Wild edible plants of Meghalaya, North-east India

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Abstract

The people of Meghalaya are very close to nature, and forests are one of the important natural resources in the state. The tribes of the state largely depend on forests for their livelihood and have acquired a vast knowledge about plant wealth and utilization of forest products. The present communication aims to document the traditional knowledge about wild edible plants used by tribal people of Meghalaya. During present investigation, a total of 249 species of wild edibles belonging to 153 genera and 82 families were inventorised. Among them 129 are trees, 54 shrubs, 37 herbs and 29 climbers. The majority of the species were fruits bearing (125). Some edible plants have great economic value and are highly linked with socio-economic development of tribal communities of the state. A few such species may be introduced in agroforestry systems, which could be potential genetic resources for tree breeding programmes in other areas of the country and also to provide edible plant resources to the communities in addition to creating photosynthetic pool to counter environmental degradation.

Keywords: Wild edible plants, Traditional knowledge, Meghalaya, North-east India, Agroforestry, Genetic resources.

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the earth³. These forests inhabit a large number of trees, shrubs, herbs, climbers, epiphytes, faunal wealth and a wealth of non-timber forest products (NTFP) including medicinal and aromatic plants (MAP), and wild edible plants. The wild edible plants with high diversity are widely distributed in mountain forests and are valuable source of food and medicines for domestic and commercial purposes.

Although rural people utilized wild plants for their livelihood, the scientists have recently realized importance of such plants in rural economy. Since late 1980s studies on use

Introduction

Plants provide food and other life-supporting commodities and are very important for survival of human beings and other organisms; besides, they protect our environment and maintain nature. The evidence of man's dependency on plants for his survival can be demonstrated by palaeo-ethnobotanical findings from prehistoric archaeological sites^{1, 2}.

Tropical forests are major reservoir of plant diversity, as they harbor about 50% of the total plant species identified so far, with 12 per cent area of



Map showing the study area

Green page: Research Article



Edible fruits: a-Baccaurea sapida, b-Citrus medica, c-Cycas pectinata, d-Diospyros kaki, e-Elaeagnus Iatifolia, f-Ficus auriculata, g-Ficus hirta, h-Garcinia cowa, i-Garcinia tinctoria, j-Pyrus pashia, k-Rubus ellipticus; Edible leaves: 1-Begonia palmata, m-Begonia roxburghii, n-Caryota urens, o-Cayratia japonica, p-Centella asiatica, q-Rhododendron arboreum; Edible flowers: r-Bauhinia purpurea, s-Bauhinia variegata, t-Buddleja asiatica, u-Corchorus capsularis, v-Hovenia dulcis. of wild plants in tropical forests have been taken up vigorously^{4, 5}. The easy access to the resources and proximity to widely dispersed rural markets are key factors enabling people to generate income from NTFP⁶. Income from NTFP seldom appears to account for a large share of a household's total income, but it often is important in bridging seasonal or other cash flow gaps. In the areas having high plant diversity, income from NTFP can be the main source of household income for rural communities.

There has been a revival of interest in medicinal and wild food plants during the last few decades among the ethnobotanists⁷⁻¹⁷ which is associated with an increasing desire for natural rather than synthetic medicine and wild or organically grown foods.

Some studies have been conducted in Meghalaya on ethnomedicinal plants used by the tribal communities¹⁸⁻²⁰ but there is paucity of information on edible plants of this region²¹⁻²³. Therefore, the present study was conducted to provide base line data that can be helpful in ensuring sustainable utilization of wild edible plants of Meghalaya.

Study area

The state of Meghalaya regarded as "abode of clouds" covers an area of 22, 429 sq km lying between 25°47′-26°10′N latitude and 89°45′-92°47′E longitude, and situated in the Northeastern Himalayan region of India. It is bordered on the North-West, North and East by Assam, and South and South-West by Bangladesh. Three main tribes of Meghalaya include the *Khasis*, *Jaintias* and *Garos*, who follow the matrilineal system of society.

Meghalaya has hard sedimentary rocks of the Shillong series along with granites, quartzite with phyllites and slates. The soil is generally red, sandy loam of lateritic origin²⁴. Meghalaya falls under the sub-tropical zone and its location and topography characterize its monsoonic climate. The average temperature ranges from 10°C during the cold months (November to February) to 27°C during the warmer months (April to June). The average annual rainfall is 2420 mm²⁵.

Meghalaya is one of the biodiversity rich states of India in terms of vegetation and flora. Varied altitude, topography, status of soil and climatic conditions favour high species richness and support different types of forests. Deciduous and evergreen tropical forests, sub-tropical semi-evergreen forest and sub-tropical pine forest are the major types in the state²⁶. Wide geographical and climatic diversity provides a repository of valuable medicinal and wild edible plants of the region. These plants have a valuable place in indigenous system of medicine as well as tribal dietary requirements. Shifting cultivation and clear fellings have led to the massive exploitation of virgin forests and development of secondary communities on disturbed forests²⁷⁻³¹.

Methodology

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Field study was carried out during

the period between April 2004 and October 2005. Details on wild edible plants were recorded by interviewing the local people and local markets were visited for inventory of wild edible plants used for commercial purpose. Tribal informants were consulted to locate and collect these plants. They provided useful information on wild edible plants and their common names, including usefulness of different parts of various plants.

The standard methods as suggested by Martin³² and Cotton³³ were adopted for herbarium preparation. Plant identification was done with the help of regional and local floras³⁴⁻³⁶, and specimens were counter-checked from the herbarium of the Botanical Survey of India, Eastern Circle, Shillong. The specimens are housed in Ecology Research Laboratory, Department of Botany, School of Life Sciences, North-Eastern Hill University, Shillong.

Results and Discussion

Botanical and family name, local name (in *Khasi*), growth habit, season of availability and plant parts used are enumerated in Table 1. During the present investigation information was collected on 249 species (belonging to 153 genera and 82 families). This is about 13.2 % of the total species (1886) of vascular plants identified in Meghalaya³⁴. It was observed that out of total wild edible species, 5% are under cultivation also¹¹.

