

Review Article

MEDICINAL PLANTS OF NORTH-EAST REGION OF INDIA: A SMALL REVIEW

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ABSTRACT

Assam is a state of the North Eastern part of India. There are varieties of plants distributed in various parts of the state. 50% of India's entire plant biodiversity is contributed by the North Eastern States i.e., Manipur, Mizoram, Sikkim, Tripura including Assam. The Ministry of Environment and Forests (MoEF), Government of India in 1980s recorded two hundred and eighty-six (286) species of plants from Assam, used by the tribes of Assam.

The traditional system of medicine plays an important role in the healthcare of rural people for all types of ailments. The healing power of traditional herbal medicines has been realized and documented since Rigveda and Atharvaveda. Nearly 80% of the world populations rely on traditional medicines for primary health care, most of which involve the use of plant extracts.

Keywords: Medicinal plants, Assam, Phytochemical, Biodiversity

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INTRODUCTION

Most of the medicinal plants used by local people and tribes of the state of Assam are indigenous and are not known to the vast world of phytochemical science and research. The active ingredients and potent phytochemicals with promising pharmacological properties present in those plants are yet to be explored [1].

Maybe some lifesaving miracle drug formulation can be discovered from one or some of those indigenous plants of Assam which are being used with trust and confidence by thousands of people, the tribal and the villagers residing in Assam and can be a landmark in the world of pharmaceutical sciences and a blessing to mankind all over the globe [2].

Assam-the peerless

Assam words originate from Sanskrit word 'Asom' which means 'unparallel' or 'peerless' Assam is an evergreen state. Enormous medicinal plants and herbs have made her evergreen [3].

Assam derives its name from the 'Ahoms'-who ruled the state for 600 y till the British came to India. Assam is a state of 'Y' shaped. Among the three major physical regions of Assam, the Brahmaputra river valley is the largest followed by the Barak River valley in the south, and the hilly region between Meghalaya (to the west) and Nagaland and Manipur (to the east).

The diverse topology of the state Assam provides a platform for diverse biodiversity of Assam. The climatic condition of Assam is primarily hot and humid with sufficient precipitation around the year. The main profession of people of the state of Assam is agriculture. The principal food crop is rice and the principal cash crop includes tea, jute, cotton, etc. Major fruits found growing in the state of Assam are guava, banana, jackfruit, pineapple, blackberry, sugarcane, orange, mango etc. Assam is well known for sericulture. Exclusive varieties of silk i.e., Endi, Muga, Tassar, etc. are produced by Assam. Muga silk is produced only by Assam in the world [4].

Plant biodiversity of assam

India is one among the twenty-five 'mega-biodiverse' regions of Earth. Assam is a part of the Eastern Himalayan Biodiversity of India.

The geographical area of Assam is 78,438 km² of which 35.48% is a forest. The forest in Assam can be classified as

- Tropical Wet Evergreen Forests
- Tropical Semi Evergreen Forests
- Tropical Moist Deciduous Forests
- Sub-tropical Broadleaf Hill Forests
- Sub-tropical Pine Forests
- Littoral and Swamp Forests
- Grassland and Savannahs.

Golaghat, Jorhat, Sibsagar, Tinsukia, Dibrugarh etc are fall under Tropical Wet Evergreen Forests. Hollong (*Dipterocarpus macrocarpus*) the tallest tree of Assam also known as the 'State Tree' is found in these forests.

Hallangapar, Kakoi, Nauduar, Batasipur, Abhoypur, Dilli, Dhansiri, Kholahat, Mayong, Garbhanga, Rani, Mahamaya, Guma, Dohalia, Singla, Haltugaon, Kachugaon, Gali, Pobha, Ranga etc are fall under Tropical Semi Evergreen Forests.

Moist deciduous forests are distributed in the Districts of Nagaon, Morigaon, Kamrup, parts of Nalbari and BARPETA, DARRANG, DHUBRI, KOKRAJHAR and GOALPARA. Sal (*Shorea robusta*) is the primary tree found in moist deciduous forests of Assam along with other species of trees. *Terminalia* is also abundant.

