore, Asteraceae, <i>Terapaibi</i> , MUMP-0211.	Not selling in the market	Get from Healer	Whole plant WE	Fresh and boiled twig decoction is used in case of stomach disorder, cuts, wounds and burns
18.	<i>Crateva religiosa</i> G. Forst., Capparaceae, <i>Loyum-lei</i> , MUMP-004362.	Not selling in the market	Get from Healer	Leaf, bark, flowers	Leaf juice in stomach disorders and urinary complaints, muscular sprain. Bark is demulcent, stomachic, laxative, antipyretic & tonic. Flowers are astringent and cholagogue.

19.	<i>Curcuma amada</i> Roxb., Zingiberaceae, <i>Yai-heinouman</i> , MUMP- 004361.	Not selling in the market	Get from Healer	Rhizom e	Fresh rhizome for int estinal worm infection. Rhizome is carminative, stomachic and sprains.
20.	<i>Cuscuta reflexa</i> Roxb. Convolvulaceae, <i>Uri- hidak</i> , MUMP-1252.	Not selling in the market	Get from Healer	Whole plant	Plant decoction is given in chronic fevers and jaundice. Seeds are purgative, carminative, anthelmintic. Plant extract is used in flatulence and liver complaints. Plant decoction is used to bath against skin infections.
21.	<i>Cymbopogon citratus</i> (DC.) Stapf, Poaceae, <i>Houna</i> , MUMP-0322.	10/bunch	With same money	Leaves	Leaves are used as an ingredient for the preparation of a local hair lotion (<i>Chenghi</i>). The essential oil is used as an insecticide against mosquitoes and as a deodorant.
22.	<i>Cymbopogon nardus</i> (L.) Rendle., Poaceae, <i>Charot</i> , MUMP-0155.	10/bunch	With same money	Leaves	The decoction of the leaves with other plants is used in traditional hair lotion (<i>Chenghi</i>). The oil from the plant is used as perfume. Infusion of leaves is stomachic.
23.	<i>Cyperus cyperoides</i> (L.) Kuntze, Cyperaceae, <i>Chumthang</i> , MUMP-0333.	Selling in the market for mat- making material per bundle Rs.50- 200	With same money	Root	Root extract is used in liver and stomach complaints.
24.	<i>Cyperus pilosus</i> Vahl, Cyperaceae, <i>Chumthang-makhok- akanba</i> , MUMP-1805.	Not selling in the market	Get from Healer	Root	Root extract is used in liver and stomach complaints
25.	<i>Duchesnea indica</i> (Jacks) Focke, Rosaceae, <i>Heirongkak</i> , MUMP-1888.	Not selling in the market	Get from Healer	Leaves	Leaf poultice is used in case of headache and fevers.
26.	<i>Echinochloa colona</i> (L.) Link, Poaceae, <i>Urichak</i> , MUMP- 1833.	Not selling in the market	Get from Healer	Whole plant	Plant is used in spleen and haemorrhage problems. And also used in biliousness and constipation.
27.	<i>Eleusine indica</i> (L.) Gaertn, Poaceae, <i>Pungphai</i> , MUMP-1788.	Not selling in the market	Get from Healer	Whole plant WE	Plant fresh extract in fever and small pox, kidney stone and fish poison. Plant is one of the constituents in socio -religious problems.

28.	<i>Elsholtzia communis</i> (Collett & Hemsl.) Diels Lamiaceae, <i>Lomba</i> , MUMP-002371	10-20/bundle of flower twig		Leaves WE	Leaves in fresh wound, fever, cold and cough, blood pressure, nose bleeding and menstrual disorder
29.	<i>Enydra fluctuans</i> Lour., Asteraceae, <i>Komprek-tujombi</i> , MUMP-0061.	Not selling in the market	Get from Healer	Young shoots WE	Boiled extract to treat urinary tract infection, dysentery, diarrhoea and diabetes.
30.	<i>Eryngium foetidum</i> L. Apiaceae, <i>Awa-phadigom</i> , MUMP-0710.	10-20/bundle	With same money	Leaves WE	Leaf decoction is taken in case of paralysis and epilepsy, high blood pressure. Root soup is stomachic.
31.	<i>Euphorbia hirta</i> L., Euphorbiaceae, <i>Pakhangleiton</i> , MUMP0454.	Not selling in the market	Get from Healer	Whole plant WE	Plant extract in bronchitis, asthma, colic and dysentery, healing cuts and wounds, burn wounds and bone fracture.
32.	<i>Ficus glomerata</i> Roxb. Moraceae, <i>Heibong</i> , MUMP-1226.	Not selling in the market	Get from Healer	Root, Fruits bark, leaves WE	Fruit, bark, root extract for dysentery, diabetes, lung diseases. Latex is used for local application on boils. Bark given to cattle in rinderpest disease. Fruit is stomachic and carminative.
33.	<i>Goniothalamus sesquipedalis</i> (Wall.) Hook. f. & Thomson, Annonaceae, <i>Leikham</i> , MUMP-0060.	10-20/bundle	With same money	Whole plant AV	Decoction of fresh leaf as remedy for stomach pain.
34.	<i>Isodon ternifolius</i> (D. Don) Kudo, Lamiaceae, <i>Khoiju</i> , MUMP-1395.	10-20/bundle	With same money	Leaves, f lower AV	Leaves and inflorescences for the preparation of hair lotion (<i>chenghi</i>). Burnt leaf smoke as antidote of small pox. Leaf ash after burning in fire is applied on forehead in headache and skin diseases.
35.	<i>Jasminum multiflorum</i> (Burm.f.) Andr., Oleaceae, <i>Kundo-macha</i> , MUMP004357.	10-20 per bunch of flowers	With same money	Leaves, roots AV	Leaf decoction is used in skin sore and rheumatism. Leaves are used in ulcers and fever. Roots along with leaves are used in ophthalmopathy. Dried leaves are applied as poultice on ulcers.
36.	<i>Litsea polyantha</i> Juss., Lauraceae, <i>Tumitla</i> , MUMP-004356.	Not selling in the market	Get from Healer	Bark, leaves, seed	Bark decoction and leaf paste is used in cut and injuries for early suppuration, muscle-pain. Bark is astringent and cures diarrhoea. Seed oil is used in rheumatism.
37.	<i>Ludwigia adscendens</i> (L.) H.Hara, Onagraceae, <i>Ishing-kundo</i> , MUMP-1894.	Not selling in the market	Get from Healer	Leaves	Leaf paste is applied in boil and burns. The plant is a constituent of poultices used for ulcers and skin diseases.

