



NOTE

***Zeuxine grandis* Seidenf. (Orchidaceae) - an Addition to the Orchid Flora of India**

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ABSTRACT: *Zeuxine grandis* Seidenf., is being reported for the first time from India. We provide line drawing and color photo of specimen of *Z. grandis* in support of our treatment and to facilitate identification of the species.

KEY WORDS: *Zeuxine grandis*, Orchidaceae, new report, India.

INTRODUCTION

The genus *Zeuxine* Lindl. (Orchidaceae) is represented by about 70 species (Pridgeon et al., 2003; Mabberley, 2008) from World and 19 species (Misra, 2007) from India. Robert Pantling received some interesting specimens of this genus collected by Davies from ‘Andamans’, which Davies doubtfully identified as species of *Hetaeria* Blume. However, Pantling labeled Davies’s specimens as ‘*Zeuxine daviesii* King & Pantling’ and mentioned it as a ‘new species’ (not published) on a herbarium sheet (*Davies s.n.*, Acc. no 459477) presently preserved at CAL. He also drew some excellent illustrations of dissected floral parts of ‘*Zeuxine daviesii*’ on the herbarium sheet itself (Fig. 1A). While going through the specimens belonging to the family Orchidaceae at CAL in connection with the revisionary study of the subtribe Goodyerinae Klotzsch (Orchidaceae) for ‘Flora of India’, these specimens (*Davies s.n.*; Acc. no. 459477, 464565, 464566, 464567 and 464568) were located. After critical examination and study these specimens were identified as *Zeuxine grandis* Seidenf., hitherto unknown orchid species from India.

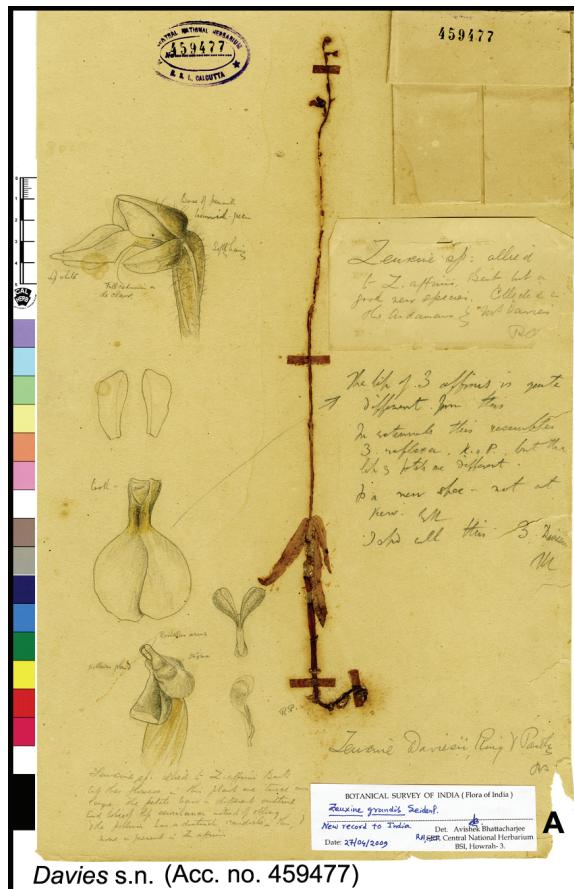
TAXONOMIC TREATMENT

***Zeuxine grandis* Seidenf.** in Dansk Bot. Ark. 32(2): 90, t. 56. 1978; Aver. in Turczaninowia 11(1): 154. 2008.

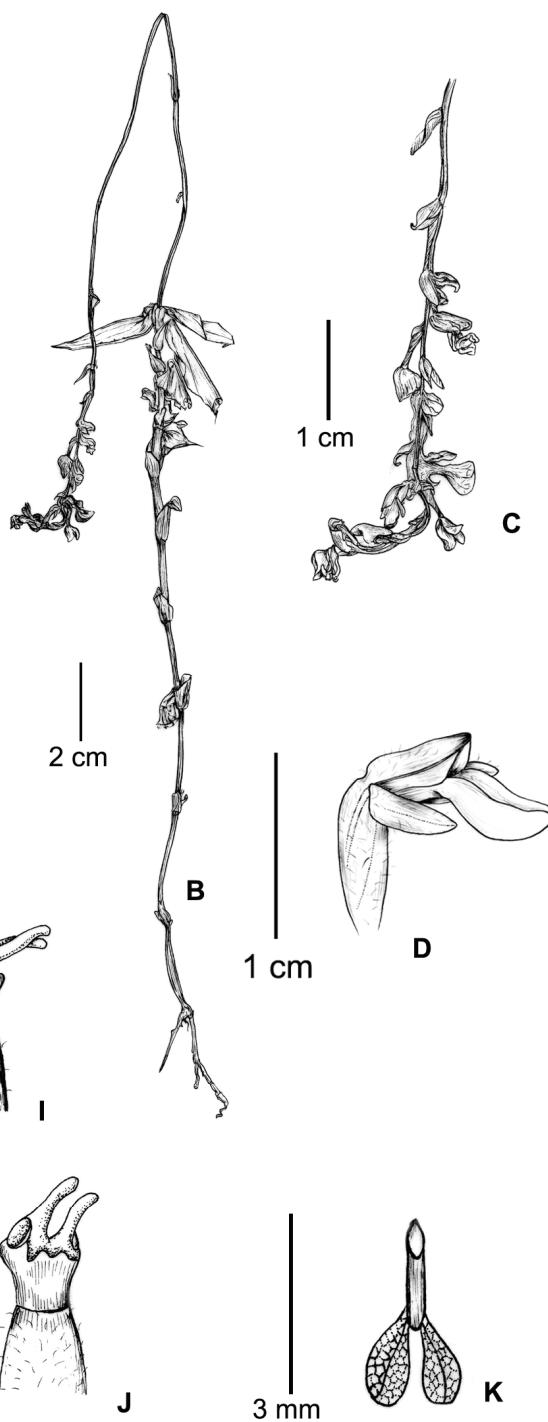
Type: Omkoi Road at km 13, GT 7730 [holotype: C (spirit), photo!; Icon. C, photo!].

