

**CYANANTHUS MACROCALYX FRANCH SSP. SPATHULIFOLIUS
(NANN F.) SHRESTHA (CAMPANULACEAE)- A LESS
KNOWN PLANT AND ITS CONSERVATION**

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Abstract

A less known plants viz. *Cyananthus macrocalyx* Franch ssp. *spathulifolius* (Nannf.) Shrestha is described with discussion on its rarity and conservation status in India. A type specimen along with recent collection details are provided for easier identification.

Keywords: *Cyananthus macrocalyx*; Conservation; Arunachal Pradesh

INTRODUCTION

Cyananthus Wallich ex Benth in Royle is one of the herbaceous genera of the family Campanulaceae, with about 23 species (27 taxa) distributed mainly in Himalaya and the Hengduan Mountains. Out of this 17 species are found in China and among these nine species are endemic (Hong et al., 1983; Hong et al., 2011). In India, the genus is represented by 11 taxa of which 07 taxa occurs in NE India (Hooker, 1881; Shrestha, 1994 and 1997; Giri et al., 2008). It is evident that *Cyananthus* is one of the most primitive genera of Campanulaceae. According to Shrestha (1997) SW china (most probably Yunnan) is the centre of origin of *Cyananthus*, considering the occurrence of as many as 20 species and many endemic taxa. Genus has tubula or funnel shaped flower and anthers are imperfectly connate around style. Due to this unique character it was originally placed in Polymoniaceae. The Genus was transferred by Agardh (1885) as a monotypic genus of the family Cynanthaceae and later placed in family Campanulaceae and now it is worldwide accepted.

Cyananthus macrocalyx Franch ssp. *spathulifolius* is one of the interesting and rare

taxa of the species described from China. Originally taxon was described by Nannf. in 1922 *Cyananthus spathulifolius* Nannf. on the basis of plant collected by Smith from Sichuan provinces, China. Later it was collected by D. Cummins and R. Cooper from Sikkim and F. K. Ward from Arunachal Pradesh (earlier NEFA), taxon is also recorded from different part of the world viz. Nepal, Bhutan and Myanmar. Shrestha (1997) had made combinatio nova of species *Cyananthus spathulifolius* Nannf. to the *Cyananthus macrocalyx* Franch ssp. *spathulifolius* (Nannf.) Shrestha. However, in recent past this taxon could be collected from Yakali Meechi high altitude top, Sawa block, East Kameng district, Arunachal Pradesh. Scrutiny of literatures and Herbarium studies reveals that this taxon has no representation in ARUN and ASSAM herbaria. During the plant collection tour to East kameng district this taxon was collected and identified as *Cyananthus macrocalyx* ssp. *spathulifolius*. As only few individuals were observed in high altitude of Yakali Meechi area and earlier it was known by collection from Poshing la, West Kameng district by F.K. Ward reveals that the population of this taxon is less in NE India. As per the availability of

published floristic documents for the state it was not recorded from Arunachal Pradesh. This taxon needs immediate in situ conservation. Considering the rarity of this taxon, more and more efforts need to be put to locate additional populations of it.

TAXONOMIC DESCRIPTION

Cyananthus macrocalyx Franch ssp. *spathulifolius* (Nannf.) Shrestha in Acta Phytotax. Sin. 35(5), 396-433. *Cyananthus spathulifolius* Nannf. in Acta Horti Gotoburg, 5, 30. 1929.

Holotype: Sichuan China, *Smith 3042*, 4000 m, 1922 (E!)

Description: A perennial decumbent herb with woody caudex. Plant upto 20 cm long; often covered with small scales at base; whole plant clothed with yellowish-white soft hairs; unbranched; branched directly coming from caudex. Leaves dense, petioles 2-3 mm long, obovate-spathulate, base of lamina winged and ciliate; margin crenulate; 0.3-0.6x 0.4-0.6 cm; closely revolute. Flower pedunculate, peduncle 0.7-1.2 cm long, ternial or axillary, solitary; peduncle softly whitish brown hairs. Calyx tubular 1-1.2 cm long, greenish brown, nearly glabrous outside or minutely hairy at apex, lobes to one third of its length. Corolla yellow and dark brown patched outside, cylindrical, 1.8-2.5 cm long, divided up to the middle, yellowish white densely hairy at throat; lobes oblong. [Fig 1- *Cyananthus macrocalyx* Franch ssp. *spathulifolius* picture and Fig-2- Holotype: *Cyananthus macrocalyx* Franch ssp. *spathulifolius*; Sichuan China, *Smith 3042*, 4000 m, 1922 (E!)]

Flowering: July-September.

Specimen Examined: Arunachal Pradesh: Posing La, 1939. *F. K. Ward 13959* (BM);

Yakali Meechi, East Kameng, 25.09.2016, N-27°50'18.2" E-92°56'29.3" 3450 m; *Umeshkumar Tiwari 47667* (ARUN!).

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Fig. 1: *Cyananthus macrocalyx* Franch ssp. *spathulifolius* picture (Yakali Meechi East Kameng, 25.09.2016, Umeshkumar Tiwari 47667 (ARUN!))



Fig. 2: Holotype: *Cyananthus macrocalyx* Franch ssp. *spathulifolius*; Sichuan China, Smith 3042, 4000m, 1922 (E!) Source: Royal Botanic Garden, Edinburgh Herbaria