

## ***Sugandhmantri* [*Homalomena aromatica* Schott]: a potential aromatic and medicinal plant of North East India**

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### **Abstract**

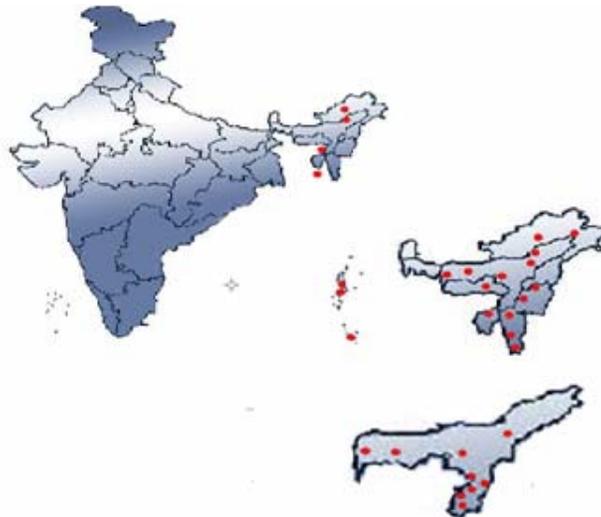
*Homalomena aromatica* Schott (Araceae), locally called *Sugandhmantri*, is one of the commercially exploited plants with high demand from natural habitats in Northeastern region of India. This rhizomatous herb grows naturally in the foot hills as well as in plains. The *Montria oil* extracted from its underground parts is reported to contain mostly 1-Linalool with traces of Terpineol, Linalool acetate, Geraniol and Acetic acid. The present investigation has thrown some new light on the occurrence, distribution, and uses of its oil.

**Key words:** *Homalomena aromatica*; Occurrence; Exploitation; *Montria oil*.

### **INTRODUCTION**

The North East India with its enchanting beauty characterized by a variety of ecological niche has been a perennial source of curiosities and challenges to human intellect and naturalists. The rich floristic diversity of N.E. India and its uniqueness provide tremendous scope for investigation. During a recent botanical investigation it has been found that among the commercially exploited plants from natural habitats from this region *Sugandhmantri* is on high demand, which occurs in restricted population in small patches of its limited habitat. This aromatic rhizomatous herb (Fig. 2) is scientifically named as *Homalomena aromatica* Schott (Araceae) and has acquired many names in different Indian languages. A number of such names have been gathered during field survey viz, *Gandhakochu* or *Gandhikochu* (Bengali); *Gansena* (Assamese); *Aancheeri* (Mizo), *Gondoi* or *Pankhokmanungshieieb* (Manipuri), *Sugandhmantri* (Hindi) and in English it is referred as 'Scented Arum'.

The genus *Homalomena* is quite large with around 140 and distributed mainly in tropical Asian and American region.



**Fig. 1.** Map showing the distribution of *Homalomena aromatica* in North East India.

**OCCURRENCE AND DISTRIBUTION**

*Sugandhmantri* is occurring sparsely the North Eastern Region of India, mainly confined to the southern part like Tripura, Barak Valley of Assam (Kew distribution 5966, 5967; Ahmed 2005), Mizoram, Nagaland and Arunachal Pradesh (Deb 1983), (Fig.1) both in low altitude foot hills and in plains. Naturally, the plant is also found in hilly areas of Chittagaong of Bangladesh (Hooker 1893; Deb 1983), and Kanjilal collected in 1957 from Singla Reserve, (recorded from herbarium sheet deposited at CAL.). The plant species is also distributed in tropical and sub-tropical parts of Asia and America (Mabberley 1997). Two species of *Homalomena*, *H. aromatica* Schott and *H. rubescens* (Roxburgh) Kunth occur in India; a few exotics are also grown as ornamentals (Anonymous 1959).

*H. aromatica* Schott is now found growing in Katakhal Reserve Forest, Nuxatilla village, 3 – 5 km from Loharbond forest house, Cachar district, Assam, at an altitude of 17 – 35 m with high density and abundance; in Monierkhal on the Sonai river, Roopacherra of Hailakandi, Assam; in Patheria hills and its adjacent areas of Karimganj, Assam.



**Fig. 2:** *Homalomena aromatica* Schott on natural habitat.

**Sugandhmantri**

The rhizome *H. aromatica* is partly subterranean, the aerial portion is clothed with the old withered leaf-sheaths with numerous long, white fibrous cords issuing from every parts. The plant is slow growing and attains a height of 30 – 60 cm in wild habitat. Leaves are crowned at the tip of stem and with sheathing bases, long petiolate, lamina sagittate-cordate. It flowers during May to August. The essential oil obtained from its rhizome is used for blending of most oriental perfumes. The plants generally grow on forest covered hill slopes (tillalands) and foothill areas and other types of vegetation. It grows best under 40 – 60 % shade, high humidity (200 to 300 cm annual rainfall), sandy and sandy

loam to clay loam with organic litter with 4.9 to 5.5 soil pH. Temporary water logging for 24 – 48 hours is beneficial for quick rhizome elongation.

Due to increasing exploitation and extraction from the wild, the species is becoming scarce and rapidly depleting in its natural habitat. More than 400 MT of dry rhizomes of *H. aromatica* are collected and transported to outside the state mainly to Kannauj, Kanpur (U.P.), Delhi, Kolkata, Mumbai etc. from Barak Valley of Assam every year. Except the botanical descriptions no other systematic research has been conducted on this plant.

The plant species is identified by consulting the specimens at CAL. The live voucher specimen is deposited at National Bureau of Plant Genetic Resources (NBPGR) and recorded there as IC No.556903, 556904, 556912 and 556914, New Delhi and the voucher in the form of herbarium sheet [T.U. Khan 35697 dated September 06, 2007] has been deposited at the Herbarium of the Department of Botany, Gauhati University, Guwahati.

### USES

The local people of Barak Valley occasionally use *H. aromatica* as vegetable. It is also used in traditional medicine particularly in the treatment of skin diseases, deafness and as blood purifier. Dry and powdered rhizome is used in snuff and tobacco preparation. On steam distillation, the rhizome yields one yellow essential oil, with pleasant odor resembling that of coriander. The essential oil has a very good demand in perfumery and cosmetic industries. The oil, commercially known as *Montria oil*, is reported to contain mostly 1 Linalool with traces of Terpinneol, Linalool acetate, Geraniol and Acetic acid. The crude material after extraction of essential oil is largely used in making *Dhup* (incense stick) (Ahmed 2005). One should realize that the price of its rhizome and products is increasing rapidly in the market.

### CONCLUSION

The excessive and uncontrolled commercial exploitation of *Homalomena aromatica* Schott for decades from its natural habitat caused fast depletion of its wild population in this region. It is also being exploited by the Government Forest Department as a minor forest produce, since long, without any conservation and /or cultivation measures. If this is continued unabated, very soon this unique and valuable species will be extinct from its natural habitat. So, there is an urgent need to control the trend of declining the population of this valuable plant. Hence, at least for the future economic potential as a medicinal and aromatic plant *Sugandhmantri* needs attention for its proper conservation through sustainable exploitation and maintaining sizeable population in protected areas.

### Acknowledgements

The first author (TUK) is grateful to University Grants Commission for financial assistance.

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