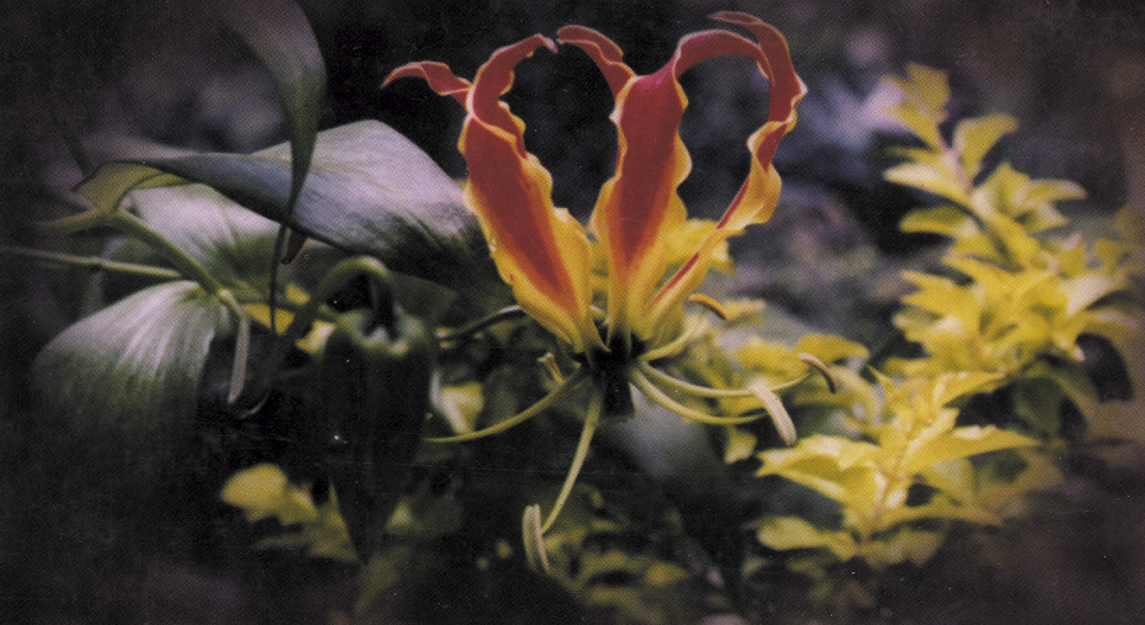


# **BIODIVERSITY IN NORTH EAST INDIA**



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**NEHU**

# Wild Edible Plants of Meghalaya

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## INTRODUCTION

Meghalaya comprises of South Garo Hills, West Garo Hills, East Garo Hills, West Khasi Hills, East Khasi Hills, Ri-Bhoi and Jaintia Hills districts lying between 25°47" - 26°10" N latitude and 89°45" - 92°45" E longitude and covers an area of 22,549 km<sup>2</sup>. It is bounded on the North, East and West by Assam and on the South by Bangladesh (Fig. 1). The altitude ranges from 50 - 1960 m. The state is having an estimated population of about 23,57,510 according to the projected 2001 census with a density of 79-persons/sq. km.



*Fig 1: District map of Meghalaya*

Meghalaya is ranked seventh among all states and union territories in respect of the percentage of state's geographic area under forest cover with 70 percent of the state is forest area (State forest report, 2002). Almost 90 percent of the forest area of the state is outside the direct government control and is owned by the clan and community. The state has 1112 sq. kms of reserved forest, 12 sq. kms of protected forest

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and 8372 sq. kms of unclassified forest. Meghalaya has a dense forest area of 5681 sq. kms (25.3 pc of the state forest area), while 9903 sq. kms is open forest (44.2%) and the remaining is a non forest area (3.0 %). Dense forests are areas where the foliage cover (canopy) is more than 40%, whereas in open forests, it is between 10 to 40% and in the non forest area the foliage cover is below 10 pc.