38.	<i>Lysimachia parviflora</i> Baker, Primulaceae, MUMP-0027. <i>Kengoi</i> ,	10-20 per bunch of whole plant	With same money	Whole plant WE	Cooked plant is given against diabetes, piles and intestinal disorder.
39.	<i>Magnolia hodgsonii</i> (Hook.f &Thoms.) H. Keng, Magnoliaceae <i>U-thambal-angangba</i> , MUMP004370.	10-20 per bunch of flowers	With same money	Bark, Flower AV	Bark is stimulant, diaphoretic, used in malaria and rheumatism. Flowers are used as insect repellants and also in perfumery. Flower is used in the preparation of traditional hair lotion(<i>chinghi</i>).
40.	<i>Melothria perpusilla</i> (Blume) Cogn., Cucurbitaceae, <i>Lamthabi</i> , MUMP- 000847.	50-100 per bunch of whole plant	Get from Healer	Whole plant	The boiled soup of the plant is regarded as one of the best medicine for treatment of jaundice in the traditional system.
41.	<i>Mussaenda roxburghii</i> Hook.f., Rubiaceae <i>Hanurei</i> , MUMP-1880.	Not selling in the market	Get from Healer	Leaves, root AV	Leaves are used for preparation of hair lotion (<i>chinghi</i>). Juice of leaf or root is used for jaundice , snake bite .
42.	<i>Nelumbo nucifera</i> Gaertn., Nelumbonaceae, <i>Thambal</i> , MUMP-0056.	50-1000 per bunch of flowers	With same money	Leaves, flower AV	Young leaves eaten fresh against diabetes; gargling of boiled flower extract to cure tonsillitis.
43.	<i>Oreocnide integrifolia</i> (Gaudich.) Miq., Urticaceae, MUMP1273. <i>U-khaji</i> ,	Not selling in the market	Get from Healer	Leaves, root	Leaf is cooked-eaten for normal blood circulation. Root smashed with ginger to cure rashes and skin infection. The decoction of the leaves are used in diabetes
44.	<i>Persicaria odorata</i> (Lour.) Sojak, Polygonaceae <i>Phakpai</i> , MUMP-0048.	5-10 per bunch of twigs	With same money	Young shoots WE	Shoots used in controlling hypertension; fresh shoots eaten with chutney.
45.	<i>Phlogacanthus jenkinsii</i> C.B.Clarke, Acanthaceae, <i>Nongmangkha-ashinba</i> , MUMP-004355.	Not selling in the market	Get from Healer	Leaves	Used to cure cough and fever and also control liver enlargement.
46.	<i>Rubus ellipticus</i> Sm. Rosaceae, MUMP0726. <i>Heijampet</i> ,	Not selling in the market	Get from Healer	Leaves, roots	Decoction of leaves are used in urinary complaints and also used in painful menstruation. Root is used in colic.
47.	<i>Spondias mombin</i> L Anacardiaceae, MUMP-0065. <i>Heining</i> ,	5-10 per bunch of fruits	With same money	Bark,Fru it, root WE	Bark extract for dysentery and diarrhoea, gonorrhoea, muscular sprain and back ache. Fruit pulp is dyspepsia. Roots in regulating menstruation.

48.	<i>Scutellaria discolor</i> Colebr., Lamiaceae, MUMP-0790. <i>Yenakhath,</i>	5-10 per bunch of plants	With same money	Leaves	Fresh leaf paste is good for local application in snake bites and stings of poisonous insects. Decoction is used in muscular and rheumatic pain.
49.	<i>Smilax ovalifolia</i> Roxb. ex D. Dons, Liliaceae, <i>Kwa-manbi,</i> MUMP - 004353.	50-100 per bunch of roots	With same money	Root	Roots are used in venereal diseases, rheumatic, dysentery, and urinary complaints. Plant twig is boiled and taken bath against skin diseases.
50.	<i>Tetragium bracteolatum</i> (Wall.) Planch, Vitaceae, <i>Monja-mahei,</i> MUMP- 0070.	15-20 per bunch of fruits or leaves	With same money	Leaves, fruits AV	Boiled extract of plant used against indigestion and stomach disorder.
51.	<i>Wendlandia paniculata</i> (Roxb.) DC. Rubiaceae, <i>Pheija,</i> MUMP-0069.	15-20 per bunch of flowering twig	With same money	Flower WE	Leafy shoot decoction is given in cough and dysentery. Young leaves eaten as vegetables.

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