A New Species of *Zeuxine* Lindl. (Orchidaceae) from India

Avishek Bhattacharjee[1*] and C. M. Sabapathy[2]

1. *Central National Herbarium, Botanical Survey of India, A.J.C.B. Indian Botanic Garden, Howrah - 711 103, India. Email: avibsi@rediffmail.com*
2. *Central National Herbarium, Botanical Survey of India, A.J.C.B. Indian Botanic Garden, Howrah - 711 103, India. Email: cm_sabha@yahoo.co.in*

* *Corresponding author.*

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ABSTRACT: *Zeuxine chowdherii* Av. Bhattacharjee & C.M. Sabapathy, a new species of *Zeuxine* Lindl. (Orchidaceae) is being described from Tamil Nadu, India.

KEY WORDS: *Zeuxine, Zeuxine chowdherii,* Orchidaceae, new species, Tamil Nadu, India.

INTRODUCTION

The genus *Zeuxine* Lindl. is represented by about 70 species (Mabberley, 2008) in the World of which 18 species (including the new species described here) has been estimated from India during the present study. During the revisionary studies on some selected taxa of Orchidaceae for 'Flora of India', the second author (C.M. Sabapathy) collected some curious specimens of *Zeuxine* from Velliangiri Hills of Western Ghats, Coimbatore District, Tamil Nadu. The critical studies of these specimens and scrutiny of the available literature revealed it to be a hitherto unknown species of *Zeuxine*, which is described in the present paper as *Zeuxine chowdherii* Av. Bhattacharjee & C.M. Sabapathy.

TAXONOMIC TREATMENT

Zeuxine chowdherii Av. Bhattacharjee & C.M. Sabapathy, *sp. nov*. Figs. 1 & 2

Type: India, Tamil Nadu, Coimbatore District, Velliangiri Hills, near 'Sita Vanam', 22.05.2006, *C.M. Sabapathy* 46023 (holotype: CAL); India, Tamil Nadu, Coimbatore District, Velliangiri Hills, near 'Sita Vanam', 18.06.2008, *C.M. Sabapathy* 46024 (paratype: CAL, spirit).

Z. chowdherii a *Z. longilabris* praecipue lateralibus sepalis ovato-lanceolatis (nec ovato-oblongis vel lesiniformibus), late ellipticis petalis cum rotundato apice (nec oblongo-falcatis cum apice subacuto sive obtuso), et epichili integrilobulis (nec serratilobulis) differt.

Terrestrial herbs, upto 16 cm tall, rhizomatous. Rhizomes 3-5 cm long, 2-4 mm thick, dull pinkish-brown, creeping, rooting at nodes. Roots 1-3 cm long, 2-4 mm thick, yellowish-brown, fleshy, usually one sided (on lower side of rhizome), with distinct root-hairs. Stem 3-4 cm long, 1.5-3 mm thick, pinkish-red to greenish-pink, decumbent at base, erect above, unbranched, glabrous, with few membranous sheaths formed by withered leaf-bases. Leaves 2-3, withered at flowering, 0.8-2.2 cm long, glabrous; petiole 2-8 mm long, sheathing at base; lamina 0.5-1.5 × 0.3-1 cm, ovate to ovate-lanceolate, base obtuse, apex acute, 3-veined. Inflorescence terminal raceme, laxly 2-5 flowered, pale yellowish-brown, pubescent; peduncle 4-6 cm long, with 2 sheathing bracts, sheathing bracts 7-12 × 3-5 mm, lanceolate, apex acuminate, pubescent, 3-veined; rachis 4-6 cm long. Floral bracts 0.6-1 cm long, narrowly lanceolate, apex acuminate, pubescent, 3-veined. Flowers 1-1.5 cm long (including ovary), resupinate. Sepals free, pinkish-red with whitish tinge at apex, pubescent, 1-veined; dorsal sepal 5.5-7 × 3.5-4 mm, broadly ovate, concave, apex obtuse; lateral sepals 5-6.5 × 2.5-3 mm, ovate-lanceolate, apex sub-acute. Petals 5.5-6.5 × 2.8-3.2 mm, broadly elliptic, oblique, apex rounded, white, with 1 complete and 2 incomplete veins. Labellum 1.2-1.4 cm long, white, 3-lobed; hypochile, c 1.5 × 2 mm, shortly saccate at base, with 2 appendages (1 on each side), appendages c 0.4 mm long, entire, curved; mesochile 2.5-3 × 1.5-2 mm, with infolded lateral margins; epichile 2-lobed, lobules 7-9.5 × 3-4 mm, falcate, more or less parallel to mesochile, apex obtuse to rounded, margin entire. Column 2.5-3 mm long, with 2 frontal appendages (1 on each side) near base of rostellum, appendages c 0.6 × 0.4 mm, rectangular; rostellum c 1.5 mm long, dull white, remnant bifid, apex obtuse, slightly curved. Pollinarium c 3 mm long; pollinia 2, c 1 mm long, light yellow to dull white, sectile, bifid; caudicles c 0.4 mm long, tegula 1.5 - 2 mm long, transparent with yellowish tinge, viscidial end cup-shaped; viscidium c 0.5 × 0.25 mm, oblong-elliptic, dull white, thick. Stigma 2-lobed, sub-orbicular, well separated, mustered yellow, laterally placed on column above base of rostellum. Ovary

