Strobilanthes sunhangii (Acanthaceae) – a new addition to the flora of India from Arunachal Pradesh

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Abstract: Strobilanthes sunhangii T.Deng, J.T.Chen & Y.F.Deng is reported as an addition to the flora of India from Pakke Kessang district of Arunachal Pradesh with a detailed description and photo plate for the precise identification.

Keywords: Acanthaceae, China, New Record, Northeast, Strobilanthes divaricata, Tibet.

Introduction

The genus Strobilanthes Blume, consisting of approximately 450 species, is the second largest genus in the family Acanthaceae followed by Justicia L. (Wood & Scotland, 2009; Hu et al., 2011; POWO, 2023), mainly distributed in the tropical parts of Asia, from China, Indomalaya to Melanesia (Mabberley, 2017). In India, there are 167 species of Strobilanthes distributed in the Western Ghats and the Himalayas, with 41 species recorded from Arunachal Pradesh (Arisdason et al., 2020). Reproductive parts play a key role in the species identification, but due to the infrequent flowering and monocarpic nature of the genus, species identification is difficult and thus many Strobilanthes species are still kept undescribed.

During expeditions in the Pakke Kessang district of Arunachal Pradesh in August 2021 and July 2022, the first author found a population of Strobilanthes plants with about 40–60 mature individuals. After observations of wild living plants, herbarium specimens, laboratory studies and consultation of the relevant literature (Blume, 1826; Clarke, 1885; Wood, 1994, 2001, 2014; Carine & Scotland, 2002; Deng et al., 2006; Hu et al., 2011; Adhikari, 2018; Augustine, 2018; Thomas et al., 2019, Chen et al., 2020) the plants were identified as S. sunhangii T.Deng, J.T.Chen & Y.F.Deng, a species recently described by Chen et al. (2020) from Medog county, Tibet, China. Further, it was found that this species has so far not been reported from India (Anderson, 1867; Arisdason et al., 2020) and hence, a detailed description, distribution and color photographs are provided.

Taxonomic Treatment


Type: CHINA, Tibet, Medog county, Beibeng town, N 29.23319, E 95.17693, c. 1470 m, 05.10.2018, H. Sun, T . Deng & Z.M. Li Sunhang 19964 (holo KUN [KUN1345286 digital image!]; iso KUN [KUN1345287!, KUN1345288 digital images!]).

Fig. 1

Undershubs, 1–2 m high, profusely branched. Stems sub–terete, glabrous with swollen internodes. Leaves opposite, anisophyllous, petioles 3–6 mm long, sulcate, glabrous; blades ovate to lanceolate-ovate, larger ones 4.5–10.5 × 2.1–3.5 cm long, smaller ones 3.2–8.5 × 0.8–1.2, base rounded to narrowly cuneate, slightly oblique, apex acuminate to narrowly caudate, margins serrulate, both surfaces glabrous; secondary veins 3–6 on each side of midvein and prominent on both surfaces.

Inflorescences of axillary spikes, simple, slender, 6–21 cm long, rachis glabrous; bracts linear, 2–3.5 mm long, caducous, bracteoles not seen. Flowers 1.2–3.5 cm apart on rachis. Calyx 0.8–1.2 × 0.1–0.2 cm, long, glabrous, 5-lobed to middle; lobes linear-lanceolate, finely acuminate at apex, equal. Corolla 2.6–3.2 cm long, campanulate, outside and lobes pinkish-white, inside purplish-pink, outside...
glabrous, finely pubescent inside at base of corolla; were lower lip forms and continues till second bend; tube cylindrical with c. 90° twist at base and middle of corolla; lobes broadly elliptic, emarginate at apex. Stamens 4, didynamous, included; united part of filaments dense villous at base, glabrous on middle, upper and margin; shorter pair c. 3 mm long; longer pair c. 6 mm long; anther thecae oblong, c. 3 mm long. Ovary c. 4.5 mm long, glabrous; style c. 1.8 cm long, with sparse gland-tipped trichomes. Fruits and seeds not seen.

Flowering & fruiting: Flowering from June to October, fruiting not seen.

Habitat: The plants grow in tropical semi-evergreen forest patches at an elevation of 1300–1600 m.

Distribution: China, and now in India.

Specimens examined: INDIA, Arunachal Pradesh, Pakke Kessang district, Pakke WLS, N 27°09′28″, E 93°12′55″; Muri, N 27°09′47″, E 93°14′29″, 30.07.2022. K. Chowlu 41103 (ARUN!); Upper Subansiri district, Muri, near Daporijo, Kumar Ambrish 17238 (ARUN!).

Conservation Status: Strobilantes sunhangii is so far known from two locations in India other than its type locality. The Extent of Occurrence (EOO) of the species is estimated to be less than 5,000 km² (c. 3585.820 km²) with an Area of Occupancy (AOO) of 12 km² (AOO based on IUCN standard cell width of 2 km²). Due to various anthropogenic activities and natural calamities, habitat degradation was observed in the localities. Based on available data, the species is assigned to the category Endangered (EN B1ab(iii) & B2ab(iii)) according to the IUCN Criteria (IUCN 2012, 2022).

Notes: The present collection exhibits some minor variations in calyx and stamen characters compared to those for S. sunhangii reported by Chen et al. (2020). In the present material, the calyx is 8–12 mm long and linear-lanceolate (vs. 7–8 mm long and ovate), the filaments of the shorter pair are c. 3 mm long and those of the longer pair c. 6 mm long (vs. shorter pair c. 2 mm, longer pair c. 4 mm). The calyx characters of this taxon are matching well with those of S. divaricata (Nees) T. Anderson but Chen’s specimens are showing variations. While consulting ARUN, the second author (AS) found the collection Kumar Ambrish 17238 (Ambrish, 2013) identified as S. divaricata. On close examination, however, the authors identified it as S. sunhangii and both the specimens collected by KC and KA showing the same variations could be due to ecological or phytogeographical factors.

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Literature Cited