In the districts of Karbi Anglong and North Cachar Hills are found the Sub-tropical Pine forests and Sub-tropical Broad Leaf Hills forests. *Alseodaphne petiolaris* (Ban-hanwalu), *Cleidon speciflorum*, *Antidesma bunius*, *Betula alnoides*, etc. are the various species found. Grassland and Savannahs constitute the vegetation in Kaziranga National Park, Orang, Sonai-Rupai, Laokhowa, Pobitora, Barnadi, Burachapori, Dibru-Saikhowa Wildlife Sanctuaries and to some extent in Manas National Park [5].

Table 1: Some medicinal plants of Assam, their common name, compounds present and medicinal use [6-10]

S. No.	Scientific name	Vernacular name	Family and distribution	Uses
1	<i>Vanda coerulea</i>	Bhatou Phul (Assamese)	Orchidaceae India: Assam, Arunachal Pradesh	Eye drops for the treatment of Glaucoma. Cataract and blindness
2	<i>Renanthera imschootiana</i>	Red Vanda	Orchidaceae Assam	Gonorrhoea, control eye sores
3	<i>Rauvolfia serpentina</i>	Chota chand	Apocynaceae Assam,	Sedation, hypertension, brodyeardia, myosis, ptosis, tremors
4	<i>Aquilaria mallaccensis</i>	Agarwood	Thymelaeaceae Assam	Wood is stimulant, tonic, aphrodisiac, carminative, astringent, also used in diarrhoea, constipation, vomiting and snakebite.
5	<i>Hibiscus manihot</i>	USIPAK (Assamese)	Malvaceae Assam	Tuberculosis, anti-diabetic
6	<i>Abies spectabilis</i>	Talishpatra (Assamese, Bengali)	Pinaceae Assam	Asthma, bronchitis, Carminative, Expectorant, Diuretic
7	<i>Abroma augusta</i>	Bon-kopah (Assamese)	Sterculiaceae Assam	Diabetes and headache
8	<i>Arbus precatorius</i>	Latumoni, Rati (Assamese)	Fabaceae Assam	Diuretic, emetic, aphrodisiac
9	<i>Abutilon indicum</i>	Pera-petari (Assamese)	Malvaceae Assam	Anti-inflammatory, astringent, Diuretic
10	<i>Acacia polyacantha</i>	Samaidh (Assamese)	Mimosaceae Assam	Bitter, astringent, anthelmintic
11	<i>Acalypha indica</i>	Mukuta-manjari (Assamese)	Euphorbiaceae Assam	Burns, scabies, syphilis and centiped bites
12	<i>Achyranthes aspera</i>	Hati-huria (Assamese)	Amaranthaceae Assam	Dysentery, piles ulcer, diuretic
13	<i>Acorus calmus</i>	Bos (Assamese)	Araceae Assam	Chronic diarrhoea and dysentery

CONCLUSION

Assam consist of rich varieties of medicinal plants and herbs. Most of those plants and their medicinal uses are known only to the inhabitant and the tribes residing in various parts of Assam. The active ingredients present in these plants may be used for designing some new drugs and pharmaceutical agents which can pave some new alleys in the world of pharmaceutical sciences and be a blessing for mankind. Plant-derived pharmaceutical formulations used to treat diseases.

Alternative medicine is better than our conventional allopathic medication and can enhance the impact of conventional drugs if used properly. Natural product derived from plants may be do not have any side effects till date if used in a specific dose. Some of the medicinal plants work unbelievably in certain diseased conditions according to the tribal people of Assam. Maybe while hunting for drugs in laboratories for certain deadly diseases day and night, researchers and scientists are missing some miraculous and potent phytochemical constituents which could be modified for formulating the drug, which are present in the plants grown in wild and ignorance on the roadside, backyards and valleys of Assam.

AUTHORS CONTRIBUTIONS

All the author have contributed equally

CONFLICT OF INTERESTS

Author declare that they do not have any conflict of interest

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