Number of wild edible tree species are markedly more (129) followed by shrubs (54), herbs (37) and climbers (29). Percent contribution of different parts of plants used depicts that fruits of majority of species are edible (50.2%); leaves, seeds and flowers contributed 15.3, 3.6 and 2.8%, respectively.

Moraceae was found to be the most common family with 15 species. Other important families were Rosaceae (12 species), Rutaceae and Myrtaceae (11 species each), Euphorbiaceae (10 species), Anacardiaceae (9 species), and Clusiaceae, Myrsinaceae and Vitaceae (8 species each). The generic composition showed a contrary result. Moraceae was replaced by (3 families) Ancardiaceae, Euphorbiaceae and Rutaceae, which had highest generic diversity. The monospecific and monogeneric families were counted as 38 and 50, respectively (Table 2). The flowering starts between January and March in majority of species and fruiting period varies from species to species.

Fruits of *Baccaurea sapida* (Roxb.) Muell.-Arg., Citrus medica Linn., Docynia indica (Wall.) Decne, Gynocordia odorata and Myrica esculenta Buch.-Ham., and leafy vegetables such as Centella asiatica (Linn.) Urban and Houttuynia cordata Thunb. are sold in the market at a large scale. The seeds of Castanopsis indica A. DC. is eaten raw by ethnic communities of Meghalava. Seeds are collected from the forests and sold in the markets. Fruits are mostly consumed raw and leafy vegetables are cooked, boiled or fried. The survey in the local markets showed that the vendors sell edible fruits, about 40% wild edibles, which are harvested mostly from the forests³⁷⁻⁴⁰. Due to lack of proper storage facilities in the region, the harvesters are bound to sell their edible products in fresh conditions⁴¹. However, bamboo shoots are preserved by the traditional methods.

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Table 1

Botanical name/ Family	Local name	Habit	Habitat	Flowering/Fruiting	Edible part
Actinidia callosa Lindl./ Actinidiaceae	Mei-soh-khan	Shrub	Sub-tropical forests of Khasi hills	April-August	Fruits
Adhatoda vasica Nees/ Acanthaceae	1	Shrub	Garampani at Jaintia hills	December-May	Leaves, Flower
Aegle marmelos (Linn.) Correa ex Roxb./ Rutaceae	Soh-bel	Tree	Byrnihat - Khasi hills		Fruits
Aglaia edulis A. Gray/ Meliaceae	Dieng-soh-longar	Tree	Common in tropical evergreen forests	March-June	Fruits, Aril
A. roxburghiana Miq.	ı	Tree	Tropical forests of Garo hills	February-March	Fruit
Amaranthus gangeticus Linn/Amaranthaceae	ı	Herb	Along the margins of river Umkhrah	1	Leaves, Stem
Antidesma bunius Spreng/ Euphorbiaceae	Dieng-soh-silli	Tree	Common in forests	April-August	Fruit
A. diandrum Heyne ex Roth	Dieng-japen	Tree	Common in tropical forests, often as a sal forest under growth	April-February	Fruit, Leaves
A. ghesaembilla Gaertn.	ı	Tree	Tropical forests of Khasi and Jaintia hills	March-February	Fruit
A. khasianum Hook.f.	Dieng-soh-sillih	Tree	Khasi and Jaintia hills, mostly confined into sacred forests	July-November	Fruit
Aphania rubra (Roxb.) Radlk./ Sapindaceae	Dieng-soh-jymmang	Shrub	Common in mixed evergreen forest margins	November-April	Fruit
Ardisia floribunda Wall./ Myrsinaceae	Theilang-rong	Iree	Frequent in forest margins and river sides	June-February	Fruit, Leaves
A. griffithi C. B. Clarke	Dieng-pylleng	Shrub	Present in evergreen primary forests as an under growth	April-June	Hower
A. polycephala Wall.	Dieng-soh-sying	Tree	Khasi hills	April-June	Leaves, Shoot
Argyreia nervosa (Burm.f.) Boj. Convolvulaceae	Jatap-masi	Climber	Common in lower elevation deciduous forests, secondary forests and grass lands	October	Leaves
Arisaema consanguineum Schott/Araceae	Saru-bsein	Herb	Along moist areas in sub-tropical forests	1	Leaves
Artocarpus chaplasa Roxb./ Moraceae	Dieng-soh-ram	Tree	Umling-Khasi hills	March-August	Fruit
A. lakoocha Roxb.	Armu (G)	Tree	Common	February-August	Fruit
Azadirachta indica A. Juss./ Meliaceae	Dieng-neem	Tree	Secondary forests of Garo hills at lower elevations	March-August	Leaves, Shoot
Baccaurea ramiflora Lour./ Euphorbiaceae	Soh-ram-dieng	Tree	Khasi hills at lower elevations	1	Fruit
B. sapida (Roxb.) MuellArg.	Dieng-soh- ram-dieng	Tree	Common	April-July	Fruit
Bauhinia purpurea Linn. / Caesalpiniaceae	Me-gong (G)	Tree	Common in secondary deciduous forest margins of Khasi hills	September-March	Flower

