

Meghalaya State Medicinal Plants Board



1. Introduction

Medicinal Plants are an important source of raw materials for traditional medicine and other plant based medicine. The people depend upon local medicinal plants for their primary and immediate health care needs. These plants could be either the cultivated plants in their homesteads, farmlands, cultivation fields or wild plants from forests. The formulations made of these medicinal plants are used for primary health care like cuts, wounds, cough, pain, stomach problems, liver disorders etc. The parts of the plant in use could be leaves, fruits, roots or stems as per their suitability to cure ailments. The supply base of herbal raw drugs used in the manufacture of Ayurveda, Siddha, Unani and Homoeopathy systems of medicine is largely from the wild. Since the wild sources is speedily shrinking it has been a felt needs for conservation and sustainable supply of of medicinal plants for plant based medicine.



Nepenthes khasiana
(location- Lawbah West Khasi Hills District)

Meghalaya is very rich in floral diversity, a significant part of which comprises medicinal and aromatic plants and there is a long- standing traditional of use of medicinal plants in the State. The development of medicinal plants sector in Meghalaya has a great scope for providing employment to the people as there is a huge and ever increasing market for medicinal and aromatic and their preparations in the country and abroad.

The Government of India has established the National Medicinal Plants Board in The Department of India System of Medicinal & Health(ISM&H), Ministry of Health & Family Welfare to co- ordiante all matters relating to the development of ISM&H, Government of India vide letter NO Z18020/6/2001-MP Cell, dated 04.06.01 had asked the State Government of Meghalaya to constitute a State Level Medicinal Plants Board to ensure sustained availability of medicinal plants and to improve their quality.The Government of Meghalaya

therefore, felt it necessary to constitute the Meghalaya State Medicinal Plants Board to handle all matters related to policy formulation, co-ordination of various agencies dealing with medicinal plants, local health traditions, sustained availability of medicinal plants, validation and certification issues and conservation and preservation of medicinal plants in the State.

2. Organisation Structure:

The Meghalaya State Medicinal Plants Board (MSMPB) having legal status of a Society registered under the Meghalaya Societies Registration Act, 1983 came into existence during March 2006 has its headquarters at the office of the Principal Chief Conservator of Forests, Lower Lachumiere, Shillong. The Chief Executive Officer of the Board is the Additional Principal Chief Conservator of Forests (Social Forestry & Environment). The Board has a Governing Body which is headed by the Chief Secretary to the Government of Meghalaya as the Chairman and other higher officials as its members. The Divisional Forest Officers of the Social Forestry Divisions of all the District of Meghalaya act the Implementing Agencies of the Schemes of the Board in the field at present.

3. Diversity of Medicinal and aromatic plants in Meghalaya:

The soils of Meghalaya are largely lateritic. In the central plateau soil is predominantly red. In the northern border areas there are typical upland loam and old / new alluvial soils. The southern parts have sandy and clayey soils. In general, soils are highly leached, acidic and deficient in phosphorus and potassium contents.

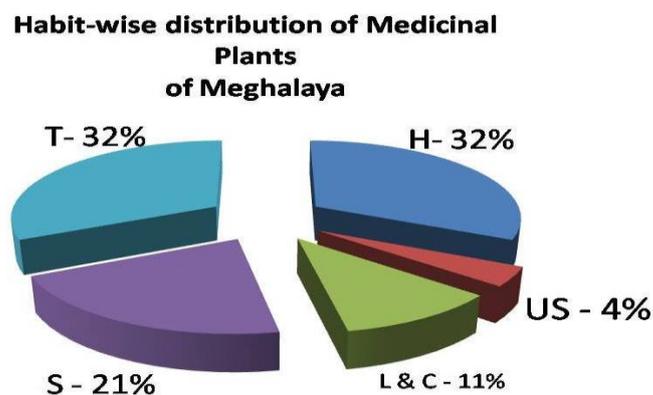
Various types of forests are found in Meghalaya and each type is characterized by a variety of species. The richness of the forests of Meghalaya is well known and has been studied by many Botanists and Foresters. Hooker (1906) described the flora of Khasi Hills in Meghalaya as **'the richest in India and probably in the whole of Asia'**. Phytogeographically, the vegetation of this Area is very interesting possessing an admixture of Asiatic and Indian Peninsular flora. This great diversity and richness of flora are mainly due to its physical geography coupled with the nature of rainfall, temperature, altitude and other

environmental factors. The forest of Meghalaya can broadly be classified as under.

