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Ethnobotanical usages of plants in western Mizoram

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Ethnobotanical survey among the tribals inhabiting western part of Mizoram brought to light a number of wild plant species used as edibles and as herbal medicine. There are 23 plants species, which were common throughout the study area. The tribals utilized 89 plant species for herbal medicine, 44 plant species consumed as wild edible fruits, 33 plant species as wild edible plants, 8 plant species for pig food, 11 plant species for fire wood & for charcoal making and 23 plant species for timber. The paper enumerates and discusses various ethnobotanical aspects of the plants used by the tribals of Mizoram.

Keywords: Ethnobotany, Endangered plants, Rare plants, Mizoram

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The study area situated in the western part of Mizoram, falls under Mamit district. It is located between 23°15′ N-24°15′N latitude and 92°16′E-92°40′E longitude covering the geographical areas of 3015.57 km^2, which is 14.3% of the total geographical area of Mizoram. The district includes 102 villages with a population of 59,102, which is around 8.57% of the total population of Mizoram with a density of 19 per sq km. The study area enjoys a moderate monsoon type of climate giving 20-34°C during winter with an average annual rainfall of 2,842 mm. The soil is sandy loam. The highest peak in this area is around 1,485 m and the lowest elevation is 40 m from sea level. Most of the people depends upon agriculture especially *jhum* cultivation. The total area under *jhum* cultivation is around 291.42 sq km, while land under permanent cultivation, i.e. wet rice cultivation and dry rice cultivation includes 10.49 sq km and 5.47 sq km, respectively[1]. The area is very rich in flora and fauna, the total forest cover is about 2,588.62 sq km including plantation of forest trees. The study area has three distinctive reserved forests having a mixed evergreen to evergreen with bamboo forest types of vegetation, viz. Dampui Reserved Forest covers 255 sq km, Dampa Tiger Project covers 480 sq km and Lungkulh virgin forest.

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Methodology

The study is based on extensive field work, secondary information from locally available literature and personal interviews with local practitioners in western part of Mizoram under Mamit district, conducted over a period of more than 3 years. During the field survey, the practitioners amongst the inhabitants of the area including Bawlpu (medicine man) and others with knowledge of plants were consulted. Plants were identified with the help of regional flora and herbarium of Botanical Survey of India; Shillong[2].

Results

The usual cultivation practice of the area is shifting cultivation, which has led to severe degradation of forests and has disturbed plant succession. The original plant species are replaced by *Melocana bambusoides*, *Mikania micrantha*, *Eupatorium odoratum*, *Saccharum spontaneum* and thatched grass. Among the natural vegetation, 23 plant species belonging to 16 families and 22 genera are common throughout the study area (Table 1). Medicinal plants are another diverse category of plants directly harvested from the wild plants. Exploitation of traditional knowledge of medicinal plants is another key issue the world over. Medicinal plants are significant to both developing and developed