Botanical name/ Family	Local name	Habit	Habitat	Flowering/Fruiting	Edible part
B. variegata Linn.	Dieng-long	Tree	Frequent in deciduous forest slopes	February-March	Leaves, Buds
Begonia palmata D. Don./ Begoniaceae	Sla-lajaw	Herb	Temperate forests of Khasi and Jaintia hills	-	Leaves
B. roxburghii A. DC.	Kamchal	Herb	Tropical and sub-tropical forests	July	Leaves
Bridelia stipularis Blume/ Euphorbiaceae	Risan-um	Shrub	Common in Sal and other mixed deciduous forests	September-March	Fruit
Buddleja asiatica Lour./ Buddlejaceae	Dieng-tuti- mynneng	Shrub	Common in higher elevations of Jaintia hills along forest margins	January-November	Flower
Bursera serrata Wall. ex Colebr./ Burseraceae	Dieng-soh-mir	Tree	Frequent in tropical evergreen and mixed deciduous forests of Garo hills	March-April	Fruit
Calamus acanthospathus Griff./ Arecaceae	-	Shrub	Common in dense evergreen forests	June-July	Shoot
C. erectus Roxb.	Soh-thri	Shrub	Common in dense evergreen forests at Khasi hills	-	Fruit
Callicarpa arborea Roxb./ Verbenaceae	Dieng-lakhoit	Tree	Abundant in secondary deciduous and pine forests	May-February	Bark
C. rubella Lindl.	Ja-lang-kwai	Shrub	Frequent in moist and shady areas of Garo and Khasi hills	May-February	Bark, Root
Caryota urens Linn./ Arecaceae	Kwai-cha	Tree	Frequent in dense evergreen forests of Tura and Nongpoh	-	Fruit
Castanopsis indica A. DC./ Fagaceae	Dieng-sarag (J)	Tree	Common in evergreen forests	February-December	Fruit
C. purpurella (Miq.) N. P. Balakr.	Dieng-soh-stap	Tree	Common	-	Fruit
C. tribuloides A. DC.	Dieng-soh-ot	Tree	Common in evergreen forests often along stream sides	September-February	Fruit
Cayratia japonica (Thunb.) Gagnep./ Vitaceae	Syrbuid (J)	Climber	Fairly common	April-June	Fruit
Centella asiatica (Linn.) Urban/ Apiaceae	Badmaina	Herb	Throughout the region along the disturbed areas	-	Leaves
Cinnamomum tamala Nees & Eberm./ Lauraceae	Dieng-la-tyrpad	Tree	Secondary forests and home gardens	February-October	Leaves, Bark
Cirsium lepskyi Petrak/ Asteraceae	Soh-shiah	Herb	Khasi hills	November-February	Seed
Citrus hystrix DC./ Rutaceae	Soh-kyniet	Tree	Khasi and Jaintia hills, mostly confined into sacred forests	March-February	Fruit
C. latipes (Swingle) Tanaka	Soh-heh	Shrub	Garampani at Jaintia hills	-	Fruit
C. medica Linn.	Soh-manong	Shrub	Khasi hills	March-February	Fruit
Clausena heptaphylla Wight & Arn./ Rutaceae	Dieng-siang-mat	Shrub	Khasi and Jaintia hills	April-December	Fruit, Leaves
Clerodendrum infortunatum Linn./Verbenaceae	Dieng-ja-rem	Shrub	Khasi and Garo hills	February-August	Leaves

Botanical name/ Family	Local name	Habit	Habitat	Flowering/Fruiting	Edible part
C. serratum (Linn.) Moon	Rilong-phlang	Shrub	Common in pine and sal forests undergrowth	October-May	Leaves, Flower, Shoot
Colocasia affinis Schott/ Araceae	-	Herb	Common along margins of streams and ponds	-	Leaves, Rhizome
C. esculenta Schott	Shriew	Herb	Common along streams and ponds	-	Leaves, Rhizome
Combretum decandrum Roxb./ Combretaceae	Mei-long-kha-saw	Climber	Throughout the province	November-April	Bark
C. roxburghii Spreng.	Mei-long-kha-saw	Climber	Common in tropical evergreen and deciduous forests	November-March	Leaves
Conocephalus suaveolens Blume/ Moraceae	Dudiblok (G)	Climber	Present in tropical belts of the state	January-April	Leaves
Corchorus capsularis Linn./ Tiliaceae	-	Herb	Found in the forest margins	July-September	Leaves
Cornus capitata Wall. ex Roxb./ Cornaceae	Dieng-soh-japhon	Tree	Frequent in forests of Khasi and Jaintia hills	April-September	Fruit
Corylopsis himalayana Griff./ Hamamelidaceae	Dieng-piur	Shrub	Common in pine forests at higher elevations	January-June	Flower
Cudrania javanensis Trec./ Moraceae	U-sia-kiang	Tree	Common throughout the province	April-November	Fruit
Curcuma longa Linn./ Zingiberaceae	Shynrai	Herb	Mostly grown in home gardens	-	Rhizome
<i>Cyathocalyx martabanicus</i> Hook.f. & Thoms./ Annonaceae	-	Tree	Tropical forests of the state	-	Fruit
Cycas pectinata Griff./ Cycadaceae	Dieng-sia-goda	Tree	Khasi and Jaintia hills	May	Fruit
Dalbergia rimosa Roxb./ Fabaceae	Jyrmi-bu-stem	Shrub	Fairly common in deciduous scrubland and mixed bamboo forests	April-December	Seed
Debregeasia longifolia Wedd./ Urticaceae	Soh-tyrsim	Tree	Common in dense evergreen forests and forest margins of Garo hills	June-February	Fruit
<i>Dendrocalamus hamiltonii</i> Nees & Arn./ Poaceae	Seij-lai	Tree	Abundant throughout the state	June-October	Shoot
Desmodium trifolium DC./ Fabaceae	-	Herb	Common in meadows in the hills	August-December	Leaves
Dillenia indica Linn./ Dilleniaceae	Soh-kyrbam	Tree	Common along river sides	June-April	Fruit, Calyx
D. pentagyna Roxb.	Dieng-soh-bar	Tree	Along deciduous forest tracts	March-July	Flower
D. scabrella (D. Don) Roxb. ex Wall.	Agatchi-badura (G)	Tree	Along deciduous tracts of Khasi and Garo hills	March-July	Fruit
Diospyros kaki Linn. f. / Ebenaceae	Dieng-iong (J)	Tree	Frequent in open areas	March-September	Fruit
D. lanceaefolia Roxb.	Dieng-thang	Tree	Common at lower elevations in tropical evergreen forests usually along river banks	April-February	Fruit
Docynia hookeriana Decne/ Rosaceae	Dieng-soh-phoh	Tree	Khasi and Jaintia hills	February-September	Fruit
D. indica (Wall.) Decne	Soh-phoh	Tree	Common in Khasi hills, often cultivated	February-September	Fruit