The forests of Meghalaya provide a large number of plants whose fruits, seeds, tubers, shoots, etc. make an important contribution to the diet of the people, particularly those living near forests and other rural areas. These plants not only provide inexpensive food but several other useful products like medicine, fibre, fodder, dyes etc. They also provide useful genes for crop improvement. The study of wild edible plants is important not only to identify the potential sources which could be utilized as alternative food or in times of scarcity but to select promising types for domestication.

Recently, the role of ethnobotanical studies in trapping the old traditional folk knowledge as well as in searching new plant sources of food, drugs etc. has been emphasized (Jain, 1987,1991).

The study indicated the presence of a large number of wild edible plants in the district; however, the present paper enumerates only those species which are used as food or spice by the people of this region.

### MEGHALAYA – AT A GLANCE

#### *Geographical Location*

25° 47' -26° 10' N and 89° 45' – 92° 47' E

*Area:* 22,429 sq. km

*Population* ( 2001 census): 23,57,510

*Density:* 79 persons/ sq.km.

*Sex ratio:* 955 females/1000 males

*Literacy:* Total 75%

*Number of Districts:* 7

*Number of Blocks:* 32

*Number of towns:* 12

*Number of villages:* 5780

*Reserved areas:* 981 sq.km

*Protected areas:* 12 sq.km

*Unclassed areas:* 8503 sq.km

*National Parks:* 2 nos, with 386.70 sq.kms area

*Sanctuaries:* 3 nos, with 34.21 sq.km area

*Coal production* - 4238000 MT

*Limestone production* - 389000 MT

*Cement production* - 1.03 lakh MT

*(Source: Directorate of Economics & Statistics,  
Government of Meghalaya)*

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### MATERIAL AND METHODS

Along with intensive survey of locally available information on the use of traditional herbal medicine collected through personal interview and literature search, field work was also considered necessary. Short field visits were made to specific areas. During the field visit, interactions with local knowledgeable persons and other stakeholders were made to collect information and to solicit their views on medicinal plants and biodiversity conservation. The methodology followed during field work was based mainly on the detailed questionnaires and some standard format. Carefully planned field work spread over four years from 1998 to 2002 was carried out in different tribal pockets of Meghalaya. The purpose of the study was not only the collection of first hand information about the relationship of medicinal plants with the community but also to verify the already published data wherever possible.

Studies were carried out among different tribes of the state. The plants were identified using relevant floras and by matching the specimens in the herbaria of Botanical Survey of India at Shillong and at North-Eastern Hill University, Shillong. Where necessary, interpreters were employed in order to acquire details of uses and other information on plants and their environment. Tribal markets or weekly *hats* were also visited to study the plants and plant products sold there. As the rural folk of the region are largely dependent on wild plants and plant products for their existence, their local markets are full of wild vegetables, fruits and medicinal plants. These markets are either permanent as in Shillong, Sohra, Nongstoin, Jowai, Nongpoh and other big towns, or are held on a fixed day each week in small villages. *These weekly hats* are tapped for their rich source of information. The vegetables and fruits collected from the wild and their products are the commonest commodity in these tribal markets as well as the domesticated variety of crops and animals.

### OBSERVATIONS AND RESULTS

In the present study 87 wild plants which are eaten whole or in part by the local people are recorded along with their family, local name, habit, extent of use, parts used and mode of usage.

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**Table 1: Wild Edible Plants of Meghalaya**