Table 1 — Common plant species of the area

Plant name	Local name	Family	Status	Uses
Albizzia stipulata Boiv.	*Vang*	Mimosaceae	F	Fuel wood, gum
Anogeissus accuminata Wall.	*Zairum*	Combretaceae	F	Timber, Fuel wood
Bambusa tulda Roxb.	*Rawthing*	Poaceae	A	Medicinal, food
Bauhinia variegata Linn.	*Vaube*	Caesalpiniaceae	F	Posts
Callicarpa arborea Roxb.	*Hnahkiah*	Verbenaceae	F	Medicinal
Derris robusta Benth.	*Thingkha*	Fabaceae	F	Posts, Fuel wood
Duabanga sonneratioides Buch.-Ham.	*Zuang*	Sonneratiaceae	F	Timber
Emblica officinalis Gaertn.	*Sinhlu*	Euphorbiaceae	F	Medicinal, fruit
Erianthus longiseosus Anderss.ex.Benth.	*Luang*	Paoceae	A	Fodder
Erythrina stricta Roxb.	*Fartuahpui*	Fabaceae	F	Hedge grow
Eupatorium odoratum Linn.	*Tlangsam*	Asteraceae	A	Antiseptic
Ficus cunia Buch.-Ham.	*Theitit*	Moraceae	F	Fruit
Ficus semicordata Buch.-Ham. ex Sm.	*Theipui*	Moraceae	F	Fruit
Gmelina arborea Roxb.	*Thlanvawng*	Verbenaceae	F	Timber
Imperata cylindrica Beauv.	*Di*	Poaceae	A	Thatching
Melocanna baccifera (Roxb.) Kurz.	*Mautak*	Poaceae	A	Medicinal, food
Michelia champaca Linn.	*Ngiau*	Mangnoliaceae	F	Timber
Protium serrata Wall.ex Colebr.	*Bil*	Burseraceae	F	Fruit
Sapium baccatum Roxb.	*Thingvawkpui*	Euphorbiaceae	F	Packing boxes
Schima wallichii (DC.) Korth.	*Khiang*	Theaceae	A	Fire wood
Sterculia villlosa Roxb.	*Khaupui*	Steculiaceae	F	Bark for fibre
Tetrameles nudiflora R.Br.	*Thingdawl*	Tetramelaceae	F	Timber
Toona ciliate Roem.	*Tei*	Meliaceae	F	

countries. Over 75% of the world's rural people rely on traditional herbal medicine. About half of the world's medicinal compounds are still derived or obtained from plants[3]. There are 89 plants species belonging to 56 families and 68 genera, which are being utilized by the tribals of western part of Mizoram for herbal medicine (Table 2).

Rare and endangered species have been the focus of much conservation attention, but the same development pressure and destructive phenomena are also at work in the relatively wealthy and developed areas of Mizoram. There are 13 medicinal plant species belonging to 9 families and 13 genera, which are critically endangered and facing threat in the study area (Table 3). Most of the people in the area practicing shifting cultivation, which devastated a large area of forest as well as plant population, make some plants as rare and endangered species. The local people living in the village of western part of Mizoram particularly on forest areas are still dependent upon wild plants for their various requirements. Tribals make use of a large variety of fruits and wild edible plants[4-6]. Altogether 44 wild edible fruit species belonging to 24 families and 34 genera and 33 wild edible plant species belonging to 23 families and 27 genera have been reported (Tables 4,5). Many wild plant species are utilized as animal feed; grasses and legumes are the major components. Other forage species are also important, particularly during lean period, when green forage is scarce. The use of plants for fodder, green or dry is still practiced in the rural areas. Mizoram also represents the repository of genetic resources of forage plants. There are 8 plant species, which are used as food for pigs belonging to 6 families and 8 genera (Table 6).

Love of the tribal people for the forest has been maintaining the greenery in the past because they considered themselves as an integral part of the forest. However, with the rise of consumerism their attitudes is gradually changing and they have started looking at the forest as a source of wealth to sustain their increasingly daily needs and luxuries. They have led to the depletion of forest cover and a disturbance in the ecological balance. 11 plant species are used as firewood and charcoal under 9 families and 9 genera. While 23 plant species are used as timber, which belong to 15 families and 21 genera (Tables 7,8). The plant species are outstanding source of many products essential to society such as industrial raw materials, timber, fuel, food and fodder. Therefore, these are prone to decimation from harvesting. Plants are prominent environmentally, as forests help to stabilize