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	<i>Donella roxburghii</i> (G. Don) Pierre ex Lecomte/ Sapotaceae	-	Tree	Khasi and Jaintia hills	April-May	Fruit
	Drypetes assamica (Hook.f.) Pax & Hoffm./ Euphorbiaceae	Dieng-pankher	Tree	Common in dense evergreen forests at Tura peak	October-April	Fruit
	<i>Dysoxylum gobara</i> (BuchHam.) Merr./ Meliaceae	Sla-luchai	Tree	Fairly common in tropical evergreen forests of Khasi and Garo hills	December-August	Leaves
	Ehretia acuminata R. Br./ Boraginaceae	Dieng-basier	Tree	Common at lower elevations in tropical evergreen forests and in open places	March-April	Fruit
	Elaeagnus latifolia Linn./ Elaeagnaceae	Soh-shang	Shrub	Widely cultivated in Khasi home gardens	November-May	Fruit
	E. pyriformis Hook. f.	Dieng-soh-blor	Shrub	Usually along forest margins	November-April	Fruit
	<i>Elaeocarpus floribundus</i> Blume Elaeocarpaceae	-	Tree	Common in Tura ranges of Garo hills	May-December	Fruit
	E. lanceaefolius Roxb.	Dieng-soh-khyllam	Tree	Frequent in dense evergreen forests of Tura and Jowai	June-December	Fruit
	E. prunifolius Wall.	Soh-khyllam- eit-blang	Tree	Dense evergreen forests at Jarain	January-October	Fruit
	Embelia nagushia D. Don/ Myrsinaceae	Mei-ja-jew-khlaw	Climber	Common in secondary forests	March-December	Leaves
	E. nutans Wall.	-	Climber	Common in secondary and mixed deciduous forests	February-May	Leaves
	E. sessiliflora Kurz	Soh-jew-tenksai	Climber	Common in secondary forests	September	Fruit
	E. subcoriacea (Clarke) Mez	Jermi-masi (J)	Climber	Frequent in dense primary evergreen forests	May-February	Leaves
	Emblica officinalis Gaertn./ Euphorbiaceae	Soh-mylleng	Tree	Abundant in secondary and deciduous forests	March-February	Fruit
	Erioglossum rubiginosum Blume/ Sapindaceae	-	Tree	Tropical and sub-tropical forests	-	Shoot
	Eryngium foetidum Linn./ Apiaceae	Dhania-khlaw	Herb	Along forest margins	May-February	Leaves
	Eugenia bracteata Roxb./ Myrtaceae	-	Tree	Khasi hills, near the foot on the Sylhet slopes	January-December	Fruit
-	E. claviflora Roxb.	Chambu (G)	Tree	Khasi and Garo hills	March-May	Fruit
-	E. formosa Wall.	Dieng-sa-ludong (J)) Tree	Khasi and Garo hills	March-April	Calyx
	E. fructicosa Roxb.		Tree	Sub-tropical forests of Khasi hills	March-June	Fruit
	E. jambolana Lam.	Dieng-ramai	Tree	Throughout the area often gregarious in swamps	April-July	Fruit
	E. operculata Roxb.	Thot-kak (G)	Tree	Common in all types of forests	April-July	Fruit

Botanical name/ Family	Local name	Habit	Habitat	Flowering/Fruiting	Edible part
E. praecox Roxb.	Dieng-myrchang	Tree	Nearly all over the province	December-April	Fruit
E. praetermissa Gage	-	Tree	Nearly all over the province of Khasi hills	November-April	Fruit
Euryale ferox Salisb./ Nymphaeaceae	Shriew-u-pubon	Herb	Water bodies of Khasi hills	May-August	Seed
Fagopyrum cymosum Meissn./ Polygonaceae	Jarian	Herb	Khasi hills	July-November	Leaves
F. dibotrys (D. Don) Hara	Jarian	Herb	Common in secondary forests and waste lands at higher elevations	July-December	Leaves
Ficus auriculata Lour./ Moraceae	-	Tree	Tropical and sub-tropical tracts of Khasi hills	-	Fruit
F. cunia BuchHam.	Dieng-thylliang- sang (J)	Tree	Common throughout the province	January-December	Fruit
F. geniculata Kurz	Phrap-agar (G)	Tree	Khasi, Garo and Jaintia hills	September-March	Leaves
F. hirta Vahl	Dieng-soh-rompain	Tree	Abundant, particularly along streams in bamboo forests	November-April	Fruit
F. lanceolata BuchHam.	-	Tree	Khasi and Jaintia hills	April-June	Fruit
F. nemoralis Wall.	Dieng-surme-blang	Tree	Khasi and Jaintia hills	December-February	Fruit
F. pomifera Wall.	-	Tree	Khasi and Jaintia hills	January	Fruit
F. roxburghii Wall.	Dieng-soh-lampin	Tree	Common throughout the province	April-June	Fruit
Flacourtia cataphracta Roxb./ Flacourtiaceae	Dieng-soh-mluh	Tree	Deciduous forests of the province	March-January	Fruit
F. jangomas (Lour.) Raeusch.	Dieng-soh-mluh	Tree	Common in lower elevations along river banks and forest margins	March-October	Fruit
Flemingia vestita Benth./ Fabaceae	Soh-phlang	Shrub	Waste lands and secondary forests	-	Tuber
Fragaria nilgerrensis Schlecht./ Rosaceae	-	Herb	Frequent in secondary forests	-	Fruit
Garcinia cowa Roxb./ Clusiaceae	Rengran (G)	Tree	Frequent in evergreen and mixed forest at lower elevations	March-August	Fruit
G kydia Roxb.	Dieng-soh- longksan	Tree	Frequent in evergreen forests of Khasi and Garo hills	February-August	Fruit
G lanceaefolia Roxb.	Dieng-soh-jadu	Shrub	Tropical evergreen forests as under growth	February-July	Fruit, Leaves
G paniculata Roxb.	Dieng-soh-longkor	Tree	Tropical evergreen forests at lower altitude	December-July	Fruit
G pedunculata Roxb.	Dieng-soh-danei	Tree	Mixed tropical forests	September-February	Fruit
G spicata Hook.f.	Dieng-soh-kwang	Tree	Frequent in tropical forests of the province	May-February	Fruit
G. tinctoria (DC.) W.F.Wight	Dieng-soh-rynsan	Tree	Common in Khasi hills at lower elevations	March-January	Fruit
G xanthochymus Hook. f.	Dieng-soh- khyllung	Tree	Khasi and Jaintia hills along forest margins	March-February	Fruit

