



Research Article

WILD EDIBLE PLANTS USED BY MEITEI COMMUNITY OF EASTERN HIMALAYAS, INDIA

SINGH DEDRILKUMAR AND MATHEW BINU*

Department of Rural Development and Agricultural Production, North-Eastern Hill University, Tura Campus, Tura, 794002, Meghalaya, India

*Corresponding Author: Email-drbmathew@gmail.com

Received: August 17, 2016; Revised: September 24, 2016; Accepted: September 24, 2016; Published: November 01, 2016

Abstract- The study was conducted at Imphal West District of Manipur, India during 2009-2014. The study area is situated in the Manipur valley between the latitude 24.30°N to 25.00°N and longitude of 93.45°E to 94.15°E covering an area of 558 sq. kms. The population is predominately dominated by the Meitei community. The present study was conducted to identify and document the indigenous wild edible plants being used by the Meitei community. This research was carried out through extensive field survey, personal interviews and careful documentation of wild edible plants in the selected study area. In the present study, 105 wild edible plant species under 83 genera belonging to 48 families were recorded which were found to be ethnobotanically important among the Meitei community. These plants were identified and listed with their botanical name, vernacular names, family and plant parts used.

Keywords- Wild edible plants, Ethnobotany, Meitei, Indigenous.

Citation: Singh Dadrilkumar and Mathew Binu (2016) Wild Edible plants used by Meitei community of Eastern Himalayas, India. International Journal of Agriculture Sciences, ISSN: 0975-3710 & E-ISSN: 0975-9107, Volume 8, Issue 53, pp.-2699-2702.

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Academic Editor / Reviewer: K.D. Bhutia, Dr Laxman Sharma

Introduction

In search of alternative source of food and medicines, man is compelled to turn to nature. The term 'wild' when applied to plants or plant species refers to those plants that grow spontaneously in self-maintaining populations in natural or semi-natural ecosystem and can exist independently of direct human action. In India more than 9, 500 wild plants species have been recorded so far, out of these nearly 3, 900 or more wild plants species are edible. Approximately 75 thousand species of plants world-wide are believed to be edible [1]. Over 675 wild edible species belonging to 384 genera and 149 families were reported from Indian Himalaya [2]. North-East India is identified as one of the bio-diversity hot spot in the world map for its rich and diverse floral and faunal population. Many of the species contributing to the biological diversity of North-East India restricted to the region as whole or in smaller places. Imphal West District of Manipur is one such place having huge wealth of plant species that has great significance from ethnobotanical point of view. Although few literature have been published in English and vernacular language with regard to herbal/fruit plants [3] however, systematic documentation on wild edible plants (WEP) used by the Meitei community of Manipur valley is not been done. Numerous wild edible plants of this region are still lying either unknown to the modern world or underutilized. Due to ignorance, unawareness, extensive deforestation, unscrupulous exploitation and lack of enough conservation measures many of the wild edible plants are in verge of extinction from our planet. Therefore, Wild edible plants have been a focus for many ethnobotanists in recent decades [4]. However, these plant resources and their indigenous use are in danger of being lost in areas where environmental and cultural transformations have led to changes in feeding practices. Many indigenous communities abandon or change their traditional customs and thereby lose their plant knowledge over time [5-7]. Imphal West District of Manipur situated approximately between the latitude 24.30° N to 25.00° N and longitude of 93.45° E to 94.15° E with an area of 558 sq. kms is predominately dominated by the Meitei community. Around 29 different tribal ethnic groups are inhabited in the district. The major tribes are Kabui, Tangkhul, Kuki, Hmar, Chithung etc. Besides

these tribes, a large section of the population from Muslim community (Meitei Pangal), Nepali, Bengali Marwari and people from other parts of India also live. It has a population of 4, 44,382 as per 2011 census report.