Table 2 — Medicinal plants

Plant Name	Local name	Family	Status	Uses
Acer laevigata	*Thingkhim*	Aceraceae	F	Bark decoction is applied on strain.
Achyranthes bidentata	*Vangvat-tur*	Amaranthaceae	A	Leaf juice is applied as remedy for poisoned leach bite sores.
Adiantum caudatum	*Chakawkria*	Adiantaceae	A	Crushed fronds are applied externally on skin diseases.
Adiantum phillippense	*Chakawkte*	Adiantaceae	A	Plant infusion is takenfor fever and dysentery.
Aeginetia indica	*Sangharvaibel*	Orobanchaceae	F	Rhizome juice is applied on mumps.
Aegle marmelos	*Belthei*	Rutaceae	EW/ R	Fruit decoction as remedy for dysentery
Ageratum conyzoides	*Vailenhlo*	Asteraceae	A	Juice of *Callicarpa arborea* (*Hnah kiah*) root bark and *curcuma* (*Aieng*) rhizome is drunk as remedy of stomach cancer.
Albizia odoratissima	*Kangteknu*	Mimosaceae	F	Leaf boiled in ghee is used for curing cough.
Albizia procera	*Kangtekpa*	Mimosaceae	C	Leaf poultice is applied to ulcers.
Arenga pinnata	*Thangtung*	Palmae	F	Root decoction is applied for bronchitis and stomachache.
Amomum dealbatum	*Aidu*	Zingiberaceae	A	Bark juice is used as antiseptic.
Anannas comosus	*Lakhuihthei*	Bromeliaceae	C	Leaf /fruit juice is used for curing convulsion.
Anogeissus acuminata	*Zairum*	Combretaceae	F	Bark juice is applied as antiseptic.
Artocarpus lakoocha	*Theitat*	Moraceae	F	Seed as purgative; bark powder is applied to sores to draw out purulent matter; infusion is applied on pimples and cracked skin.
Artocarpus chama	*Tatkawng*	Moraceae	F	Bark decoction is taken against diarrhoea.
Averrhoa carambola	*Theiherawt*	Averahoaceae	R	Three or four fruit slices are taken daily for jaundice, bleeding piles and as antiscorbutic.
Bischofia javanica	*Khuangthli*	Euphorbiaceae	F	leaf juice is used for curing sores.
Bombax ceiba	Phunchawng	Bombaceae	R	Root as stimulant & tonic; root bark as emetic; gum as tonic, aphrodisiac, demulcent, homeostatic astringent, for curing diarrhoea & dysentery; fruit and flower for snake bite.
Bombax insigne	Pang	Bombaceae	F	Decoction of bark with that of *Mangifera indica* (equal part) is taken twice daily.
Callicarpa arborea	*Hnahkiah*	Verbenaceae	A	Bark juice is drunk for curing stomach pain, dysentery & vomiting.
Cammellia sinensis	*Thingpui*	Theaceae	F	Leaf decoction is used as astringent, stimulant & diuretic.
Carcinia paniculata	*Vawmva*	Guttiferae	F	Seed is used against roundworm.
Caryota urens	*Tum*	Arecaceae	F	Fleshy toddy is taken as food during famine.
Casia alata	*Tuihlo*	Caesalpiniaceae	F	Leaf paste is applied on ringworm.
Catharanthus roseus	*Kumtluang*	Apocynaceae	F	Raw leaves are taken for curing high blood pressure.
Centella asiatica	*Lambak/ Hnahbial*	Apiaceae	C	Leaf decoction is taken for curing asthma & eye problems.
Chukrasia tabularis	*Zawngtei*	Meliaceae	F	Raw roots are taken for the remedy of stomach pain.
Citrus sinensis	*Serthlum*	Rutaceae	F	Leaf decoction is taken for curing malaria.
Costus specious	Sumbul	Zingiberaceae	F	Raw plant is taken as a remedy of tonsillitis.
Cucurbita maxima	*Mai*	Cucurbitaceae	A	Fruit / leaf decoction is taken for eye problem.
Curculigo crassifolia	*Phaiphek*	Amaryllidaceae	F	Tuber juice is used in stomachache.
Curcuma longa	*Aieng*	Zingiberaceae	A	Rhizome juice is used as antiseptic.
Dendrocnida sinuata	*Thakpui*	Urticaceae	A	Root decoction boiled with crabs is taken for curing jaundice.
Dillenia indica	Kawrthindeng	Dilleniaceae	F	Fruit decoction is taken for stomach problem.
Dioscorea alata	*Rambachim*	Dioscoreaceae	A	Tuber is used in leprosy and piles.
Dysoxylum gobara	*Thingthupui*	Meliaceae	C	Leaf & bud decoction in diarrhoea & dysentery.
Elaeagnus caudata	*Sarzuk*	Elaeagnaceae	F	Root decoction for expelling placenta.
Embelia subcoriacea	*Tling*	Elaeagnaceae	F	Leaf decoction is used for bathing in treating smallpox.
Emblica officinalis	*Sunhlu*	Euphorbiaceae	A	Raw fruit for curing stomach problem.