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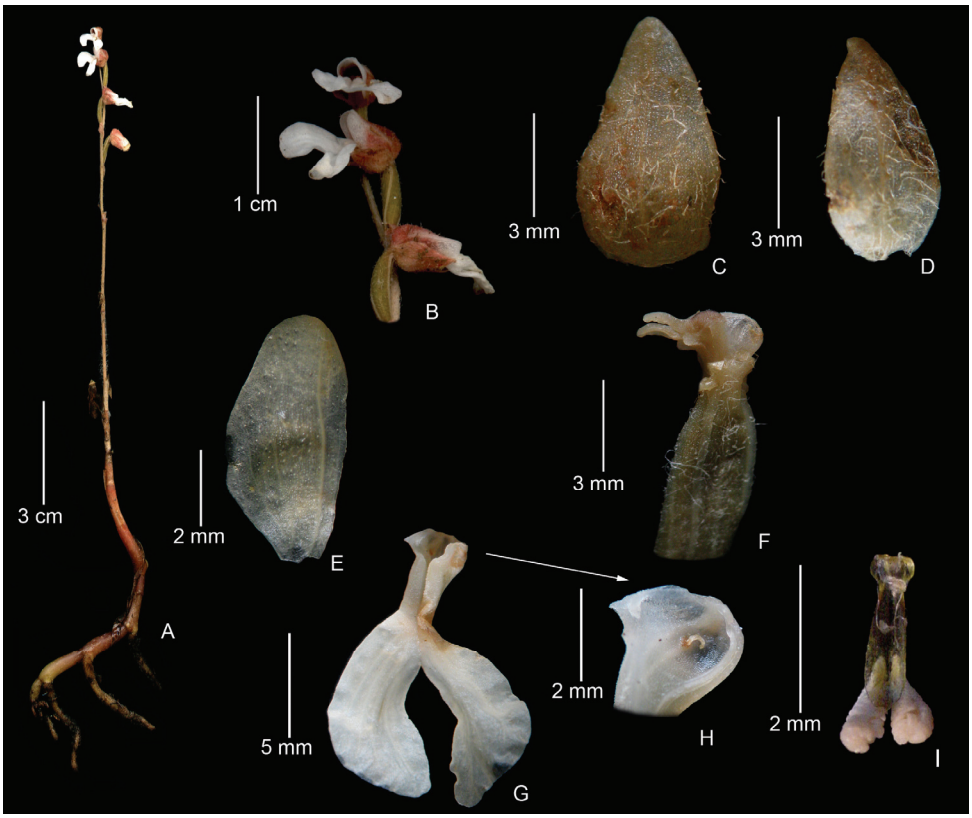


