

## LENTIBULARIACEAE

**Utricularia caerulea** L. [= *Utricularia nivea* Vahl; *U. racemosa* Wall. ex Walp.; *U. filicaulis* Wall. ex A. DC.; *U. squamosa* Benj.; *U. paucifolia* Benj.; *U. purpurea* Willd. ex Benj.; *U. racemosa* Wall. ex Walp. var. *filicaulis* (Wall. ex A. DC.) C.B. Clarke; *U. caerulea* L. var. *filicaulis* (Wall. ex A. DC.) Haines; *U. sampathii* Sub. & Yogan.]

**Description:** Herbs; rhizoids up to 3 cm long, glandular, rarely branched; stolons up to 2 cm long, 0.1-0.3 mm thick, sparsely glandular, branches hyaline. Foliar organs 4-8 x 1-1.3 mm, spatulate, rosulate, 1-6 per node on stolons, 1-nerved, rounded to obtuse at apex. Traps 1-2 mm long, ovoid, on vegetative organs; stalk short; mouth terminal with a rim of glandular hairs; upper lip extended into a beak-shaped appendage, glandular, Racemes 3.5-40 cm long, 0.5-1 mm thick, simple or rarely branched, terete or flattened, glabrous; flowers clustered at apex or lax; scales 1.5-4 x 0.7-1 mm, medifixed, elliptic to



**Utricularia caerulea** L.

Courtesy: N.V. Malpure

rhomboid, 1-nerved; bracts 1.5-5 mm long, medifixed, elliptic to rhomboid, sparsely papillose without, 1-nerved; bracteoles 1-2 mm long, linear, basisolute, papillose; flowers up to 6 mm long; pedicels up to 2 x 0.4 mm, erect, terete, often recurved in fruit, papillose. Calyx-lobes subequal, hooded, papillose; upper lobe 2-2.5 x 1.5-2.5 mm, broadly ovate to orbicular, obtuse or rarely acute at apex. Corolla purple, pink, rose, blue, violet, white or cream-coloured, papillose; upper lip 2-4 x 1.5-1.8 mm, oblong to rarely deltoid, constricted at middle with two horn like projections on ventral surface, ciliate at lower margins,

truncate, notched or emarginate at apex; lower lip 1.5-5 x 2-4.5 mm, semi-orbicular to broadly ovate, yellow in throat, gibbous at base, rounded or shallowly 3-lobed at apex; spur 3-5 mm long, longer than lower lip, horizontally projected, often curved upwards, acute or notched at apex. Stamens c 1 mm long; filaments strap-shaped, curved, 1-nerved; anther thecae distinct. Pistil c 1 mm long; ovary ovoid, attached to upper calyx-lobe at base; style short; stigma 2-lipped, lower semi-orbicular and hairy, upper filiform and glabrous. Capsules 1.5-2 mm across, subglobose to obliquely ovoid, papillose, dehisce vertically by a ventral slit; placenta c 1 mm across, subglobose, pitted. Seeds 0.2-0.3 mm long, ovoid, ellipsoid to obovoid; hilum terminal; testa reticulate, cells elongate.

**Fl. & Fr.:** August-December along West Coast, Northeast India and West Bengal; August-April in East Coast and Central India with a peak during December-February.

**Habitat:** On wet or marshy open sandy soil, mud and gravelly areas, under both seasonal and perennial conditions; from sea level upwards.

**Chromosomes:**  $n = 20$  (Kausik, 1938; Subramanyam & Kamble, 1968).

**Pollen:** 3- or 4-colporate, 32-34 x 20-22  $\mu$  and 32-35 x 27-29  $\mu$  (as *U. nivea*) (Thanikaimoni, 1966); 3-colporate, 28-30 x 26-28  $\mu$  (Subramanyam & Yoganarasimhan, 1981); 3-colporate, 19 x 32  $\mu$  (Taylor, 1989).

**Distribution: India** - Distributed in Eastern and Northeastern, Central and Southern states: Uttar Pradesh, Bihar, West Bengal, Meghalaya, Odisha, Madhya Pradesh, Gujarat, Goa & Dadra, Maharashtra, Andhra Pradesh, Tamil Nadu, Karnataka and Kerala. Madagascar, Sri Lanka, India to Japan, Malesia and Australia.

**Notes:** *Utricularia caerulea* L. was much discussed regarding its taxonomy, nomenclature and typification. Oliv. (*l.c.*) and Clarke (*l.c.*) applied the name to the Koenig's specimen in LINN (= *U. graminifolia* Vahl). Bhattacharyya (1976) applied it to the "Nelipu" of Van Rheedee (= *V. reticulata* Smith). Basak (1979) clarified the doubts regarding the typification of *U. caerulea* and followed Smith's (1805) lectotypification of Hermann 23 (BM). Recently, Bhattacharyya (1986) proposed the name for rejection, as he felt it was most confusing. Hence the name *U. caerulea* L. is followed in this treatment.

Critical examination of the type material and analysis of protologue of the recently described *Utricularia sampathii* Sub. & Yogan. show that it is only a variable form of *U. caerulea* L.

**References:**

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Taylor, P. 1989. The genus *Utricularia* – a taxonomic monograph. *Kew Bull. Add. Ser.* 14: 1-724.

Thanikaimoni, G. 1966. Pollen morphology of the genus *Utricularia*. *Pollen et Spores* 8: 265-284.