Contd —

Table 2 — Medicinal plants — *Contd*

Plant Name	Local name	Family	Status	Uses
Entada pursaetha	Kawi	Mimosaceae	F	Seed are soaked in water and water is dropped into the nostrils against leech.
Ervatamea coronaria	*Paarsi*	Apolynaceae	F	Root is chewed for relief in toothache.
Erythrina indica	*Fartuah*	Leguminaseae	F	Bark is used as astringent and antidote to snakebite.
Ficus bengalensis	*Hmawng*	Moraceae	F	Milky juice is applied externally for pains in rheumatism & lumbago. Infusion of bark is used as tonic, astringent, in dysentery, diarrhoea & diabetes. Seed is used for cooling tonic; leaf is applied as poultice for abscesses; root fibre in gonorrhoea.
Ficus prostrata	*Theitit*	Moraceae	F	Root juice is applied against snakebite.
Garuga pinnata	*Bungbutuairam*	Burseraceae	F	Stem bark juice is dropped into eyes to cure opacities of conjunctiva. Leaf juice mixed with sugar is taken in asthma.
Girardinia palmata	*Kangthai*	Urticaceae	A	Root juice is taken during food allergy.
Gmelina arborea	*Thlanvawng*	Verbenaceae	F	Roasted fruit is applied externally in itches.
Hedychium spicatum	*Aithur*	Zingiberaceae	F	Rhizome is used as stimulant, expectorant, tonic, carminative, in stomachache, liver problem, vomiting, inflammation, pain & snakebite.
Hedyotis scandens	*Laikingtuibur/ Kelhnamtur*	Rubiaceae	C	Plant decoction is taken against swelling & kidney problem.
Hibiscus rosa-sinensis	Midumpangpar / *Banglapar*	Malvaceae	C	Raw flower is taken for curing jaundice.
Hoya griffithi	*Hnahchhah*	Asclepiadaceae	F	Leaf sap is applied on burnt skin and is covered with leaf.
Imperata cylindrica	*Di*	Poaceae	A	Root juice is used for curing intestinal worms.
Lagerstroemia speciosa	*Thlado*	Lythraceae	F	Root decoction is taken in jaundice; bark infusion is taken in diarrhoea & dysentery.
Leea compactiflora	*Kawlkar*	Vitaceae	A	Root is taken for stomach problem.
Lepionurus sylvestris	*Anpangthuam*	Opiliaceae	R	Decoction of leaves is taken for diabetes.
Litsea cubeba	*Sernam*	Lauraceae	F	Fruit is given during hysteria, headache & paralysis.
Lobelia nictianaefolia	*Berawchal*	Lobeliaceae	R	Plant juice is applied in boils and warts.
Macaranga denticulata	*Zawngtenawh-lung*	Euphorbiaceae	A	Plant decoction is taken for diabetes & retained placenta.
Melocalamus compactiflorus	*Sairil*	Graminae	F	Stem juice is taken against influenza.
Merremia umbellata	Vawktesentil	Convolvulaceae	C	Leaf poultice is applied on burns and sores.
Mesua ferrea	*Herhse*	Guttiferae	F	Flowers & leaves are used as astringent, stomachic and against snakebite & scorpion sting.
Michelia champaca	*Ngiau*	Magnoliaceae	C	Leaf infusion is taken with honey for colic. Fruit & seed paste is used for crackle feet.
Mikania micrantha	*Japanhlo*	Asteraceae	A	Leaf juice for dysentery, as haemostatic. Leaves boiled with V*itex peduncularis* are taken against fever.
Mimosa pudica	*Hlonuar*	Mimosaceae	C	Leaves and root are used for piles & fistula; root decoction is useful in gravelliest complaint.
Morinda angustifolia	*Lum*	Rubiaceae	F	Leaf poultice is applied in crackled feet.
Morus australis	*Lungli*	Moraceae	R	Bark is used for anthelia, purgative; leaf decoction as gargle in inflammation of vocal cord, white roots as astringent.
Musa paradisiaca	Balhla	Musaceae	A	Stem sap is applied as antiseptic.
Passiflora nepalensis	*Nauawimu*	Pasifloraceae	A	Root decoction is taken in malaria.
Polygonum barbata	*Anbawng*	Polynaceae	F	Seeds are taken for relieve in colic.
Pratia nummularis	*Choakthi*	Campanulaceae	C	Leaf juice for curing dysentery & vomiting.
Pteridium acquilinum	*Katchat*	Pteridiaceae	A	Rhizome decoction in chronic disorder.
Salix tetrasperma	Tuipuisuthlah	Salicaceae	A	Bark is used as febrifuge.
Saraca asoca	*Mualhawih*	Caesalpiniaceae	EN/R	Bark is astringent, used in uterine inflation, gonor, scorpion sting.

