

THE GENUS *NECHAMANDRA* IN INDIA

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ABSTRACT

In all Indian floras *Nechamandra alternifolia*, a common aquatic herb of Hydrocharitaceae, is described under the genus *Lagarosiphon*. Some authors use the name *Lagarosiphon roxburghii*; others place it under *Lagarosiphon alternifolia*. The correct name of this plant is *Nechamandra alternifolia* (Roxb.) Thw. This note presents complete synonymy, detailed description and distribution in India.

In all Indian floras a very problematic plant of the Hydrocharitaceae is described under the genus *Lagarosiphon*. Hooker (1888), Prain (1903), Cooke (1907) and Duthie (1920) describe it under the name *Lagarosiphon roxburghii*; Haines (1924) and Fischer (1928) place it under *Lagarosiphon alternifolia* and this name has been followed by a number of later workers. Hutchinson (Families of Flowering Plants 2: 541, 1959) differentiates *Nechamandra* from *Lagarosiphon* as follows:

Male flowers with 3 fertile stamens, sometimes accompanied by staminodes; leaves alternate or verticillate	<i>Lagarosiphon</i>
Male flowers with 2 fertile stamens, unaccompanied by staminodes; leaves alternate	<i>Nechamandra</i>

Further, Hutchinson (l.c.) states that the genus *Lagarosiphon* is confined to Tropical and S. Africa, whereas *Nechamandra* occurs in S. E. Asia and N. E. Tropical Africa. A careful study of fresh specimens from various localities in India has revealed that the Indian specimens of this taxon show only 2 fertile stamens which are never accompanied by staminodes. Therefore, this taxon must come under the genus *Nechamandra*.

The genus *Nechamandra* was first described by Planchon in Ann. Sc. Nat. ser. 3, 11: 78, 1849, and under the genus he gave *Nechamandra roxburghii* as the only species from India. Since the earliest specific epithet for this taxon is *alternifolia* (under the genus *Vallisneria* by Roxburgh), the correct name, according to Art. 55 of the International Code of Botanical Nomenclature (1956), is *Nechamandra alternifolia*. This combination has already been made by Thwaites in Enum. Pl. Zeyl. 332, 1864.

The description given below is based on numerous fresh and preserved specimens examined from many parts of India; specimens of the Southern Circle Herbarium of Botanical Survey of India, Coimbatore, of Central National Herbarium, Sibpur and of Blatter Herbarium, Bombay have also been examined.

Nechamandra alternifolia (Roxb.) Thwaites, Enum. Pl. Zeyl. 332, 1864. *Vallisneria alternifolia* Roxb. [Hort. Beng. 71, 1814 nomen nudum, et] Pl. Corom. 2: t. 165, 1802 et Fl. Ind. 3: 750, 1832; Wight, Ic.

t. 11, 1838. *Nechamandra roxburghii* Planch. in Ann. Sc. Nat. ser. 3, 11: 78, 1849; Dalz. & Gibs. Bomb. Fl. 277, 1861. *Lagarosiphon roxburghii* (Planch.) Benth. in Benth. & Hook. f. Gen. Pl. 3: 451, 1883; Hook. f. Fl. Brit. Ind. 5: 659, 1888; Trim. Fl. Ceyl. 5: 124, 1893; Prain, Beng. Pl. 995, 1903; Cooke, Fl. Pres. Bomb. 2: 669, 1907; Duthie, Fl. U. Gang. Pl. 3: 174, 1920. *Lagarosiphon alternifolia* (Roxb.) Druce in Rep. Bot. Exch. Cl. Brit. Is. 1916: 630, 1917; Haines, Bot. Bih. Or. 853, 1924; Fischer in Gamble, Fl. Pres. Madr. 1396, 1928; Santapau in Rec. Bot. Surv. Ind. ed. 2, 16(1): 233, 1958.