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	Gardenia campanulata Roxb./ Rubiaceae	Soh-mai	Tree	Very rare, confined to sacred forests of Jaintia hills	March-November	Fruit, Leaves
	Glycosmis pentaphylla (Retz.) Correa/ Rutaceae	Dieng-soh-sning	Tree	Common in forests of Garo hills as an forest under growth	January-April	Fruit
	Gmelina arborea Roxb./ Verbenaceae	Dieng-lophiang	Tree	Common in deciduous and secondary forests	February-July	Fruit
	Gnetum montanum Markgr./ Gnetaceae	Mei-lar-iong-um	Climber	River banks of dense evergreen forests	February-December	Fruit
	Grewia elastica Royle/ Tiliaceae	Dieng-thap- ballieh	Tree	Common in deciduous forests of Nongpoh range	April-November	Fruit
	G hirsuta Vahl	Soh-synting	Shrub	Confined to grasslands in Balphakram sanctuary	November-January	Fruit
	G sapida Roxb.	-	Shrub	Common in secondary forests	March-May	Fruit
	G sclerophylla Roxb.	-	Shrub	Common in secondary forests at lower elevations	May-September	Fruit
	<i>Haematocarpus thomsoni</i> Miers Menispermaceae	-	Climber	Common in undisturbed forest as an under growth	April-May	Fruit
	<i>Hodgsonia heteroclita</i> Hook. f. & Thoms./ Cucurbitaceae	Mei-soh-mynthar	Climber	Frequent in secondary forests of the state	February-March	Seed kernel
	Holboellia latifolia Wall./ Lardizabalaceae	Sa-tymbra (J)	Shrub	Common in the vicinity of the streams	February-November	Fruit
	Homalomena aromatica Schott/ Araceae	-	Herb	Khasi home gardens	May-November	Petiole
	<i>Horsfieldia amygdalina</i> (Wall.) Warb./ Myristicaceae	Dieng-ja-lyntep	Tree	Frequent in tropical evergreen forests at lower elevations	December-May	Seed, Aril
	Houttuynia cordata Thunb./ Saururaceae	Ja-myrdoh	Herb	Mostly in open places and along streams	April-July	Leaves
	Hovenia dulcis Thunb./ Rhamnaceae	Dieng-mylliat (J)	Tree	Common in tropical forests of the state	May-January	Peduncles
	Ipomoea batatas (Linn.) Lam./ Convolvulaceae	Phan-karo	Herb	Cultivated in Jhum fields	-	Tuber
	I. racemosa Roth	Soh-lah	Herb	Cultivated in Jhum fields	November-April	Tuber
	Ixora subsessilis Wall./ Rubiaceae	Dieng-jowat	Shrub	Largely confined to sacred forests	May-February	Flower, Shoot, Root
-	Lantana camara Linn./ Verbenaceae	Dieng-sohpang -khlieh	Shrub	Throughout the plains	June-February	Fruit
	Leea macrophylla Roxb./ Vitaceae	Pharun-barne	Herb	Forest under growth at Khasi hills	August-March	Fruit
-	<i>Lepisanthes rubiginosa</i> (Roxb.) Leenh./ Sapindaceae	-	Tree	Occasional at lower elevations	May-June	Fruit
-	Litchi chinensis Sonner./ Sapindaceae	Soh-manir	Tree	Cultivated in Khasi and Garo hills	January-June	Fruit

Botanical name/ Family	Local name	Habit	Habitat	Flowering/Fruiting	Edible part
Maesa indica Wall./ Myrsinaceae	Dieng-soh-jala -tyrkai	Shrub	Common in shady localities as a forest under growth	March-December	Fruit, Leaves
<i>Mallotus philippensis</i> MuellArg. Euphorbiaceae	Dieng-chandon	Tree	Occasional in deciduous forests at lower elevations	August-May	Fruit
Malvastrum tricuspidatum A. Gray/ Malvaceae	-	Herb	As forest under growth	October-January	Seed, Bark
Mangifera indica Linn./ Anacardiaceae	Dieng-soh-pieng	Tree	Occasional in Garo hills	February-July	Fruit
Medinilla rubicunda Blume/ Melastomataceae	-	Tree	Common in secondary forests of the state	-	Fruit, Leaves
<i>Melastoma malabathricum</i> Linn. Melastomataceae	Dieng-soh-khing	Shrub	Common in waste lands and near water courses	February-December	Fruit
Meliosma pinnata Roxb./ Sabiaceae	Dieng-soh-naior	Tree	Common along streams and secondary forests in shady slopes	April-September	Fruit, Leaves
<i>Melodorum verrucosum</i> Hook. f. & Thoms. Annonaceae	Jyrmi-soh-ram- khlaw	Climber	Common in moist places	March-January	Fruit
<i>Momordica dioica</i> Roxb. ex Willd. Cucurbitaceae	-	Climber	Cultivated in Jhum fields	-	Fruit
Monochoria hastata Solms/ Pontederiaceae	-	Herb	Rivers and paddy fields	-	Leaves, Shoot
Moringa oleifera Lam./ Moringaceae	-	Tree	Cultivated and also run wild at lower elevations	-	Fruit, Leaves, Flower
M. pterygosperma Gaertn.	-	Tree	Cultivated and also run wild at lower elevations	January-May	Fruit, Leaves, Flower
Murraya koenigii (Linn.) Spreng./ Rutaceae	Sam-khatsi (G)	Shrub	Common in deciduous forest under growth	February-May	Leaves
Mussaenda roxburghii Hook. f./ Rubiaceae	-	Tree	Common	-	Leaves, Flower
Myrica esculenta BuchHam./ Myricaceae	Dieng-soh-phie	Tree	Common at higher elevation in Khasi and Jaintia hills	-	Fruit
Natsiatun herpeticum BuchHam./ Icacinaceae	-	Shrub	Present in tropical and sub-tropical forests	December-February	Leaves, Shoot
Nelumbium speciosum Willd./ Nelumbonaceae	Soh-lapudong	Herb	Water bodies of Khasi and Jaintia hills	June-February	Carpel
Nephelium longana Cambess./ Sapindaceae	Dieng-loba	Tree	Sub-tropical forests of Khasi hills	April-September	Aril
<i>Olax acuminata</i> Wall. ex Benth./ Olacaceae	Dieng-tyrut	Shrub	Frequent in wet evergreen forests of Khasi hills	April-July	Leaves
Paederia foetida Linn./ Rubiaceae	-	Climber	Found in tropical and sub-tropical forests	-	Leaves