Terrestrial herbs, 12-30 cm tall, rhizomatous. Rhizome 3-6 cm long, 2-4 mm thick, terete, pale green, creeping, rooting at nodes. Root 0.6-4 cm long, pale brown, fleshy, with minute root-hairs. Stem 4-15 cm

long, 3-4 mm thick, brownish green, decumbent at base, erect above, unbranched, glabrous, with several membranous sheaths formed by withered leaf-bases. Leaves 1-6, 1-5 cm long, scattered along the stem, sometimes crowded near the apex, withered during flowering, glabrous; petiole 0.4-1 cm long, sheathing at base; lamina 0.7-4.5 × 0.3-1.5 cm, lanceolate to narrowly ovate, base obtuse, apex acute, reddish-green, 3-5 or many veined. Inflorescence terminal raceme, laxly 2 – many flowered, pubescent; peduncle 6-18 cm long, with 2-3 sheathing bracts; sheathing bracts 0.5-1 cm long, apex acuminate, clasping, pubescent, 3-veined; rachis 2.5-12 cm long. Floral bracts 0.4-1 × 0.15-0.25 cm, ovate-lanceolate, apex acuminate, usually shorter to as long as ovary, 3-veined. Flowers 0.8 – 1.3 cm long, resupinate. Sepals free, pale green to brownish-green to greenish-pink, pubescent; dorsal sepal 5-7.5 × 2.8-3.5 mm, ovate, apex sub-acute to obtuse, adnate to petals to form a hood on column, 1-veined; lateral sepals 5-7 × 2.5-3.2 mm, ovate-lanceolate, apex obtuse, spreading, 1-veined. Petals 5-7 × 2-3 mm (at widest portion), obliquely subrectangular-falcate to narrowly ovate, apex obtuse, white with greenish to pinkish tinge, glabrous, with 2 incomplete veins. Labellum 7-10.5 mm long; hypochile saccate, 2-2.5 × 1.8-2.4 mm, white with yellowish tinge, with 1 filiform to oblong appendage in each side; mesochile 1.5-1.8 × 1.3-1.6 mm, oblong, white, margin incurved; epichile 2-lobed, lobules 4-8 × 3-4 mm, sub-orbicular to spatulate, broadening from base, white, with yellow spot at base, forming very acute angle to axis of labellum, sometimes slightly overlapping when spread, margin slightly undulate. Column 2-3 mm long, without any wings but with a seam with 2 upwards tongues below rostellum, tongues ca 0.4 × 0.3 mm; rostellum 1.2-1.8 mm long, bifid,



Davies s.n. (Acc. no. 459477)



Davies s.n. (Acc. no. 464565)

Fig. 1. *Zeuxine grandis* Seidenf. A: Davies s. n. (CAL, Acc. no. 459477). B: Whole plant. C: Close-up of inflorescence. D: Flower. E: Dorsal sepal. F: One of the petals. G: One of the lateral sepals. H: Labellum. I: Column (side view). J: Column (front view). K: Pollinarium. [B – K from Davies s. n. (CAL, Acc. no. 464565)].



projecting, apex sub-acute to obtuse. Stigma 2-lobed, elliptic, well separated, lateral. Anther-cap *ca* 3 × 1.5 mm, orange-red. Pollinarium *ca* 3.2 mm long; pollinia 2, *ca* 1.3 mm long, obovate to obclavate, sectile, bifid; caudicles *ca* 0.3 mm long; tegula *ca* 2 mm long, linear-spathulate, semi-transparent; viscidium *ca* 1 × 0.6 mm, elliptic, with inrolled edges. Ovary including pedicel 0.5-1.2 × 0.1-0.3 cm, elliptic-fusiform to narrowly obclavate, twisted, green, pubescent. Capsule *ca* 1 cm long.

Distribution: India, China, Thailand, Vietnam.

Specimens examined: INDIA: Andaman & Nicobar Islands: Andaman, February 1897, Davies s.n. (CAL; Acc. no. 464565, 464566, 464567, 464568); Andaman, Davies s.n. (CAL, Acc. no. 459477).

Z. grandis is closely allied to *Z. affinis* (Lindl.) Benth. ex Hook.f. but can be distinguished in having longer and broader epichile lobules (4-8 × 3-5 mm) whereas, *Z. affinis* has relatively smaller (2-3 × 2-2.5 mm) epichile lobules. Further, the angle between the two lobules of epichile is narrower (when spread) in *Z. grandis* than *Z. affinis* and the shape of the epichile lobules are also different in these two species. *Z. grandis* is extremely rare in India as it has not been collected after Davies in 1897. Further collections are needed to study the species in detail and to confirm the taxonomic status as well as to carry out its ex-situ conservation.

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印度蘭科植物補註—*Zeuxine grandis* Seidenf.

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摘要：本文首次報導印度蘭科植物 *Zeuxine grandis* Seidenf.，並附標本照片及手繪圖。

關鍵詞：*Zeuxine grandis*、蘭科、新紀錄、印度。