Materials and Methods

The present study was conducted in Imphal West District of Manipur, India during 2009 to 2014. This research was carried out through extensive field survey and careful documentation of wild edible plants. In the present investigation, data were collected from both primary and secondary sources from the selected study area. Primary data were collected using standard data collection methods [8] for identification of plants and the mode of utilization were recorded. Local wild habitats, small markets, local vendors, door to door house visits, survey of forest areas, local herbal medicine doctors i.e. 'Amaiba' and 'Amaibi' (in local language) were also visited to collect the ethnobotanical information regarding wild edible plants. Secondary data were collected from various published and unpublished literature in books, booklets, newspapers, magazines and journals on wild edible plants during the last three decades. In order to authenticate the identity of the plants various published literature and experts were personally consulted. Data were also collected from records of Government authorities and by personal interview with the elders of the community. The authenticated data were tabulated systematically with their botanical names, vernacular names, family and plant parts used.

Results and Discussion

Various spices and medicinal plants found in the study area were listed with their vernacular names, family and plants parts used. Some of the fruit plants listed in the T able are included among the commercial fruits in other part of the country, but these are growing in wild and unprotected conditions in Imphal West District of Manipur and these plants are not cultivated commercially in the study area. Therefore, they are mentioned here as wild edible fruits. In the present study, 105

wild edible plants were recorded which were being used by the Meitei community for various medicinal and nutritional uses since time immemorial. This indigenous knowledge has been carried over generations after generations mainly through words of mouth. These plants belonging to 83 genera under 48 families were

found to be ethnobotanically important among the Meitei community. These plants were identified and listed alphabetically with their botanical name, vernacular names, family and plant parts used [Table-1].

Table-1 Wild edible plants used by Meitei community in Imphal West District, Manipur