Contd —

Table 2 — Medicinal plants — *Contd*

Plant Name	Local name	Family	Status	Uses
Schima wallichii	*Khiang*	Theaceae	A	Fruit decoction for snakebite & insect bite.
Scoparia dulcis	*Perhpawng-chaw/ Hlothlum*	Scrophulariaceae	C	Plant juice is taken for curing kidney stone.
Securinega virosus	*Saisiak*	Euphorbiaceae	F	Leaf decoction is used in bathing children for curing scabies and measles.
Smilax pervifolia	*Kaiha*	Liliaceae	A	Root grounded with old molasses or with coagulated lows milk, mixed with water is drunk as a remedy against blood.
Solanum torvum	*Tawkpui*	Solanaceae	C	Crushed seed is applied in toothache and tooth decay.
Spondias mangifera	*Tawitaw*	Anacardiaceae	F	Bark is refrigerant, useful in dysentery, and rheumatism.
Stereopermum colais	*Zihngal*	Bignoniaceae	F	Leaf decoction is used as febrifuge; leaf juice is applied on itch.
Taraktegenos kurzii	*Khawitur*	Bilaceae	R	Seed oil in leprosy and skin diseases.
Terminalia bellirica	*Thingvandawt*	Combretaceae	F	Fruit is taken against stomach problems.
Terminalia chebula	*Reraw*	Combretaceae	F	Fruit is taken against stomach problems.
Trevesia palmata	*Kawhtebel*	Araliaceae	C	Leaf juice is taken for colic, stomachache & high blood pressure.
Vitex peduncularis	*Thingkhawilu*	Verbenaceae	F	Bark decoction is used in typhoid fever.
Xylia xylocarpa	*Thinguk*	Mimosaceae	F	Bark decoction is used in diarrhoea, ulcer & gonorrhoea.
Zanthoxylum armatum	*Arhrikreh*	Rutaceae	R	Leaves are used to wards off fouls, lice.
Ziziphus mauritiana	*Borai*	Rhamnaceae	F	Root decoction is taken for fever; root powder is applied externally on chronic ulcer.
Zanonia indica	*Lalruanga dawibur*	Cucurbitaceae	R	Fruit decoction is given in stomach problems.