Sl	Scientific name	Local name	Family	Mode of Utilization
1.	<i>Acanthopanax trifoliatum</i>	Kenbut (Mk)	Araliaceae	Young shoots are cooked and eaten
2.	<i>Adhatoda vasica</i>	Devglamch (G)	Acanthaceae	Cooked as vegetable
3.	<i>Alocasia indica</i>	Kimchit nokam (G)	Araceae	Cooked as vegetables
4.	<i>Amaranthus gangeticus</i>	Chantili (G)	Amaranthaceae	Cooked as vegetables
5.	<i>Antidesma diendrum</i>	Aburok-arabok (G)	Euphorbiaceae	Eaten raw
6.	<i>Argyria nervosa</i>	Jatapmasi (K), Soh ring kang	Convolvulaceae	Leaves are eaten raw and considered to be medicinal
7.	<i>Artocarpus chaplasha</i>	Soh-phan khlaw (K)	Moraceae	Cooked as vegetables
8.	<i>Artocarpus heterophyllus</i>	Soh-phan (K)	Moraceae	Dried seeds powdered and stored and this is boiled with water and eaten as a substitute for rice during famine or scarcity. Eaten raw
9.	<i>Azadirachta indica</i>	Neemu (G)	Meliaceae	Cooked as vegetables
10.	<i>Baccaurea sapida</i>	Soh ramdieng (K), dojuka (G)	Euphorbiaceae	Flower is eaten raw
11.	<i>Bauhinia purpurea</i>	Muyung-laphang (K) megong (G)	Caesalpiniaceae	Leaves and flower is cooked as vegetables
12.	<i>Begonia palmata</i>	Hurmaw(G) Jajew(Mk)	Begoniaceae	Young shoots are cooked and eaten. Fruits yield a dye used as ink
13.	<i>Begonia roxburghii</i>	Kimchare (G)	Begoniaceae	Leaves and shoots are cooked with dry fish
14.	<i>Begonia rubrovenia</i>	Johoksier (K)	Begoniaceae	Stem is edible
15.	<i>Brassaiopsis palmate</i>	Eri (G)	Araliaceae	Leaves are fed to Eri silk worms
16.	<i>Buddleja macrostachya</i>	Jalong krem (K)	Buddijaceae	Barks are chewed with betal leaf
17.	<i>Calamus acanthospathus</i>	Rie (G)	Araceae	Shoots are pounded, fermented and then sundried and stored for offseason
18.	<i>Cardamine macrophylla</i>	-	Brassicaceae	Leaves are used as vegetable
19.	<i>Casearia graviolens</i>	Bolong miandok (G)	Bixacaceae	Leaves are used as vegetable and twigs are cooked and eaten

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SI	Scientific name	Local name	Family	Mode of Utilization
20.	<i>Castanopsis indica</i>	Chhaku khokrok (G)	Fagaceae	Fruits are eaten raw
21.	<i>Centella asiatica</i>	Kynbat moina(K), Brahmi(G)		Roots and Leaves are eaten raw or cooked for dysentery, skin disease, diabetes etc.
22.	<i>Chlorophytum arundinaceum</i>	Soh-kyian	Liliaceae	Cooked as Vegetable
23.	<i>Cirsium involucreatum</i>	Soh chlia (K)	Asteraceae	Seeds are aromatic, eaten raw
24.	<i>Cleome viscosa</i>	-	Cleomaceae	Seed are used for flavoring curry
25.	<i>Codonopsis parviflora</i>	Ja tyndong (K)	Campanulaceae	Leaves are cooked and eaten
26.	<i>Colocasia affinis</i>	Goneusu (G)	Araceae	Roots are cooked with dry fish
27.	<i>Colocasia esculenta</i>	Matchitangong (G)	Araceae	Roots are cooked as vegetables
28.	<i>Corchorus capsularis</i>	Mehku (G)	Tiliaceae	Leaves are cooked as vegetable
29.	<i>Corchorus pretense</i>	Amalthchu(G)	Amaryllidaceae	Roots are cooked as vegetables
30.	<i>Cordia grandis</i>	Kotra (Mk)	Ehreliaceae	Resin is used as adhesive
31.	<i>Crataeva nurvala</i>	Jong sia (G)	Cleomaceae	Shoots are cooked and eaten
32.	<i>Crinum pretense</i>	Amaltchu (G)	Amaryllidaceae	Root are cooked as vegetable
33.	<i>Croton roxburghii</i>	Marthu arong (Mk)	Euphorbiaceae	Leaves are used for fermenting liquor
34.	<i>Croton tiglium</i>	Runi bih (G)	Euphorbiaceae	Fruits are used as antidote
35.	<i>Cryptolepis sinensis</i>	-	Periplocaceae	Branches are used as fishing rods
36.	<i>Cucurbita moschata</i>	Pathaw (K)	Cucurbitaceae	Eaten raw
37.	<i>Cyathocalyx martabanicus</i>	-	Annonoaceae	Ripe fruits is edible
38.	<i>Dendrocalamus halmiltonii</i>	Binh (G) Nain	Poaceae	Shoot are pounded and used as pickle and also for off season
39.	<i>Desmondium triflorium</i>	Memang-mong-arabak (G)	Fabaceae	Leaves are cooked and mixed with dry fish