Submerged, fresh-water, perennial herbs; stems up to 1 m. long, upper branches floating. Leaves alternate, 1.5-5.5 cm. long, 2-5 mm. wide, linear-lanceolate, gramineous, sessile, amplexicaul, acute, minutely serrulate, pellucid, striate; nerves 4-5, equal, parallel, without a prominent midrib. Flowers dioecious; male flowers minute, numerous and densely crowded in axillary, sessile, paired, ovoid, 2-fid spathes; perianth of outer whorl of 3 tepals, enclosing an inner whorl of 2 small tepals, arranged antero-posteriorly; stamens 2, divergent; anthers ovate, dehiscing transversely. Female flowers solitary, enclosed in a tubular spathe, which is axillary and single, bifid at apex, mostly covered by the bases of leaves; perianth-tube filiform, attenuated above into a neck; limb 3-partite, lobes spreading, orbicular; ovary inferior, ovate-lanceolate, gradually attenuated, slightly unequal-sided, 1-celled; ovules many, orthotropous, attached irregularly on the parietal placentae; stigmas 3, each cuneate, bilobed, finely papillose on the surface. Fruit an ovoid indehiscent utricle enclosed in the persistent spathe; seeds numerous, minute, ascending, oblong, scrobiculate.

Flowering and Fruiting: September to April.

Specimens Examined: WALLICH CATALOGUE: Herb. Wight 5046A (CAL); Herb. Hamilton 5046B (CAL). INDIA. ANDHRA PRADESH: Repalle, Guntur Dt., G. V. Narayana 16811 (MH); Narasapur, Medak Dt., K. M. Sebastine 6754 (MH); Pakhal Lake, Warangal Dt., K. M. Sebastine 11681 (MH); BENGAL: Vicramapore, C. B. Clarke 14156 (CAL); Amta, J. N. Nasker s.n. (CAL); Lower Bengal, Kurz s.n. (CAL); Bengal, Griffith s.n. (CAL); Bengal, J. D. Hooker & T. Thomson s.n. (CAL). MADHYA PRADESH: Kanker,

Bastar Dt., *K. Subramanyam* 7142 (MH); Chachai Falls, Rewa Dt., *K. M. Sebastine* 8812 & 8813 (MH); MADRAS STATE: Kille, S. Arcot Dt., *Raju & Jaganathan* 17824 (MH); Alagar Hills, Madurai Dt., *K. Subramanyam* 4295 & 4344 (MH); Lalgudi Road, Tiruchirapalli Dt., *K. M. Sebastine* 7776 (MH); Annamalainagar, S. Arcot Dt., *K. M. Sebastine* 5212 (MH); Kurumbur, Tirunelveli Dt., *D. Daniel* s.n. (MH); Nazareth, Tirunelveli Dt., *D. Daniel & J. Sakaram Rao* s.n. (MH); Tanjore, *Agricultural Demonstrator* s.n. (MH); MAHARASHTRA STATE: Bhidae Tank, Nagpur, *K. Subramanyam* 4554 (MH); Malad, *G. L. Shah* 10042 & 10043 (BLAT); Kandivli, *R. R. Fernandez* R2112 (BLAT); Khandala, *H. Santapau* 8112 (BLAT); Kurul Pong, *Moses Ezekiel* 30294 (BLAT); Lonavala, *G. M. Woodrow* s.n. (BLAT). NEPAL. Parsar, *O. Polunin* et al. 5881 (CAL.). CEYLON. no locality, *Thwaites* CP3176 (CAL.).

Distribution: Throughout India and Ceylon in ponds, tanks and lakes at low altitudes.

Note: According to Hartog (in Fl. Males. 1, 5: 390, 1957), *Nechamandra alternifolia* does not occur in Malaysia. All the specimens from Assam, Burma and Malaya kept in Herb. CAL, under the name *Lagarosiphon roxburghii*, on careful examination proved to be *Blyxa japonica* (Miq.) Maxim. This restricts the distribution of *Nechamandra alternifolia* to India and Ceylon. *Nechamandra* can be easily distinguished from *Blyxa* by the former having leaves which do not show a prominent midrib but possess 4-5 equal, parallel nerves and by the female spathe which is very short and not prominently visible outside the leaf-bases, and also by the fruit which is ovoid (and not elongated as is the case in *Blyxa*).

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