Fig. 1. *Zeuxine chowdherii* Av. Bhattacharjee & C.M. Sabapathy. A: Habit. B: Portion of inflorescence. C: Dorsal sepal (outer surface). D: Lateral sepal (outer surface). E: Petal. F: Column with portion of ovary. G: Labellum. H: Portion of hypochile with an appendage. I: Pollinarium. [*C.M. Sabapathy* 46023 (CAL); C – I dissected from flowers kept in 70% alcohol].

including pedicel 6-10 × 1.8-2.5 mm, terete, pale green, twisted, pubescent.

Flowering and Fruiting: May – July.

Habitat: The species is found growing on moist humus-rich forest floor at about 1200 m elevation.

Distribution: INDIA: Tamil Nadu.

Etymology: The new species is named in honour of Dr. H.J. Chowdhery, an eminent Orchidologist of Botanical Survey of India for his valuable contributions to Indian orchidology.

Z. chowdherii shows close resemblance with *Z. longilabris* (Lindl.) Benth. ex Hook.f. but can be easily distinguished (Fig. 2) mainly in having ovate-lanceolate lateral sepals; broadly elliptic petals with rounded apex and epichile lobules with entire margins as compared to ovate-oblong to awl-shaped lateral sepals; oblong-falcate petals with sub-acute to obtuse apex and serrated epichile margins of the later. Although the degree of serration of epichile margin varies in *Z. longilabris,* but it is never entire. Further, the colour of sepals of *Z. chowdherii* is pinkish-red whereas in *Z. longilabris* it varies from greenish-white to greenish-brown.

Z. chowdherii is also having some similarities with *Z. grandis* Seidenf. but can be distinguished from it in the shape of epichile lobules, shape of petals, size of the appendages inside hypochile and characters of columnar appendages. But the features of column and pollinarium of the new species are more close to that of *Z. longilabris* than *Z. grandis*. Sathish Kumar and Manilal (2004) provided sketches of flowers (without any details of column and pollinarium) and labellum of *'Zeuxine sp. nov.'* collected from Wayanad, Kerala by Theuerkauf but not provided any specific epithet, Latin diagnosis, description and type as they merely doubted it as a new species. However, the illustration provided for *'Zeuxine sp. nov.'* by Sathish Kumar and Manilal (2004) shows close resemblance with *Z. chowdherii*.