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Sl	Scientific name	Local name	Family	Mode of Utilization
40.	<i>Dillenia indica</i>	Agachi(G) , Dieng Soh Karbam (K)	Dillaniaceae	Unripe fruits are cooked with dry fruits
41.	<i>Elaeagnus latifolia</i>	Soh Shang(K), chhokhua (G)	Elaeagnaceae	Fruit are eaten raw
42.	<i>Elaeocarpus floribundus</i>	Jolpai (G), Ok-hi sinsigti (Mk)	Elaeocarpiaceae	Fruits are edible and used for making pickle.
43.	<i>Elatostema dissectum</i>	-	Urticaceae	Leaves and fruits are edible , either raw or cooked
44.	<i>Eryngium foetidum</i>	Etucha-bellock(G)	Apiaceae	Leaves are cooked as vegetables
45.	<i>Fagopyrum esculentum</i>	Jarain (K)	Polygonaceae	Leaves are cooked and eaten
46.	<i>Ficus auriculata</i>	-	Moraceae	Shoots are used as vegetables
47.	<i>Ficus prostata</i>	-	Moraceae	Bark are eaten with betal leaf
48.	<i>Fiscus hispida</i>	Thamusa(G)	Moraceae	Unripe fruits are cooked as vegetables and ripe ones are eaten raw.
49.	<i>Garcinia pedunculata</i>	Soh denae(K), Thizou(G)	Guttiferaceae	Fruit are eaten raw
50.	<i>Gaultheria fragrantissima</i>	La thynrait	Ericaceae	Fruits edible, leaves used for tea
51.	<i>Gnetum montanum</i>	Jagingriube(Mk)	Gnetaceae	The seeds are chewed as substitute for areca nut
52.	<i>Hedyotis diffusa</i>	Mangaluk(Mk)	Rubiaceae	Leaves are eaten with fish after child birth.
53.	<i>Hibiscus pungens</i>	Kaldha(G)	Malvaceae	Leaves are cooked as vegetables
54.	<i>Hodgsonia macrocarpa</i>	Soh-Lyot (K)	Curcubitaceae	Leaves as Silk worm feed
55.	<i>Homalomena aromatica</i>	Kimchit nokam(G)	Araceae	Petiole are cooked as vegetables
56.	<i>Ipomea racemosa</i>	Setre budu(G)	Convolvulaceae	Cooked as vegetables also consumed boiled
57.	<i>Ixora subsessilis</i>	Sang rura(G)	Rubiaceae	Cooked preferably mixed with dry fish
58.	<i>Mallotus philippinensis</i>	Setre budie(G)	Euphorbiaceae	Unripe fruits are cooked as vegetable