- (a) Tropical -found in areas up to 900 m elevation and comprises of evergreen and semi-evergreen forests, moist and dry deciduous forests, and grasslands.
- (b) Subtropical – mainly confined to high altitude areas of Khasi and Jaintia hills. *Pinus kesiya* forms the dominant species. In some places these pine trees are intermixed with trees like *Schima wallichii*, *S. khasiana*, *Myrica esculenta*, *Acacia mollissima*, *Alnus nepalensis*, *Quercus griffithii*, *Engelhardia spicata*, *Rhus javanica*, etc.
- (c) Temperate - confined to elevations from 1,300 to 1,800 m and occurs only in Shillong plateau. Species like *Juglans regia*, *Rhododendron arboreum*, *Quercus griffithii*, *Betula alnoides* and *Manglietia caveana* characterize these forests.

Meghalaya with its wide ranging altitudes, forest types and resultant agroclimatic conditions offers habitats for a very large number of medicinal plants. The richness is also the result of the people's traditional knowledge on them. They differ widely in their habit and habitat requirements. Though the flora is well known and many ethnobotanical publications have been brought out, a consolidated account of the medicinal plant diversity is still lacking. This is all the more essential when we consider different tribes inhabiting different districts with their diverse traditional practices. Altogether 834 medicinal plant species have so far been reported (**Fig.1**) Rubiaceae is the dominant family with maximum number of medicinal plants in Meghalaya.

Fig. 1. Habitat wise distribution of 834 medicinal plants of Meghalaya



H- Herb, T- Tree, Shrub, L & C-Leafy and Climbers, US- under story

(Sources of information: Action Plan- cum road map for development of Medicinal plants in Meghalaya prepared by the Board in consultation with the Botany department of NEHU)

Endemic and Threatened Medicinal Plant Species:

There are many medicinal plants, which have been classified as endemic and/or threatened in the state depending on their distribution pattern and population size. **Eight medicinal plant species** such as *Camellia caduca* Cl ex Brandis, *Citrus latipes* Tanaka, *Nepenthes khasiana* Hk. f, *Osbeckia capitata* Benth are reported to be endemic to Meghalaya only. **Thirty-seven medicinal plants**, like *Schima khasiana* Dyer, *Boehmeria macrophylla* D.Don, *Citrus medica* L, *Ilex khasiana* Purk, *Piper griffithii* C.DC, *Acanthus leucostachys* Roxb. etc. which has been classified as endemic to Eastern Himalayas, Western Ghats, Indo-Burma region and Peninsular India, are also found in Meghalaya. **Seventeen medicinal plant species** found in Meghalaya have been classified under threatened category some of these are *Taxus wallichiana* var. *baccata*, *Dendrobium nobile*, *Panax pseudo-ginseng*, *Nepenthes khasiana* etc.