Table 3 — Rare and threatened ethnomedicinal plants

Plant name	Local name	Family	Status	Occurrence
Aegele marmelos	*Belthei*	Rutaceae	EW/R	Zawlnuam
Aquilaria malaccensis	*Thingrai*	Thymeteaceae	CR/R	Tuipuibari
Bombax ceiba	*Phunchawng*	Bombaceae	Vu	Lengpui
Cautleya gracillis	*Pale*	Zingiberaceae	Ew/R	Dampui
Clerodendrum wallichii	*Tratuba*	Verbenaceae	Vu/R	Dinthar
Cyclea arnotis		Merispermaceae	Vu/R	W. phaileng
Elaeagnus pyriformis	*Sarzukpui*	Elaeagnaceae	Vu	Tuipuibari
Ocimum sanctum	*Runhmui-dum*	Lamiaceae	Ew	Perhsang
Ruellia suffructicosa	*Savangma*	Acanthaceae	CR/VR	Tuipuibari
Saraca asoca	*Mualhawih*	Caesalpiniaceae	EN/R	Lungkwlh forest
Stemona var. minor	*Kaimam*	Stemonaceae	EN	Tuipuibari
Zanonia indica	*Lalruanga-dawibur*	Cucurbitaceae	CR/R	Chikha forest

Table 4 — Wild edible fruits

Plant name	Local name	Family	Status
Aegle marmelos	*Belthei*	Rutaceae	Ew/R
Anodendron paniculatum	*Theikelki*	Melastomaceae	F
Artocarpus chama	*Tatkawng*	Moraceae	F
A. heterophyllus	*Lamkhuang*	Moraceae	A
A. lacoocha	*Theitat*	Moraceae	F
Artocarpus spp.	*Tatte*	Moraceae	F
Baccaurea ramiflora	*Pangkai*	Euphorbiaceae	F
Bruinsmia polysperma	*Theipalingkawh*	Styraceae	F
Carallia branchiata	*Theiria*	Rhinophoraceae	R
Cyanthocalyx martabanicus	*Hreirawt*	Anonaceae	F
Dillenia indica	*Kawrthingdeng*	Dilleniaceae	F

Contd —

Table 4 — Wild edible fruits — *Contd*

Plant name	Local name	Family	Status
Dinella roxburghi	*Theipabuan*	Dilleniceae	F
Elaeagnus caudata	*Sarzuk*	Elaeagnaceae	C
Emblica officinalis	*Sunhlu*	Euphorbiaceae	A
Eugenia jambolana	*Lenhmui*	Myrtaceae	A
Euphoria longan	*Theifeimung*	Sapindaceae	F
Ficus prostrata	*Theitit*	Moraceae	F
Ficus semicordata	*Theipui*	Moraceae	A
Flacourtia jangomas	*Sakhithei*	Binaceae	R
Garcinia cowa	*Chengkek*	Guttiferae	F
G. sopsopia	*Vawnmva*	Guttiferae	F
Glochidion arborescens	*Tuaitit*	Euphorbiaceae	F
Kadsura heteroclita	*Theiarbawm*	Magnoliaceae	F
Litchi chinensis	*Vaitheifeimung*	Sapindaceae	R
Mangifera indica	*Theihai*	Anacardiaceae	A
Mangifera sylvestris	*Haifawvang*	Anacardiaceae	R
Mangifera sp.	*Haivahmim*	Anacardiaceae	R
Meliosma pinata	*Tuairam*	Sabiaceae	F
Memecylon celastrinum	*Theikawrak*	Melastomaceae	F
Musa paradiasica	*Balhla*	Musaceae	A
Protium serratum	*Bil*	Burseraceae	F
Rhus javanica	*Khawmhma*	Anacardiaceae	C
Spondias pinata	*Taitaw*	Anacardiaceae	F
Stixis suaveolens	*Theisawntlung*	Capaeidaceae	F
Syzygium cumini	*Hmuipui*	Myrataceae	F
S. saligna	*Hmuifarial*	Murtaceae	F
Xeromphis spinosa	*Sazutheipui*	Rubiaceae	F
Amomum dealbatum	*Aidu*	Zingiberaceae	A
Elaeagnus pyriformis	*Sarzukpui*	Elaeagnaceae	Vu
Carcinia panniculata	*Vawmva*	Guttiferae	F
Garuga pinnata	*Bungbutuairam*	Burseraceae	F
Morus australis	*Lungli*	Moraceae	F
Ziziphus mauritiana	*Borai*	Rhamnaceae	F
Embelia subcoriacea	*Tling*	Blaegnaceae	F