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Sl	Scientific name	Local name	Family	Mode of Utilization
59.	<i>Malvastrum tricuspdatum</i>	Som zalik (G)	Malvaceae	Seeds are cooked as vegetables and bark are used as condiments
60.	<i>Manihot esculenta</i>	Phondiew	Euphorbiaceae	Barks are taken with betal leaf
61.	<i>Monochoria hostata</i>	Garopaksi gachli (G)	Pontederiaceae	Petioles are cooked with dry fish
62.	<i>Moringa pterygosperma</i>	Sajna(G) , Rodina (K)	Moringaceae	Leaves, flowers and fruits are usually cooked with dry fish
63.	<i>Myrica nagi</i>	Sohphie (K)	Myricaceae	Eaten raw and also used for making pickles
64.	<i>Oxalis latifolia</i>	Soh-thiang	Oxalidaceae	Fodder for Eri Silk worms
65.	<i>Oxyspora paniculata</i>	Long tang	Melastomaceae	Eaten raw
66.	<i>Pedicularis carnosa</i>	Sam dipo (G) samthapar (K)	Scrophulariaceae	Leaves and roots are cooked and eaten as vegetable
67.	<i>Peperomia pellucida</i>	Bithe (G)	Piperaceae	Leaves are cooked as vegetables
68.	<i>Phlogacanthus thyrsoiflorus</i>	Verua kain cheit (G)	Acanthaceae	Leaves and flower are cooked with fish and meat
69.	<i>Phrynium capitatum</i>	Balgate (G)	Zingiberaceae	Roots are cooked as vegetables
70.	<i>Phyllanthus emblica</i>	Bon bakeri(G)	Euphorbiaceae	Fruits are eaten raw also mixed with curry
71.	<i>Phyllanthus parvifolius</i>	Jala mat kha(K), memang ambri (G)	Euphorbiaceae	Fruits are eaten raw also mixed with curry
72.	<i>Phytolacca acinosa</i>	Iada	Phytolaccaceae	
73.	<i>Piper melamiris</i>	Dubili (G)	Piperaceae	Leaves are chewed as substitute of betal, leaf also cooked as vegetables
74.	<i>Plectranthus incanus</i>	Chichittoni (G)	Lamiaceae	Leaves are cooked as vegetables
75.	<i>Polygonum chinense</i>	U niuh tmar	Polygonaceae	Shoots are pounded, fermented, extracted and then sun dried for off season use
76.	<i>Portulaca oleracea</i>	Stilchi (G)	Portulacaceae	Leaves are cooked as vegetable
77.	<i>Pricamphylus glaucus</i>	Assam	Menispermaceae	Fodder for cattle, goat

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Sl	Scientific name	Local name	Family	Mode of Utilization
78.	<i>Rhynchoechum ellipticum</i>	Regong(G)	Gesneriaceae	Leaves are cooked with dry fish
79.	<i>Rhynchoechum vestitum</i>	Regong-chu (G)	Gesneriaceae	Leaves are cooked as vegetables along with sodium bicarbonate
80.	<i>Rubus ellipticus</i>	Dieng- soh –sah (K)	Rosaceae	Eaten raw
81.	<i>Smilax perfoliata</i>	Shiah –krot (K)	Smilacaceae	Shoot are pounded, fermented, extracted and then sun dried for off seasons used,
82.	<i>Sonchus leracea</i>	Jajew (K)	Asteraceae	Fruit are eaten raw
83.	<i>Strobilanthus coloratus</i>	Samoong (G) Sam-siphara (K)	Acanthaceae	Leaves are cooked as vegetable
84.	<i>Zanthoxylum acanthopodium</i>	Jaiur khlaw (K)	Rutaceae	Fruits is pungent and spicy and are used as a spice
85.	<i>Zanthoxylum armatum</i>	Jaiur (K)	Rutaceae	Fruits are aromatic and used as spice
86.	<i>Zanthoxylum khaisanum</i>	Sumet-cheng(G), Jaiur khasi (K)	Rutaceae	Leaves as vegetable, fruits aromatic and gives a tingling sensation and usually used for chutney/spice
87.	<i>Zanthoxylum limonella</i>	Hajor(Mk)	Rutaceae	Leaves as vegetables and the spines is of medicinal importance

K – Khasi, G – Garo, Mk – Mikir

## References

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