Curcuma longa



Acorus calamus



*Cinnamomum
tamala*



kaempferia galanga



panax pseudo-ginseng



Gaultheria fragrantissima



Centella asiatica



Piper longum



Rauvolfia serpentina

Photo taken & collected by SMPB Staffs during Field visit

4. Management & Utilization: Current Status

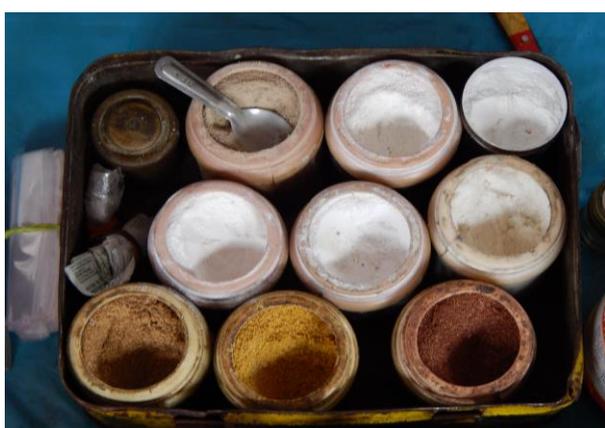
In Meghalaya, medicinal plants are an important source of raw materials for traditional medicine used by the Traditional Healers of the State. As per the market survey conducted by the Meghalaya State Medicinal Plants Board, there are minimum of three Traditional Healers in every weekly Market with in the State. Majority of them collected the raw materials from the wild which is in unorganised form and unscientific manner. Capabilities in the form of good cultivation and collection practises, good manufacturing and marketing practises etc. are to be established in the State.



Local Herbal Practitioner at Laitlyngkot Market (year 2015)



Mr. Kriston Thabah (local traditional healer) during treatment at pynursla



Herbal medicines used by Local Practitioner (at Pynursla market)



***Acorus calamus* rhizome (sample collected from traditional healer)**

Photo taken & collected by SMPB Staffs during market survey

5. Activities and Programmes

The Meghalaya State Medicinal Plants Board (MSMPB) supports various efforts to identify, protect and proliferate the species of medicinal and aromatic plants and to address issues of health care by traditional practitioners and of plant based modern medicine. The Meghalaya State Medicinal Plants Board has the following mandate:

- Extend financial assistance to farmers cultivating medicinal plants
- Identify, document, inventorise and quantify medicinal plants
- Promote in-situ conservation and ex-situ cultivation
- Facilitate co-operative efforts and cluster activities
- Deal with matters related to import and export
- Develop protocols for cultivation, standardization and quality control
- Empower farmers/growers through capacity building.



Nursery site at Mawiaban , Nongstoin, West Khasi Hills District

During 2014-15, the National Medicinal Plants Board has become a part of the National AYUSH Mission under the Ministry of AYUSH Govt. of India, New Delhi. The main objective is to promote AYUSH medical system through cost effective AYUSH services, strengthening of educational system, facilitate enforcement of quality control of Ayurveda, Siddha and Unani & Homoeopathy (ASU & H) drugs and sustainable availability of ASU & H raw materials. Under the National AYUSH Mission Scheme, the Board has been entrusted with the implementation of the component 'Medicinal Plants' to be taken up in the State. Through this scheme the Board has been taking up activities like nurseries development, cultivation of medicinal plants, training/ awareness programs, etc. The Board is also providing assistance to Local Herbal Practitioners for setting up

of a small home herbal garden in an area of not less than 5000 sq. For cultivation of medicinal plants, clusters are to be established and in each cluster there may be a minimum of 3 to 5 farmers each having land not less than 2 hectare each. The Board also give support to the Joint Forest Management Committees(JFMCs/ Panchayats/SHGc/ BMCs through Forest Development Agency(FDA) District/ Division level for setting of local cluster for value addition, drying,warehousing and augmenting marketing infrastructure etc. (for further detail kindly visit NMPB Operational Guidelines, website: www.nmpb.nic.in)

Areas of Concern:

- Survey and Inventorisation of medicinal plants.
- *In-situ* conservation and *ex-situ* cultivation of medicinal plants.
- Production of quality planting material.
- Extension activities – Information, education and communication like seminar/workshops, training, etc.
- Marketing of medicinal plants for domestic and global market.
- Research & development of medicinal plants sector.
- Promote co-operative efforts amongs growers and collectors of medicinal plants.

CONTACT

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