Table 5 — Wild edible plants

Plant name	Local name	Family	Parts used	Status
Acacia sp.	*Khanghu*	Mimosaceae	Young leaves	F
Adiantum caudatum	*Chakawkria*	Adiantaceae	Young shoot	A
Amomum dealbatum	*Aidu*	Zingiberaceae	Tuber	A
Arenga pinnata	*Thangtung*	Aracaceae	Tender stem	R
Calamus sp.	*Raichhawk*	Palmae		C
Capsicum frutescens	*Anhling*	Solanaceae	Leaves	A
Caryota urens	*Tum*	Palmae	Stem pith	F
Cephalostachyum capitatum	*Rawnal*	Graminae	Tender shoot	C
Clerodendron colebrookianum	*Phuihnam*	Verbenaceae	Leaves	A
Colocasia spp	*Bal*	Araceae	Spadix	A
Dysoxylum gobara	*Thing thupui*	Meliaceae	Young shoot and leaves	A
Eryngium foetidum	*Bahkhawr*	Umbellliferae	Leaves	A
Eurya japonica	*Sihneh*	Theaceae	Young leaves	A
Garcinia lancifolia	*Pelh*	Clusiaceae	Young leaves	F
Hodgsonia machycarpa	*Khaum*	Cucurbitaceae	Fruit	F
Lepionurus sylvestris	*Anpangthuam*	Alocarea	Leaves	R
Litsea cubeba	*Sernam*	Lauraceae	Leaves (condiment)	F
Lycianthes laevis	*Vanian*	Solanaceae	Leaves	A
Musa sp.	*Tumbu*	Musaceae	Young inflorescences	A
Rhus acuminata	*Chhimhruk*	Anacardiaceae	Stem and leaves	F

Contd —

Table 5 — Wild edible plants — *Contd*

Plant name	Local name	Family	Parts used	Status
Tacca integrifolia	*Thialkha*	Taccaceae		F
Trevesia palmata	*Kawhtebel*	Anacardiaceae	Fruit	A
Dioscorea alata	*Rambachim*	Dioscoreaceae	Tuber	A
Polygonum barbata	*Anbawng*	Polygonaceae	Leaf	A
Mellocana baccifera	*Mautak*	Poaceae	Young Shoot	A
Bambusa tulda	*Rawthing*	Poaceae	Young shoot	C
Adiantum phillippense	*Chakawkte*	Adiantaceae	Young shoot	A
Polygonum barbata	*Anbawng*	Polygonaceae	Leaf	C
Arisaema leschenaulti	*Telhawng*	Araceae	Rhizome	C
Spilanthes acemella	*Ankasa*	Asteraceae	Leaf	A
Centella asiatica	*Lambak*	Apiaceae	Leaf	A

Table 6 — Plants used as pig fodder

Plant name	Local name	Family	Part used	Status
Arisaema leschenaulti	*Telhawng*	Araceae	Leaves	C
Bidens pilosa	*Vawkpuithal*	Asteraceae	Whole plant	A
Colocasia esculenta	*Dawl*	Araceae	Leaves, Rhizome	A
Ipomea batatas	*Kawlbahra*	Convolvulaceae	Leaves, Rhizome	A
Manihot esculenta	*Pangbal*	Euphorbiaceae	Leaves, Rhizome	A
Mikania micrantha	*Japanhlo*	Asparagaceae	Leaves	A
Musa sp.	*Changel*	Musaceae	Leaves	A
Spilanthes acmella	*Ankasa*	Asteraceae	Leaves	A