300	Botanical name/ Family	Local name	Habit	Habitat	Flowering/Fruiting	Edible part
	Parkia roxburghii G. Don/Mimosaseae	Aoelgap (G)	Tree	Rather rare in mixed evergreen forests at lower elevations	December	Seeds
	Passiflora edulis Sims/ Passifloraceae	Soh-brap	Climber	Cultivated in Khasi and Garo hills	-	Fruit
	Pavetta subcapitata Hook.f./ Rubiaceae	-	Shrub	Along marshy and shady localities	-	Leaves
	Pedicularis carnosa Wall./ Scrophulariaceae	Sam-thapar	Herb	As an undergrowth	May-October	Leaves, Root
	Pegia nitida Colebr./ Anacardiaceae	-	Shrub	Common in secondary forest margins at lower elevations	-	Fruit, Leaves
	Peperomia pellucida H.B. & K./ Piperaceae	-	Herb	Common in secondary forest undergrowth	-	Fruit
	<i>Phlogacanthus thyrsiflorus</i> (Roxb.) Nees/ Acanthaceae	Dieng-soh- kajut	Shrub	Very common in tropical deciduous and secondary forests	December-April	Fruit, Leaves
	Phrynium capitatum Willd./ Marantaceae	-	Herb	Common in disturbed and cultivated areas	July-September	Roots, Tuber
	Phytolacca acinosa Roxb./ Phytolaccaceae	Jaiong	Herb	As an forest under growth	May-August	Leaves
	Piper betle Linn./Piperaceae	Sla-tympew	Climber	Common in sub-tropical forests	-	Leaves
	P. longum Linn.	-	Climber	Often found in home gardens	May-December	Fruit
	P. malamiris Linn.	-	Climber	Found in cultivated areas	January-December	Leaves
	<i>Plantago erosa</i> Wall. ex Roxb. Plantaginaceae	Skhor-blang	Herb	Common in waste lands and near water courses	April-July	Leaves
	Plectranthus incanus Link/ Lamiaceae	-	Herb	Present in secondary forests of the Jaintia hills	August-February	Leaves
	<i>Polygonum alatum</i> BuchHam. ex Spreng√Polygonaceae	Ja-ut	Herb	Common in waste lands	-	Leaves
	P. chinense Linn.	Ja-lynnong	Herb	Common along evergreen forest margins and forest roads	-	Leaves
	P. dibotrys D. Don	Ja-rian	Herb	Common along periphery of the forests	-	Leaves
	Portulaca oleracea Linn./ Portulacaceae	-	Herb	Common along river banks	January-July	Fruit, Leaves
	Premna herbacea Roxb./ Verbenaceae	Bol-sal-thanuri	Shrub	Common as an sub-tropical forest undergrowth	January-July	Fruit
	Prunus cerasoides D. Don/ Rosaceae	Dieng-soh-iong- krem	Tree	Cultivated and run wild at higher elevations	October-June	Fruit
	P. jenkinsii Hook. f.	Sa-tanghi (J)	Tree	Frequent at lower elevations, often cultivated	October-August	Fruit
	P. napaulensis (Ser.) Steud.	Soh-iong	Tree	Common Khasi and Jaintia hills at higher elevations	October-August	Fruit

