Additions to the orchid flora of Peninsular India

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Abstract: Oberonia maxima C.S.P.Parish ex Hook.f., and Thrixspermum formosanum (Hayata) Schltr., so far known from northeast India, are reported here for the first time from Tamil Nadu, Peninsular India. Detailed descriptions and photographs are provided for easy identification.

Keywords: New Record, Oberonia maxima, Orchidaceae, Tamil Nadu, Thrixspermum formosanum.

Introduction

During recent field explorations in the forests of Mukurthi National Park, Nilgiri Biosphere Reserve, Tamil Nadu, the authors have collected interesting specimens belonging to the genera Oberonia and Thrixspermum of Orchidaceae. The genus Oberonia Lindl. is represented by about 350 species (Prasad et al., 2018; Govaerts et al., 2019) while Thrixspermum Lour by c. 151 species (The Plant List, 2013). Sixty nine species of Oberonia have been reported from India, mainly found in Peninsular India, north-eastern states, Andaman and Nicobar Islands, central India and Western Himalaya (Ansari & Balakrishnan, 1990; Kumar & Manilal, 1994; Misra, 2007; Narayanan et al., 2010; Chowlu et al., 2015; Chowlu & Rab, 2017; Prasad et al., 2018). Thrixspermum is represented by about 16 species in India (Misra, 2007; Maina et al., 1998; Mao et al., 2011; Gogoi, 2011; Gogoi & Yonzone, 2015), of which 4 are reported from Peninsular India (Misra, 2007).

Critical examination of the collected specimens and perusal of the relevant literature (Deori & Hajra, 1975; Liu & Su, 1978; Ansari & Balakrishnan, 1990; Hynniewta et al., 2000; Kumar & Kumar, 2005; Chen & Wood, 2009; Gogoi & Yonzone, 2015; Geiger, 2016) revealed their identity as Oberonia maxima C.S.P.Parish ex Hook.f. and Thrixspermum formosanum (Hayata) Schltr. respectively. They are reported here as new additions to the flora of Peninsular India.


Epiphytic, pendulous, caespitose herbs. Roots many, pale brownish-white, 2.4–10.5 cm long. Leaves 4–6, pale green, fleshy, distichous, 7.5–15.6 × 1.1–1.6 cm, ensiform, articulate at base, acute at apex, Inflorescence terminal, longer than the leaves, densely many flowered, decurved, compressed and adnate to the reduced uppermost leaf, c. 16.9 cm long, scape c. 4.2 cm long, rachis c. 12.7 cm long. Flowers c. 3.5 mm long, greenish-yellow, sub-sessile or with a short pedicel, closely adpressed to the rachis; floral bracts longer than the pedicel plus ovary, c. 2.3 × 1.2 mm, oblong,
Fig. 1. a & b. *Oberonia maxima* C.S.P.Parish ex Hook.f. a. Habit; b. Inflorescence. c-e. *Thrixspermum formosanum* (Hayata) Schltr. c. Habit; d. Flower: lip showing callus; e. Flower – Closer view.
laciniate towards apex, gland-dotted, greenish. Sepals reflexed, gland-dotted, imbricate, glabrous; dorsal sepal c. 1.4 × 1.1 mm, ovate, obtuse at apex, entire, erect when young; lateral sepals c. 1.4 × 1.1 mm, ovate, acute at apex, irregularly dentate at apices. Lateral petals c. 1.3 × 1.0 mm, narrowly ovate, obtuse at apex, orbicular, concave, crenulate at margins, gland-dotted; column c. 1 mm long, pale yellow; pollinia 2, obovate. Capsules 4–5 mm long, ellipsoid, shortly stalked, ridged.

Flowering & fruiting: September–November.

Ecology: This species was found growing on moss covered tree trunks in evergreen forests, in association with Oberonia verticillata Wight and O. wightiana Lindl., at elevations between 2000 and 2300 m.

Distribution: India, Borneo, Laos, Myanmar, Sabah, South and SE China, Thailand and Vietnam.


Conservation status: Less than 100 mature individuals were noticed during the field survey at Mukurthi National Park. Extensive field study in similar habitats in the adjacent localities is required to determine its exact IUCN threat status. Live specimens brought from the study area are being multiplied and maintained as germplasm collections at NOEG, BSI, SRC, Yercaud.


Small, epiphytic herbs, 6–9 cm tall. Roots 3.4–5.3 cm length, 0.2–0.3 cm in diam., radicosus, white. Stems ascending, 1.3–2.2 × 0.4–0.6 cm. Leaves distichous, 1.3–4.6 × 0.3–0.5 cm, linear-lanceolate, acute, jointed at base, thick and fleshy, midrib grooved ventrally, convex dorsally, green, spotted with purple. Inflorescence axillary racemes at lower nodes, shorter than leaves; peduncle 2.5 cm long, suberect, slender, straight, with 2 sterile bracts; rachis short, 0.3 cm long; green, thickened, few flowered, opening successively, lasting half a day; floral bracts few, c. 0.1 cm long, broadly ovate–triangular, acute at apex, green, persistent on rachis. Flowers c. 1.3 × 1.0 cm, fragrant; pedicel plus ovary 0.5 cm long, greenish brown. Sepals subsimilar, gland dotted; dorsal sepal 0.5–0.6 × 0.2–0.3 cm, oblong, obtuse; lateral sepals 0.5–0.6 × 0.2–0.4 cm, obliquely obovate, obtuse at apex. Lateral petals 0.6–0.7 × 0.1–0.2 cm, falcate-oblong, obtuse; lip white with brown stripes, saccate at base, 3-lobed; lateral lobes erect, 0.2–0.3 × 0.3–0.4 cm, subovate, obtuse; mid-lobe inconspicuous, disc pubescent; callus running from base to mid-lobe, apex of callus protruding, notched below mid-lobe; sac 0.4–0.6 cm long, cylindric, shallowly bilobed at base; column short, c. 0.15 cm long, foot c. 0.2 cm long, white. Anther cap sub-orbicular, white; pollinia 4, in two nearly equal pairs, attached by a short and broad stipe to a solitary viscidium. Capsules 4.5–7.3 × 0.3–0.4 cm, linear, cylindric.

Flowering & fruiting: April–May.

Habitat: A rare epiphytic orchid found growing on moss covered tree trunks in evergreen forest at elevations between 1950 and 2300 m.

Distribution: India, China, Taiwan and Vietnam.


Conservation status: Less than 25 mature individuals were noticed during the field survey at Mukurthi National Park. Extensive field study in similar habitats in the adjacent localities is required to determine its exact IUCN threat status. Live specimens brought from the study area are being multiplied and maintained as germplasm collections at NOEG, BSI, SRC, Yercaud.
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Literature Cited