Table 7 — Plants used as firewood and charcoal

Plant name	Local name	Family	Status
Adina cordifolia	*Lungkhup*	Rubiaceae	F
Albizia procera	*Kangtekpa*	Mimosaceae	C
Anogeissus acuminata	*Zairum*	Combretaceae	F
Castanopsis tribuloides	*Thingsia*	Fagaceae	A
Derris robusta	*Thingkha*	Fabaceae	F
Mesua ferrea	*Herhse*	Guttiferea	F
Schima wallichii	*Khiang*	Theaceae	A
Vitex peduncularis	*Thingkhawihlu*	Verbenaceae	F
Albizia odoratissima	*Kangteknu*	Mimosaceae	F
Albizia chinensis	*Vang*	Mimosaceae	F
Lobelia nicotianaefolia	*Berawchal*	Lobeliaceae	R

Abbreviations used: EW: Extinct in the wild; CR: critically endangered; EN: Endangered not CR; VU: Vulnerable not CR or EN; A: Abundant; C: Common; F: Frequent; R: Rare; VR: very rare; H: Herb; T: Tree; S: Shrub

Table 8 — Timber species

Plant name	Local name	Family	Status
Acer laevigata	*Thingkhim*	Auraceae	F
Amoora wallichii	*Sahatah*	Meliaceae	R
Anogeissus acuminata	*Zairum*	Combretaceae	F
Artocarpus chama	*Tatkawng*	Moraceae	F
A. lakoocha	*Theitat*	Moraceae	F
Castanopsis tribuloides	*Thingsia*	Fagaceae	A
Chukrasia tabularis	*Zawngtei*	Meliaceae	C
Derris robusta	*Thingkha*	Fabaceae	F
Duabanga sonneratioides	*Zuang*	Sonaratiaceae	A
Dysoxylum alliaria	*Thingsaphu*	Melliaceae	R
Gmelina arborea	*Thlanvawng*	Verbenaceae	C
Mahonia nepalensis	*Pualeng*	Berberidaceae	R
Mesua ferrea	*Herhse*	Gultiferea	F
Michelia champaca	*Ngiau*	Magnoliaceae	C
Morus australis	*Lungli*	Moraceae	R
Schima wallichii	*Khiang*	Theaceae	A
Sterospermum colais	*Zinghal*	Bignoniaceae	F
Tectonia grandis	*Tlawr/ teak*	Verbenaceae	C
Terminalia bellirica	*Thingvandawt*	Combretaceae	F
T. myriocarpa	*Char*	Combretaceae	C
Tetrameles nudiflora	*Thingdawl*	Tetramelaceae	F
Vitex peduncularis	*Thingkhawilu*	Verbenaceae	F
Xylia xylocarpa	*Thinguk*	Mimosacea	R

the environment by fixing carbon dioxide, by preventing soil erosion and by lowering the water table and are also dominant ecologically as they determine a wealth of interactions with other life forms in the community.

Discussion

The tribals of Mizoram make wider use of a large variety of plants and fruits. Such activities on one hand contributed to our knowledge of various uses of biodiversity and on the other have resulted in rapid depletion of natural resources. Their demand in the local market has increased causing a threat to these wild species. Although, these wild edible plant wealth are presently under utilized to meet future needs, the invaluable treasure needs care and more focus

research on its collection, conservation and sustainable use. With the erosion of the tribal cultures, the traditional healers have become a threatened category. Also, the genetic diversity in medicinal plants has diminished due to shifting cultivation and large scale destruction of their natural habitats. Over exploitation of medicinal resources in unscientific manner by unskilled labour and poor natural or artificial regeneration has resulted in virtual extinction of certain vital species. The demand of medicinal plants is increasing day-by-day within and outside the country and serious and effective measures are required to meet the challenge. Therefore, there is an urgent need for a local inventory of medicinal plants, to identify the species that merit priority and to formulate strategy for the *in-situ* conservation and cultivation of these species.

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