FISH MINT PLANT

Successful cultivation of Fish Mint Plant, *Houttuynia cordata* Thunb., in low altitudinal plain in West Bengal

Luxuriant growth of *Houttuynia cordata*, Scale bar = 1cm. (Inset) Magnified view of an inflorescence

IUCN Red List:
Not Evaluated

Plantae
(Plant Kingdom)

Tracheophyta
(Phylum of Vascular plants)

Piperales
(Order of dicotyledonous flowering plants)

Saururaceae
(Family of Lizard's tail plant)

Houttuynia cordata
(Fish Mint Plant)

Species described by Carl Peter Thunberg in 1783

Houttuynia cordata Thunb. (Saururiaceae), a monotypic genus, exists in two chemotypes- the Japanese chemotype producing orange smell and the Chinese chemotype producing smell like raw fish (Bora et al., 1999). Leaves of these plants are used as medicine for treatment of dysentery, gonorrhea, eye troubles and haemorrhoids. Root extract of the plant is used as diuretic (Singh et al., 1996). *H. cordata* is also used as detoxicant, anti-inflammatory (Lu et al., 2006) and antipyretic in traditional medicinal practices of Assam and China (Bora et al., 1999). Plant extract is also used as oral therapeutic agent for the treatment of athlete's foot (Rastogi, 1991). It has also been pointed out that possibility of using *H. cordata* for AIDS management because water extract of leaves inhibit reverse transcriptase-

protease activity (Rao, 2000). A detail review of the pharmacological activities of this plant is discussed in recent years (Kumar et al., 2014).

In general, this species is reported from Himachal Pradesh of India to south west China and Japan. It is also found in Myanmar and in South East Asia at an altitude of 1500-2400m (Polunin & Stainton, 1997). In India, *H. cordata* is reported from Himachal Pradesh to Sikkim, Assam, Khasi Hills and Manipur at an altitudinal range of 300-2000m (Rastogi, 1991).

H. cordata of Chinese chemotype was found near a vendor selling nursery plants in Balurghat of Dakshin Dinajpur district in West Bengal, India. This district lies between 26^{0}35'15" and 26^{0}10'15"N latitude & 89^{0}30" and 87^{0}48'37"E longitude and is situated in the north of West Bengal at an altitude of 25m. The temperature of the region reaches up to 40-42^{0}C in summer and comes down to 5-6^{0}C in winter. Annual rainfall is 1700mm. Occasional shower in winter is not uncommon (Chakraborty et al., 2012).

Identification of this plant is very easy because of its raw fish smell and small betel leaf like foliage appearance. Locally this plant is known as *māchh māchhindā* and this herb attains a height of approximately 30cm. In June, 2007 a mature plant was collected and this was planted in a flat and shallow earthen pot containing sandy soil - a characteristic soil type of this region and successfully cultivated. Since the plant prefers damp condition, plants were placed under diffused sunlight and water was sprayed regularly. During winter all the plants without producing any flower dry out and ultimately die off leaving its root stock from which new saplings emerge. During April, 2008 among forty plants of *H. cordata* only four inflorescences were produced by four different individuals. The plant produced a distinct cylindrical spike (inflorescence) composed of very small green flowers with an involucre of four large white elliptic petal like bracts at its base. All the plants having inflorescences set fruits as usual. These plants are acclimatised so well that they regenerated and maintained vegetative growth year after year using their root stocks.

To grow and nurture *H. cordata* through its vegetative mode is possible on low altitudinal plain land at Balurghat of Dakshin Dinajpur district, West Bengal. Researchers and institutions should develop modern scientific technology for evaluating proper pharmacological use of this species, which can be easily maintained and raised in plain lands.

References

Bora, P. & P.J. Handique (1999). *In vitro* regeneration of a medicinal plant *Houttuynia cordata* Thunb. from nodal explants. *Current Science*. 76(9): 1245-1246.

Chakraborty, T. K., S. D. Choudhuri & J. Choudhury (2012). Morphological variations of fertile spike in *Helminthostachys zeylanica* (L.) Hook. *Hacquetia.* 11(2): 271-275.

Kumar, M., S.K. Prasad & S. Hemalatha (2014). A current update on the phytopharmacological aspects of *Houttuynia cordata* Thunb. *Pharmacognosy Review*. 8(15): 22–35.

Lu, H.M., Y.Z. Liang, L.Z. Yi, & X.J. Wu (2006). Anti-inflammatory effect of *Houttuynia cordata* injection. *Journal of Ethnopharmacology*. 104(1-2): 245-249.

Polunin, O. & A. Stainton (1997). *Flowers of the Himalaya*. Oxford University Press, New Delhi, xxx + 580 pp.

Rao, P. N. (2000). Propecting plant aids in AIDS management. *Current Science*. 78(10):1181.

Rastogi, R.P. (Ed), (1991). *Compendium of Indian Medicinal Plants*. *Vol-2*. C.D.R.I., Lucknow & Publications and Information Directorate, New Delhi, 859 pp.

Singh, U., A.M. Wadhwani & B.M. Johri (1996). *Dictionary of Economic Plants in India*; I.C.A.R., New Delhi, 288 pp.

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