Sl.No.	Botanical Name	English/Hindi/ Bengali Name	Vernacular Name (Manipuri)	Family	Parts used
1	<i>Acorus calamus</i> Linn.	Sweet flag (E)	Okhidak	Araceae	Rhizome
2	<i>Adhatoda vesica</i> , Nees.	Malabar nut (E)	Nongmagkha	Acanthaceae	Leaves and inflorescence
3	<i>Aegle marmelos</i> , (Corr) Roxb.	Bael (E)	Heirkhagok	Rutaceae	Fruit
4	<i>Agaricus campestris</i> , Linn.	Mushroom (E)	Chengum	Agaricaceae	Whole thallus
5	<i>Ageretum conyzoides</i> Linn.	Goat weed(E) Dochunty(B)	Khongjai napi	Asteraceae	Young shoots
6	<i>Alisma plantago-aquatica</i> , Linn.	Water plantain (E)	Ishing Yempat	Alismataceae	Young shoot
7	<i>Allium hookerii</i> , Thw.	No other name	Maroinapakpi (locally adapted)	Liliaceae	Shoot and root
8	<i>Allium odorosum</i> , Linn.	No other name	Maroinakupi (locally adapted)	Liliaceae	Herb
9	<i>Alocasia cucullata</i> , Schott.	Swamp root (E)	Singju Paan	Araceae	Stem and rhizome
10	<i>Aloe abyssinical</i> , L.	Indian Aloe (E)	Dhritakumari	Liliaceae	Soft Leave
11	<i>Alpinia galanga</i> , (Linn) Willd.	Punnag champa (H)	Pullei	Zingiberaceae	Young shoots and rhizome
12	<i>Alpinia nigra</i> , (Gaertn) Burt.	Shell ginger (E)	Pullie	Zingiberaceae	Rhizomes
13	<i>Alpinia officinarum</i> , Hance.	Galangal (E)	Pullie manbi	Zingiberaceae	Rhizomes
14	<i>Alternanthera philoxeroides</i> , Griseb.	Aligator weed (E)	Kabonapi	Amaranthaceae	Soft stem
15	<i>Alternanthera sessilis</i> , D.C.	Chanchi (B)	Phakchet	Amaranthaceae	Young shoot with inflorescence
16	<i>Aphanamixis polystachya</i> (W) Parker.	Chalta (H)	Heirangoi	Meliaceae	Fruit
17	<i>Aralia armata</i> , Seem.	Spikenard (E)	Naosek nambi	Rutaceae	Young shoots
18	<i>Artabotrys hexapetalus</i> , (L.F.) Bhandari,	Champa (H) Kantali champa (B)	Chini champra	Annonaceae	Flowers
19	<i>Artemisia nilagierica</i> (C B Clarke) Pamp	Indian worm wood fleavane (E)	Laibak ngou	Asteraceae	Young shoot
20	<i>Artocarpus chaplasi</i> , Roxb	Monkey jack (E)	Heirukoothong	Moraceae	Fruit
21	<i>Azadiracta indica</i> , A.Juss.	Margosa tree (E)	Neem	Meliaceae	Leaves, seeds
22	<i>Baccaurea sapida</i> , (Roxb) Muell	Burmese grapes(E)	Motokhei	Euphorbiaceae	Fruit
23	<i>Calamus tenuis</i> , Roxb.	Cane palm (E)	Heirei	Arecaceae	Fruit
24	<i>Celtis australis</i> , Linn	Hackberry (E)	Heikreng	Ulmaceae	Fruit
25	<i>Cinnamomum zeylanicum</i> L.	Cinnamon (E)	Ushingsa	Lauraceae	Bark
26	<i>Citrus decumana</i> , L.	Pomelo (E)	Nobab	Rutaceae	Fruit
27	<i>Citrus hystrix</i> , D.C.	Hatkore (E)	Haribob	Rutaceae	Fruit (epicarp)
28	<i>Citrus limethiodes</i> , Tanaka	Grape fruit (E)	Heithum	Rutaceae	Fruit