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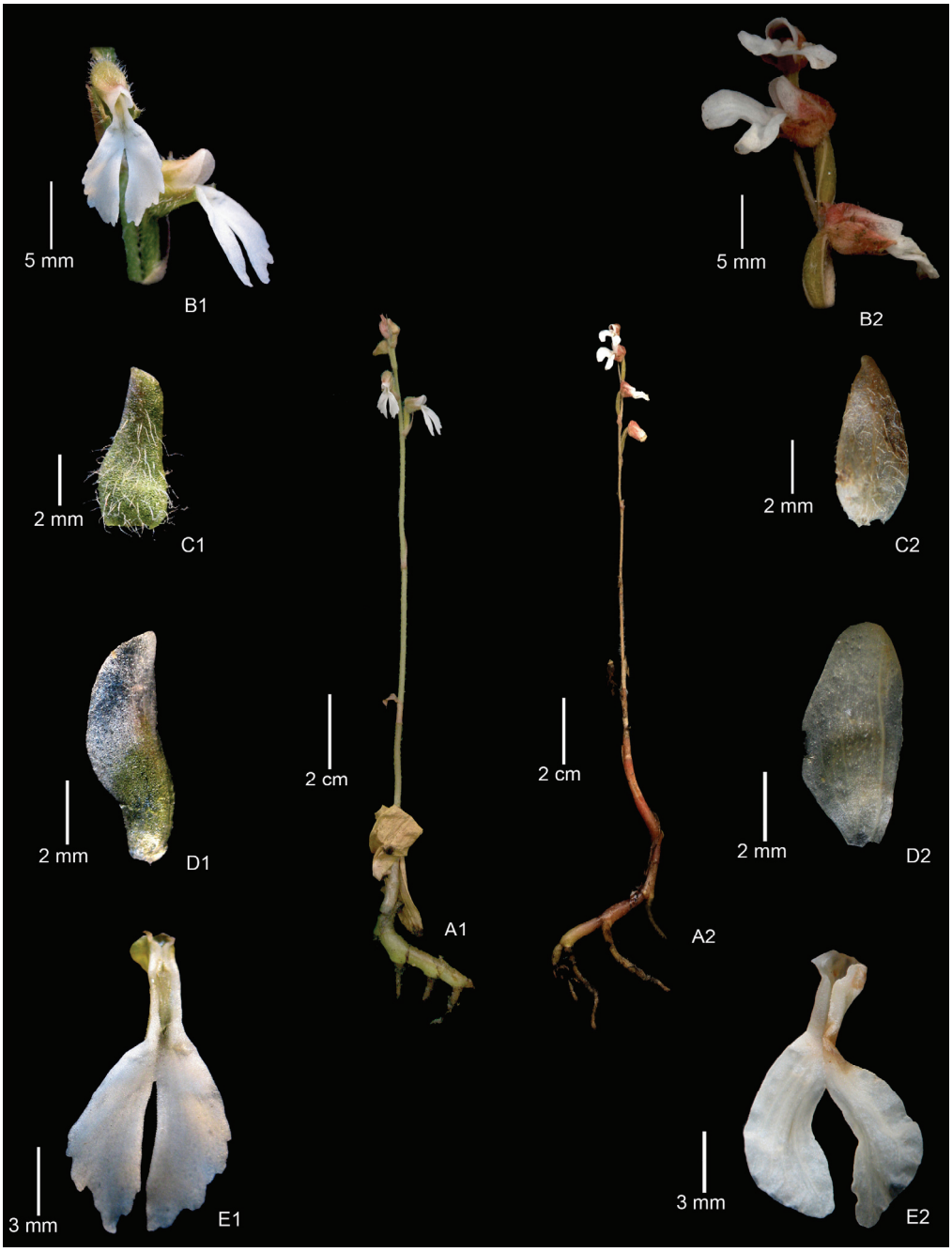


Fig. 2. *Zeuxine longilabris* (Lindl.) Benth. ex Hook.f. A1: Habit. B: Portion of inflorescence. C1: Lateral sepal (outer surface). D1: Petal. E1: Labellum; [*A. Bhattacharjee* 38143 (CAL)]. *Zeuxine chowdherii* Av. Bhattacharjee & C.M. Sabapathy. A2: Habit. B2: Portion of inflorescence. C2: Lateral sepal (outer surface). D2: Petal. E2: Labellum; [*C.M. Sabapathy* 46023 (CAL)].

Lakshminarasimhan, former IBLO, Kew for sending image of the holotype of *Z. longilabris* and to Dr. Olof Ryding, Botanical Museum, Copenhagen for sending image of the holotype (spirit) as well as photograph of a crude illustration of *Z. grandis* drawn by Dr. Seidenfaden.

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印度蘭科線柱蘭屬一新種

Avishek Bhattacharjee[1*] and C. M. Sabapathy[2]

1. Central National Herbarium, Botanical Survey of India, A.J.C.B. Indian Botanic Garden, Howrah - 711 103, India. Email: avibsi@rediffmail.com
2. Central National Herbarium, Botanical Survey of India, A.J.C.B. Indian Botanic Garden, Howrah - 711 103, India. Email: cm_sabha@yahoo.co.in
** Corresponding author.*

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摘要：本文描述來自印度 Tamil Nadu 地區之 *Zeuxine chowdherii* Av. Bhattacharjee & C. M. Sabapathy 一種線柱蘭屬的新種植物。

關鍵詞：線柱蘭屬、*Zeuxine chowdherii*、蘭科、新種、Tamil Nadu、印度。

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