

Zeuxine parvifolia (Orchidaceae) – a new addition to the Orchid flora of India

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ज्यूकसाइन पार्विफोलिया (आर्किडेसी) – भारतीय आर्किड वनस्पतिजात में एक नया संयोजन

अभिषेक भट्टाचार्यजी, संध्याज्योति फुकान एवं रूपम शंकर बरुआ

सारांश

प्रस्तुत शोध पत्र एक दुर्लभ स्थलीय आर्किड जाति ज्यूकसाइन पार्विफोलिया (रिडल) के. श्यूम. एवं फेड्डस, जो आर्किड के सबट्राइब गुडेरिनाई से संबंधित है, को भारत से प्रथम बार अभिलेखित एवं वर्णित किया गया है।

ABSTRACT:

Zeuxine parvifolia (Ridl.) K. Schum. & Fedde, a rare species of terrestrial orchid belonging to the subtribe Goodyerinae is reported here for the first time from India with detailed description.

Keywords: Assam, Cranichideae, Goodyerinae, Orchidoideae

INTRODUCTION

Zeuxine Lindl. is a genus of 90–100 species (Ormerod, 2018) of terrestrial orchids belonging to the subtribe Goodyerinae under the tribe Cranichideae of the subfamily Orchidoideae. Bhattacharjee & Chowdhery (2018) reported 19 species under the genus from India, including an unidentified species which was collected by two of the authors (SP and RSB) from Umrangso, Assam, India in 2007. However, it should be noted that Bhattacharjee & Chowdhery (2018) erroneously mentioned the locality of those unidentified specimens as

‘Orang National Park’ and name of the collector as ‘S. Dey’ due to some communication gap with the collectors which are to be corrected as ‘Umrangso’ and ‘S. Phukan and R. Barua’ respectively. The morphological characters of the specimens [S. Phukan & R.S. Barua (CAL0000027322, CAL0000027323)] of that ‘unidentified species’ were matching with that of the types and description provided in the protologue of *Z. parvifolia*, but not fully agreeing with the circumscription of ‘*Z. parvifolia* sensu Seidenf.'. Therefore, Bhattacharjee & Chowdhery (2018) did not identify the specimens (S. Phukan & R.S. Barua s.n.) at species level in their work. Seidenfaden (1978) included

Zeuxine benguetensis (Ames) Ames, *Z. boninensis* Tuyama, *Z. leucochila* Schltr., *Z. sakagutii* Tuyama, *Z. siamensis* Schltr., *Z. tenuifolia* Tuyama, *Z. tonkinensis* Gagnep. as synonyms of *Z. parvifolia*. Ormerod (pers. comm. in 2009 with the first author) doubted that Seidenfaden's treatment of *Z. parvifolia* was a mixture of some small-flowered species of *Zeuxine*, whereas Chen & al. (2009) mentioned that reassessment of type material for certain synonyms proposed by Seidenfaden (1978) might reveal that they represented distinct species. Bhattacharjee & Chowdhery (2018) were unable to confirm identity of the 'Assam specimens' (*S. Phukan & R.S. Barua s.n.*) due to unavailability of workable materials of most of the above-mentioned synonyms of *Z. parvifolia*. Finally, Ormerod (2018) studied the types/specimens of all the synonyms of *Z. parvifolia* and re-circumscribed it by excluding all the synonyms which helped the present authors to ascertain the identity of 'Assam specimens' (treated as '*Zeuxine* sp.' by Bhattacharjee & Chowdhery, 2018) as *Z. parvifolia* after 12 years of their collection.

TAXONOMIC ACCOUNT

Zeuxine parvifolia (Ridl.) K. Schum. & Fedde, Just's Bot. Jahresb. 31(1): 786. 1903 (publ. 1904); Seidenf. in Dansk Bot. Ark. 32 (2): 82. 1978, p.p. (quoad plantum typicam), *nom. illeg.*; Ormerod in Harvard Pap. Bot. 23(2): 274. 2018. *Hetaeria parvifolia* Ridl. in J. Straits Branch Roy. Asiat. Soc. 39: 87. 1903. Type: Penang Island, Penang Hill, December 1895, *H.N. Ridley* s.n. [Lecto.: K, image! (designated by Seidenf. 1978: 82–83, as 'Type'; Isolecto.: SING, image!]