Botanical name/ Family	Local name	Habit	Habitat	Flowering/Fruiting	Edible part
Pseudostreblus indicus Bureau/ Moraceae	Dieng-chiri- khlaw (J)	Tree	Frequent in evergreen forests	June-February	Fruit
Psidium guajava Linn./ Myrtaceae	Soh-pyriam	Tree	Cultivated throughout the state at lower elevations	January-December	Fruit
Pterygota alata (Roxb.) R. Br./ Sterculiaceae	Dieng-soh-lak	Tree	Very rare and found in the forests of Dawki	-	Seed
Pyrularia edulis A. DC./ Santalaceae	Dieng-soh-klong	Tree	Rather rare, present in the forests of Jarain	April-November	Fruit
Pyrus communis Linn./ Rosaceae	Soh-phoh	Tree	Cultivated at higher elevations	-	Fruit
P. pashia (BuchHam.) D. Don	Soh-shur	Tree	Common in higher elevations	March-January	Fruit
Randia uliginosa DC./ Rubiaceae	Suskeng (G)	Tree	Common in forest of Garo hills	May-February	Fruit, Leaves
Rhododendron arboreum Sm./ Ericaceae	Dieng-tiew-saw	Tree	Common	March-October	Leaves
Rhus javanicus Linn./ Anacardiaceae	Sa-ma	Tree	Very common, particularly in secondary	-	Pulp
			forests, open lands and forest margins		
R. semialata Murr.	Dieng-soh-ma	Tree	Common in sub-tropical forests	May-April	Fruit
Rhynchotechum ellipticum A. DC./Gesneriaceae	Ja-kharia	Shrub	Common nearly throughout the state	-	Leaves
Rourea commutata Planch./ Connaraceae	-	Shrub	Present in Secondary forests	-	Aril
Rubus ellipticus Sm./ Rosaceae	Soh-pero	Shrub	Common in pine forests as an undergrowth	February-June	Fruit
R. khasianus Cardot	Soh-shiah	Shrub	As an undergrowth in evergreen forests and forest margins	July-September	Fruit
R. lasiocarpus Sm.	Dieng-soh-khaw- iong	Shrub	As an forest undergrowth	March-July	Fruit
R. moluccanus Linn.	Soh-nybbah	Shrub	As an forest undergrowth	January-December	Fruit
Samanea saman (Benth). Merrill/ Mimosaseae	-	Tree	Tura ranges of Garo hills	February-June	Pods
Sambucus javanica Blume/ Caprifoliaceae	-	Tree	Common in Mawprem area	-	Leaves
Sarcochlamys pulcherrima Gaudich./Urticaceae	-	Shrub	Common in evergreen forests of Garo hills	-	Leaves, Stem
Saurauia napaulensis DCJ Saurauiaceae	-	Tree	Found in secondary forests as well as forest margins in moist areas	December-January	Fruit
S. punduana Wall.	Dieng-ja-la-ngap	Tree	Nearly throughout the state	April-November	Fruit
S. roxburghii Wall.	Dieng-soh-la-pied	Tree	Forest margins and disturbed forest areas	March-August	Fruit
Schima wallichii (DC.) Korth./ Theaceae	Dieng-ngan	Tree	Throughout the state in all type of forests	May-February	Leaves
<i>Semecarpus anacardium</i> Linn. f. Anacardiaceae	Dieng-soh-bhala	Tree	Common in deciduous and secondary forests	July-March	Fruit
Solanum barbisetum Nees/ Solanaceae	Soh-podok	Shrub	Found in Jhum fields	August-May	Fruit

5	Botanical name/ Family	Local name	Habit	Habitat	Flowering/Fruiting	Edible part
	S. indicum Linn.	Soh-ngan	Shrub	Khasi home gardens	June-February	Fruit
	S. kurzii Brace ex Prain	Khim-kha (G)	Shrub	Found in cultivated areas	March	Fruit
	S. spirale Roxb.	Soh-jhari	Shrub	Common in cultivated areas	May-February	Fruit, Leaves
	S. xanthocarpum Schrad. & Wendl.	Dieng-soh-podok- bakthang	Herb	Common in cultivated areas	December-February	Fruit
	Sonchus arvensis Linn./ Asteraceae	Ki-lan-jiat	Herb	Present in secondary forests	October-February	Leaves
	Spondias axillaris Roxb./ Anacardiaceae	Dieng-saliat	Tree	Frequent in evergreen and mixed deciduous forests	February-December	Fruit
	S. mangifera Willd.	Dieng-soh-pair- kynthai	Tree	Frequent in forests of Garo hills	March-February	Fruit, Flower buds
	S. pinnata (Linn.f.) Kurz	Dieng-soh-pier	Tree	Common in tropical deciduous belts	March-November	Fruit
	Sterculia coccinea Roxb./ Sterculiaceae	-	Tree	Tropical forests		Fruit, Seed
	S. roxburghii Wall.	Mimong-omak (G)	Tree	Usually found in evergreen forests at lower elevations	August-May	Seed
	S. versicolor Wall.	Star-um	Tree	Found commonly in deciduous forests of the state	February-July	Seed
	S. villosa Roxb.	Dieng-star	Tree	Found commonly in deciduous forests of the state	-	Seed
	<i>Stixis suaveolens</i> (Roxb.) Pierre Capparidaceae	-	Climber	Rare in forests of the Khasi hills	March-June	Fruit
	Strobilanthes scaber Nees/ Acanthaceae	Sam-siphra (G)	Shrub	Common in secondary forests of the Garo hills	November-February	Flower
	Syzygium cuminii (Linn.) Skeels/Myrtaceae	-	Tree	Fairly common, particularly at lower elevations	February-June	Fruit
	S. tetragonum Wall. ex Kurz/ Myrtaceae	Dieng-soh-sarlei	Tree	Very common in the southern slopes of the state	-	Fruit
	Tamarindus indica Linn./ Caesalpiniaceae	Dieng-soh-kyntoi	Tree	Common in Byrnihat area	-	Pulp
	Tapiria hirsuta Hook.f./ Anacardiaceae	Da-cheng-brup (G)	Shrub	Common in secondary forests of Garo hills	April-February	Fruit, Leaves
	<i>Tetrastigma leucostaphylum</i> (Dennst.) N. P. Balakr./Vitaceae	Syrpung (J)	Climber	Common in dense forests of the state	January-May	Fruit, Leaves
	T. serrulatum (Roxb.) Planch.	Sla-ngnar (J)	Climber	Usually common at higher elevations	-	Leaves
	Thunbergia grandiflora Roxb./ Acanthaceae	Jyrmi-khnong	Climber	Abundant throughout the state, particularly at lower elevations	August-March	Leaves

