NOTE

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

Avishek Bhattacharjee[1*] and H. J. Chowdhery[2]

1. Avishek Bhattacharjee, Central National Herbarium, Botanical Survey of India, Acharya Jagadish Chandra Bose Indian Botanic Garden, Howrah– 711 103, India.
2. H. J. Chowdhery, Botanical Survey of India, Northern Circle, 192 Kaulagarh Road, Dehra Dun– 248 195, India.
** Corresponding author. Mobile: 91 9433171449; Email: avibsi@rediffmail.com*

(Manuscript received 2 September 2009; accepted 26 March 2010)

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-laceolate, 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 spathulate, 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 bellow rostellum, tongues *ca* 0.4 × 0.3 mm; rostellum 1.2-1.8 mm long, bifid,

臺灣大學學術期刊資料庫

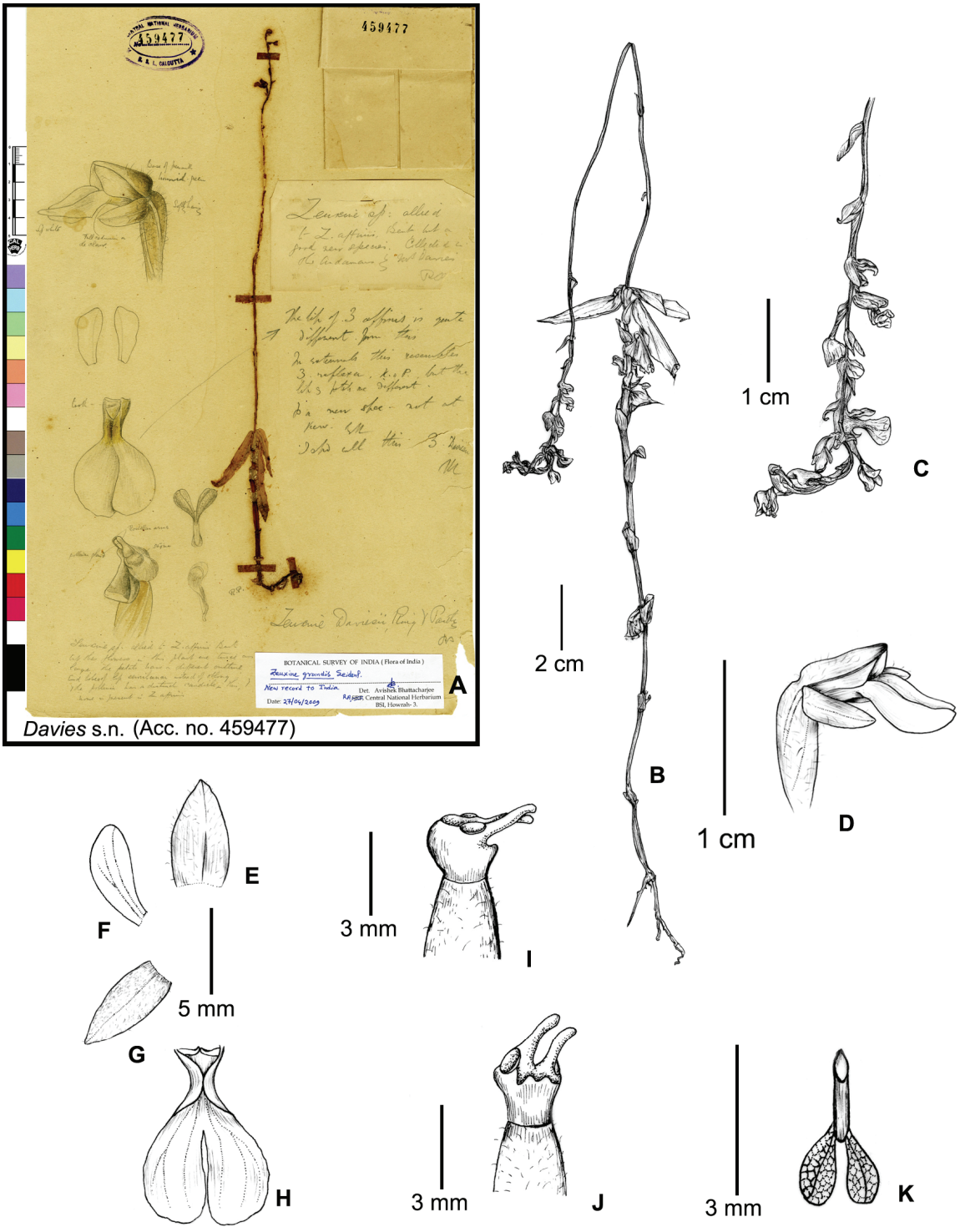


Fig. 1. *Zeuxine grandis* Seidenf. A: *Davies s. n.* (CAL, Acc. no. 459477). B: Whole plant. C: Close-up of inflorescence. D: Flower. E: Dorsal sepal. F: One of the petals. G: One of the lateral sepals. H: Labellum. I: Column (side view). J: Column (front view). K: Pollinarium. [B – K from *Davies s.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

臺灣大學學術期刊資料庫

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.

ACKNOWLEDGEMENTS

The authors wish to express their sincere thanks to the Director, Botanical Survey of India for providing facilities and encouragement. The authors are also thankful to Dr. Paul Ormerod, Queensland, Australia and Prof. Leonid Averyanov, Komarov Botanical Institute of the Russian Academy of Science, St. Petersburg for their valuable suggestion and help in identification and Dr. Olof Ryding, Botanical Museum, Copenhagen for sending the image of the holotype (spirit) and Icon drawn by Dr. Seidenfaden from the holotype of *Z. grandis*. The authors also express their thanks to D. K. Shah, Artist, Central National Herbarium, Botanical Survey of India, Howrah for making illustration of *Z. grandis* for the present communication.

LITERATURE CITED

Mabberley, J. D. 2008. Mebberley's Plant-Book, A portable dictionary of plants, their classification and uses, 3rd ed. Cambridge University Press, Cambridge, U.K. 1021pp.

Misra, S. 2007. Orchids of India. Bishen Singh Mahendra Pal Singh, Dehra Dun, India. 402pp.

Pridgeon, A. M., P. J. Cribb, M. W. Chase and F. N. Rasmussen. 2003. Genera Orchidacearum 3, Orchidoideae (Part 2), Vanilloideae. Oxford University Press, Oxford, USA. 400pp.

Seidenfaden, G. 1978. Orchid genera in Thailand VI. Dansk Bot. Ark. **32**: 1-195.

印度蘭科植物補註–*Zeuxine grandis* Seidenf.

Avishek Bhattacharjee[(1*)] and H. J. Chowdhery[(2)]

1. Avishek Bhattacharjee, Central National Herbarium, Botanical Survey of India, Acharya Jagadish Chandra Bose Indian Botanic Garden, Howrah– 711 103, India.

2. H. J. Chowdhery, Botanical Survey of India, Northern Circle, 192 Kaulagarh Road, Dehra Dun– 248 195, India.

** Corresponding author. Mobile: 91 9433171449; Email: avibsi@rediffmail.com*

(收稿日期：2009 年 9 月 2 日；接受日期：2010 年 3 月 26 日)

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。

臺灣大學學術期刊資料庫