Terrestrial herbs, 10–22 cm tall, decumbent at base, erect above; rhizomes 2–5 cm long, 2–4 mm thick, dull green with reddish tinge, creeping, rooting at nodes. Roots 1–4 cm long, 1.5–2.5 mm thick, yellowish to reddish brown, generally on lower side of rhizomes. Stem 2–6 cm long, 1.5–3 mm thick, dull green with reddish tinge, ascending, succulent, unbranched, glabrous. Leaves 3–4, usually crowded near apex of stem, pale green, withering towards flowering, glabrous; petiole 1–2 cm long, sheathing at base; lamina 1–4 × 0.6–1.1 cm, lanceolate to ovate, mostly oblique, obtuse at base, acute at apex. Inflorescence laxly 2–8 flowered terminal raceme; peduncle 5–10 cm long, villous with 2 sheathing bracts; sheathing bracts lanceolate, acuminate, 4–7 mm long; rachis 0.5–5 cm long. Floral bracts 5–6 mm long,

broadly lanceolate, long-acuminate, villous, 3–veined. Flowers 0.9–1.2 cm long, resupinate. Sepals pale green with whitish to reddish brown tinge towards apex, more reddish on maturity, free, pubescent; dorsal sepal 2.5–3 × 1.5–2 mm, ovate–elliptic, concave, subacute at apex; lateral sepals 2.5–3 × 1.2–1.6 mm, obliquely ovate–lanceolate, acute at apex. Petals 2.8–3 × 0.8–1.2 mm, obliquely oblong, white with pinkish–green tinge at base, subacute at apex. Labellum 2.5–2.8 mm long; hypochile saccate, c. 1.3 × 1.5 mm with 2 subulate appendages (1 on either side); mesochile subtubular, 0.5–0.8 mm long, white, sometimes with pinkish–green tinge; epichile bilobed, 0.6–0.9 × 2.5–3.1 mm, often with a narrow sinus between lobules, lobules rectangular, 1–1.5 × 0.6–0.9 mm, white. Column 1.5–1.7 mm long; rostellum brachia c. 1.2 mm long, narrowly clavate, dull white. Anther bilobed, c. 2 × 1 mm, pink–white. Pollinarium c. 2 mm long, with 2 sectile pollinia, light yellow to dull white; tegula 0.7–0.9 mm long, transparent with yellow tinge; viscidium oblong–elliptic. Stigma lobes 2, placed on column near base of rostellum. Ovary plus pedicel 7–8.5 mm long, 2.5–3 mm thick, terete–fusiform, dull greenish–yellow, pubescent.

Flowering and Fruiting:- February–May.

Habitat:- Growing near the bank of a small stream on a rocky slope (on blackish soil).

Distribution:- **India** (Assam, reported here); Malaysia; Singapore.

Specimens examined:- India, Assam, Dima Hasao district, Umrangso, 9.3.2007, *S. Phukan & R. Barua s.n.* (CAL0000027322, CAL0000027323).

Note:- *Zeuxine parvifolia* is morphologically close to *Z. leucochila*, but can be distinguished in having shorter sepals (2.8–3 mm vs. 3.8–4.2 mm long in *Z. leucochila*), shorter petals (2.8–3 mm vs. 4 mm long in *Z. leucochila*), shorter labellum (2.5–2.8 mm vs. 3.5–3.8 mm long in *Z. leucochila*), smaller column (1.5–1.7 mm vs. 2.4–2.5 mm long in *Z. leucochila*) with smaller, narrowly clavate rostellum brachia (vs. larger, more spatulate rostellum brachia in *Z. leucochila*).

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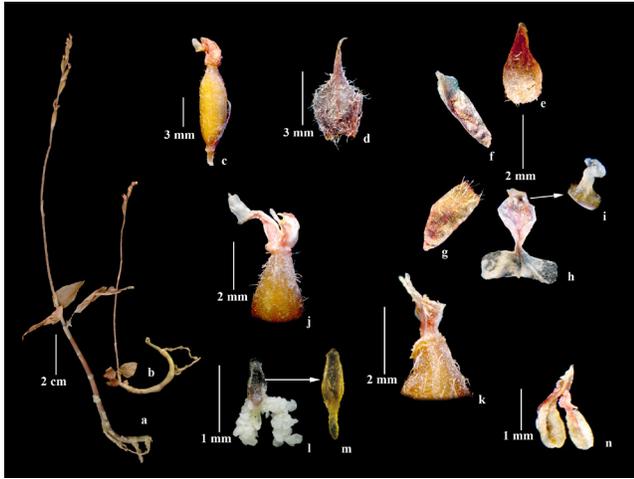


Plate 1. *Zeuxine parvifolia* (Ridl.) K. Schum. & Fedde: **a–b.** Habit; **c.** Flower with bract; **d.** Bract; **e.** Dorsal sepal; **f.** Petal; **g.** Lateral sepal; **h.** Lip; **i.** Appendage within hypochile; **j.** Portion of flower (sepals and petals removed); **k.** Column with portion of ovary; **l.** Pollinarium; **m.** Tegula; **n.** Anther (**a, d – n** from CAL0000027322; **b, c** from CAL0000027323; dissected from preserved flowers kept in 70% alcohol for a month).

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