29	<i>Colocasia antiquorum</i> , Linn	Taro (E)	Pankhok	Araceae	Petiole
30	<i>Corchorus capsulari</i> , Linn	Wild Jute (E)	Ananba	Tiliaceae	Leaves
31	<i>Curcuma angustifolia</i> , Roxb	East Indian arrow root (E)	Yaipan	Zingiberaceae	Flower
32	<i>Curcuma caesia</i> , Linn	Black zedoary (E)	Yaimu	Zingiberaceae	Rhizome
33	<i>Cynodon dactylon</i> Pers.	Doop grass (E)	Tingthou	Poaceae	Young shoot
34	<i>Cyperus esculentus</i> , L.	Earth Almond (E)	Kaothum	Poaceae	Underground tuber
35	<i>Dactyloctenium aegypticum</i> Beauv.	Crow foot (E)	Pungphai	Poaceae	Young Leaves
36	<i>Datura metel</i> Linn.	Jimson weed (E)	Sangoi-hidak	Solanaceae	Seed (medicinal)
37	<i>Dillenia indica</i> , Linn.	Elephant Apple (E)	Heigree	Dilleniaceae	Fruit
38	<i>Eichhornia crassipes</i> , Solms.	Water hyacinth (E)	Kabo Kang	Pontederiaceae	Shoot
39	<i>Enhydra fluctuans</i> , Sour.	Water cress(E)	Komprek Tujombi	Asteraceae	Young shoot
40	<i>Eryngium Foetidum</i> , L.	False coriander (E)	Awa-phadigom	Euphorbiaceae	Leaves
41	<i>Eucalyptus citriodora</i> Hook.	Lemon scented eucalypt (E)	Nasik	Myrtaceae	Leaves
42	<i>Eupatorium cannabinum</i> , L.	Ngai camphor (E)	Langthrei	Asteraceae	Young shoot
43	<i>Euphorbia longana</i> Lamk.	False sarsaparilla (E)	Nonganghei	Sapindaceae	Fruit
44	<i>Euryale ferox</i> , Salisb.	Gorgon nut (E)	Thangjing	Nymphaeaceae	Seed, soft stem, young flower etc.
45	<i>Ficus benjamina</i> L	Comosa king (E)	Khonang bot	Moraceae	Root, Bark
46	<i>Ficus caria</i> , Linn	Fig (E)	Heibong	Moraceae	Fruit
47	<i>Ficus cunia</i> (B-H) ex Roxb.	Fig (E)	Heirit	Moraceae	Fruit
48	<i>Ficus glomerata</i> Roxb.	Fig (E)	Heiboong	Moraceae	Fruit
49	<i>Ficus hispida</i> (L)	Kagsha (H)	Asi theibong	Moraceae	Fruit and leaves
50	<i>Ficus religiosa</i> L.	Peepal tree (E)	Sana khonang	Moraceae	Root and bark
51	<i>Flacourtia jangomas</i> Raeusch.	Puneala plum (E)	Heitroi	Flacourtiaceae	Fruit
52	<i>Garcinia anomala</i> , Planch	Kokam (H)	Heibung	Clusiaceae	Fruit
53	<i>Gynura cusimbua</i> Moore.	Gynura (E)	Tera paibi	Asteraceae	Young shoot
54	<i>Hedychium flavum</i> , Roxb.	Yellow ginger lily (E)	Loklei	Zingiberaceae	Rhizome
55	<i>Hedychium spicatum</i> , Koen.	Canna (E)	Loklei	Zingiberaceae	Rhizome
56	<i>Hirneola auricula</i> , Linn <i>Auricularia delicata</i> (Fr. P)	Fungi (E)	Uchina	Auriculariaceae	Whole thallus (Fungi)
57	<i>Ipomoea aquatica</i> , Forsk.	Swamp cabbage (E)	Kolamni	Convolvulaceae	Shoot
58	<i>Isoetes coromandeliana</i> Linn.	Isoetes (E)	Sorbon	Isoetaceae	Shoot
59	<i>Jussiaea repens</i> , Linn.	Blistering ammania (E)	Ishing Kundo	Onagraceae	Young shoot