Botanical name/ Family	Local name	Habit	Habitat	Flowering/Fruiting	Edible part
Trevesia palmata (Roxb.) Vis./ Araliaceae	Dieng-soh- kynthur	Tree	Occurs in tropical evergreen forests at lower elevations	April-July	Flower
Vaccinium donianum Wight/ Vacciniaceae	Dieng-soh- rongkham	Shrub	Common in tropical forest as an undergrowth	February-May	Fruit, Leaves
V. griffithianum Wight	Soh-ryngkham	Shrub	Common in pine forest margin at higher elevations	April-May	Pulp
Vangueria spinosa Roxb./ Rubiaceae	Soh-mon	Tree	Found in tropical and sub-tropical forests	April-September	Fruit
Viburnum foetens Decne/ Caprifoliaceae	-	Shrub	Mostly present in secondary forests at higher elevations	April-July	Fruit
V. foetidum Wall.	Soh-lang-ksew	Shrub	Common in pine forests and forest margins	July-September	Fruit
V. simonsii Hook. f. & Thoms.	Soh-lang-eit-ksew	Tree	Fairly common at higher elevations	June-November	Fruit
Vigna vexillata (Benth.) A. Rich./ Fabaceae	Jyrmi-soh-langtor	Climber	Common in pine forests	February-October	Seed, Tuber
Vitis angustifolia Wall./ Vitaceae	-	Climber	Common in tropical and sub-tropical forests	August-October	Leaves, Stem
V. repens Wight & Arn.	Mei-ja-khajrap	Climber	Common in tropical and sub-tropical forests	-	Leaves, Shoot
V. rugosa Wall.	-	Climber	Usually common at higher elevations	November-January	Fruit
V. rumicisperma M. Laws.	-	Climber	Farily common at deciduous and secondary forests	June-November	Fruit
Xanthium strumarium Linn./ Asteraceae	Lokra (G)	Herb	As an forest undergrowth	May-September	Shoot
Zanthoxylum budrunga Wall./ Rutaceae	Dieng-ka-shyrang	Tree	Common in secondary forests of the state	September-April	Fruit, Leaves
Z. khasianum Hook. f.	Soh-mrit	Climber	Endemic to Khasi hills at high altitudes	March-September	Seed
Z. oxyphyllum Edgew.	Jaiur-blai (J)	Shrub	Frequent in Khasi hills	May-October	Fruit, Shoot
Z. rhetsa DC.	Dieng-soh-mirik	Tree	Frequent in primary evergreen forests at lower elevations	April-September	Fruit
<i>Ziziphus funiculosa</i> BuchHam. ex Wall./ Rhamnaceae	-	Shrub	As secondary forest undergrowth	-	Fruit
Z. jujuba Mill.	Dieng-soh-broi	Tree	Common in tropical forest of Khasi and Garo hills	September-February	Fruit
Z. mauritiana Lam.	Soh-broi	Tree	Common in open areas at lower elevations	February-June	Fruit
Z. rugosa Lam.	Dumakpul (G)	Tree	Frequent in tropical deciduous belts, particularly in disturbed forest areas	March-July	Fruit

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Natural Product Radiance

41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	S. No.	
Urucaceae	Moringaceae	Melastomataceae	Flacourtiaceae	Ebenaceae	Cucurbitaceae	Combretaceae	Begoniaceae	Apiaceae	Annonaceae	Elaeocarpaceae	Fagaceae	Dilleniaceae	Convolvulaceae	Asteraceae	Arecaceae	Caesalpiniaceae	Fabaceae	Meliaceae	Caprifoliaceae	Araceae	Acanthaceae	Piperaceae	Saurauiaceae	Solanaceae	Sapindaceae	Tiliaceae	Rhamnaceae	Sterculiaceae	Polygonaceae	Rubiaceae	Verbenaceae	Vitaceae	Myrsinaceae	Clusiaceae	Anacardiaceae	Euphorbiaceae	Myrtaceae	Rutaceae	Rosaceae	Moraceae	Family	
Ь	, <u> </u>	2	1	1	2	1	1	2	2	1	1	1	2	3	2	2	4	3	2	3	4	2	2	1	S	2	2	2	2	7	Ś	4	3	1	6	6	3	6	4	5	Genus	
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78	81	80	79	78	77	76	75	74	73	72	71	70	69	80	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	S.No.	
Ineaceae	Scrophulariaceae	Sapotaceae	Santalaceae	Sabiaceae	Portulacaceae	Pontederiaceae	Poaceae	Plantaginaceae	Phytolaccaceae	Passifloraceae	Nelumbonaceae	Olacaceae	Nymphaeaceae	Myristicaceae	Myricaceae	Menispermaceae	Malvaceae	Buddlejaceae	Marantaceae	Lauraceae	Lamiaceae	Icacinaceae	Hamamelidaceae	Gnetaceae	Ericaceae	Cycadaceae	Gesneriaceae	Cornaceae	Connaraceae	Capparidaceae	Burseraceae	Boraginaceae	Lardizabalaceae	Araliaceae	Zingiberaceae	Amarantaceae	Actinidiaceae	Elaeagnaceae	Mimosaseae	Vacciniaceae	Family	
-	<u> </u>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	Genus	
-	<u> </u>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	Species	

Table 2 : Family wise distribution of the wild edible plants of Meghalaya

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Conclusion

management and conservation of plant genetic resources. That will add a new the principles of sustainable utilization of on a particular species in conformity with can be harvested without much pressure obvious need to explore wild edibles than threat to certain species. There is an overexploitation of wild edibles may cause day rural tribes of Meghalaya for their day-toindicate that wild edible plants are closely wealth of the region. dimension linked with socio-economic condition of requirements. The findings of the present study towards traditional Increased

traditional heritage of the people of controlled exploitation will constitute the involving local community on care and if the government launches programmes tribal people. This can easily be achieved, traditional knowledge system inherent in will be an effective tool for restoration of Undoubtedly, the traditional wisdom of edibles be taken for cultivation of important wild resources. The necessary steps should also share basis for conservation of such genetic Meghalaya Utilization of wild edible plants in agroforestry systems.

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There is an ample scope for studies on regeneration behaviour, population structure and status of such biological resources. The studies on phenological characters of different species must be given due importance. The outcome of such studies will be useful in determining appropriate conservation strategy.

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