60	<i>Knoxia sumatrensis</i> , DC.	Knoxia (E)	Meitei lebum	Lamiaceae	Young shoot
61	<i>Lemanea australis</i> , Atkins	Red Alga (E)	Nungsham	Rhodophyceae	Whole thallus (Algal colony)
62	<i>Leucus aspera</i> Spreng.	Durpi sak (H)	Mayang lembum	Lamiaceae	Young shoot
63	<i>Marsilea quadrifolia</i> , Linn	Sushni-sak (B)	Ishing yenshang	Marsiliaceae	Young shoot
64	<i>Marsilia minuta</i> Linn.	Water clover fern (E)	Ishing yensang	Marsiliaceae	Young shoot
65	<i>Mentha arvensis</i> , Linn.	Field mint (E)	Nungsi hidak	Lamiaceae	Shoot
66	<i>Meriandra bengalensis</i> Benth.	Bengal sage (E)	Lomba	Labiatae/ Lamiaceae	Inflorescence
67	<i>Meriandra strobilifera</i> Benth.	Sage(E)	Kanghuman	Lamiaceae	Inflorescence
68	<i>Meyna spinosa</i> , Roxb.	Moina(H)	Heibi	Rubiaceae	Leaves and ripe fruit
69	<i>Michelia Champaka</i> Linn.	Champa (E)	Leihao	Ericaceae	Bark or Flower
70	<i>Mimosa pudica</i> Linn.	Sensitive plant (E)	Kangphal Ikaithibi	Fabaceae	Leaves
71	<i>Morus indica</i> , Linn	Common mulberry (E)	Kabrang chak	Moraceae	Young leaves
72	<i>Morus nigra</i> , Linn	Mulberry (E)	Heijampet	Moraceae	Berry
73	<i>Murraya koenigii</i> , Linn.	Curry pata (H)	U-maroi	Rutaceae	Leaves
74	<i>Nelumbium speciosum</i> , Willd.	Lotus (E)	Thambal	Nymphaeaceae	Seed, young leaves
75	<i>Nelumbo nucifera</i> , Gaertn.	Lotus (E)	Thambal	Nymphaeaceae	Seed, young leaves
76	<i>Neptunia oleracea</i> , Lour.	Lajalu (H)	Ekai thabi	Mimosaceae	Soft stem
77	<i>Ngarenga porphyrochoma</i> (Hance) Bor.	Narenga sugar Cane (E)	Shingut Kambong	Poaceae	Infected column of the stem.
78	<i>Nymphaea alba</i> , Linn.	Lily (E)	Tharo	Nymphaeaceae	Soft stem and fruit
79	<i>Nymphaea lotus</i> Linn.	Water lily, Pond lily (E)	Tharo angoba	Nymphaeaceae	Soft stem and fruit
80	<i>Nymphaea rubra</i> Roxb.	Red water lily (E)	Tharoranganga	Nymphaeaceae	Soft stem and fruit
81	<i>Ocimum canum</i> , Sims	Haory basil (E)	Mayangton	Lamiaceae	Leaves & inflorescence
82	<i>Oenanthe javanica</i> , (Blume) D.C	Drop wort (E)	Komprek	Apiaceae/ Umbelliferae	Young shoot
83	<i>Oxalis corniculata</i> L.	Indian sorrel (E)	Yensin	Oxalidaceae	Young shoot
84	<i>Panax schinseng</i> Neep.	Ginseng (E)	Ginseng	Araliaceae	Root (medicinal)
85	<i>Parkia roxburghii</i> , Linn.	Tree bean(E)	Yongchhak	Mimosaceae	Pod and inflorescence
86	<i>Phoenix dactylifera</i> , Linn.	Date (E)	Thangtup	Arecaceae	Fruit
87	<i>Phoenix sylvestrus</i> , Roxb.	Date palm (E)	Palm	Arecaceae	Fruit
88	<i>Pista stratiotes</i> , Linn.	Water lettuce (E)	Kangjao	Araceae	Leaves
89	<i>Plantago major</i> Linn.	Common plaintain(E)	Yempat	Plantaginaceae	Leaves
90	<i>Pogostemon purpurescens</i> Dalz.	Patchouli plant(E)/(H)	Tekta	Lamiaceae	Whole thallus (fungi)
91	<i>Polygonum posumba</i> , Buch. Ham Ex. D. Don.	Knotweet(E)	Phakpai	Polygonaceae	Leaves
92	<i>Portulaca oleracea</i> Linn.	Common purslane (E)	Leibak Kundo	Portulacaceae	Young shoot
93	<i>Prunus armenica</i> , Willd.	Wild Himalayan cherry (E)	Mallei	Rosaceae	Fruit
94	<i>Pteris insiformis</i> Burm f.	Fern (E)	Chang khrang	Pteridaceae	Leaves
95	<i>Rhus hookerii</i> , Sahni & Bahadur	Crab's claw(E)	Heimang	Anacardiaceae	Fruits and young leaves
96	<i>Sagittaria sagittifolia</i> , Linn.	Old world arrow head (E)	Koukha	Alismataceae	Bulb
97	<i>Solanum nigrum</i> Linn.	Indian night shade (E)	Leipung khanga	Solanaceae	Fruit
98	<i>Solanum torvum</i> Swartz.	Tita begun (B)	Sing khanga	Solanaceae	Fruit
99	<i>Spondias mangifera</i> , Willd.	Crab's claw (E)	Heining	Anacardiaceae	Fruit
100	<i>Trapa natans</i> , Linn.	Water chest nut (E)	Heikak	Trapaceae	Nut and young shoot
101	<i>Vangneria spinosa</i> , Hook f. var.	Moina (H)	Heibee	Flacourtiaceae	Leaves , ripe fruit
102	<i>Vitex trifolia</i> (L)	Chinese chaste tree(E)	Uriksibi	Verbenaceae	Leaves
103	<i>Zanthoxylum limonella</i> Alston.	Prickly ash (E)	Mukthruhi	Rutaceae	Leaves, inflorescence
104	<i>Zanthoxylum alatum</i> Roxb. Var.	Winged Leaf-Prickly ash (E)	Mukthruhi achouba	Rutaceae	Leaves, inflorescence
105	<i>Zizania Latifolia</i> , Turez. Ex-Stapf	Water rice (E)	Ishing Kambong	Poaceae	Infected column is eaten either raw or cooked

N.B.: E = English H = Hindi B = Bengali

Conclusion

The Meitei people of Imphal West District of Manipur consume many wild edible plants and its parts as subsidiary food sources. These plants play an important role against mal-nutrition in the weaker section of the society. Many wild plants are commonly used as medicines among the rural people and they depend on these plants during adverse situations such as flood, famine, epidemics etc. With the change in customs and traditions, people have stopped using these plants and hence it has led to loss of precious indigenous knowledge over time. Therefore, it is necessary to take up appropriate steps to preserve and conserve the vast indigenous technical knowledge on uses of these wild edible plants for the benefit of the Meitei community in particular and the human race in general.

Acknowledgement

The authors acknowledge the cooperation, active participation and knowledge shared by the Meitei community of Imphal West District of Manipur.

Conflict of Interest: None declared

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