

A NEW SPECIES OF ZEUXINE (ORCHIDACEAE) FROM REBANA FOREST OF ODISHA, INDIA

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ABSTRACT

A new species of orchid, viz., *Zeuxine mooneyi* S. Misra is described from Odisha. The new species is allied to *Z. gracilis* (Breda) Blume, but differs in having connate lateral sepals and incurved peltate-headed papillae inside hypochile of lip.

Keywords: *Zeuxine*, Orchidaceae, New Species, India

INTRODUCTION

The Rebana forest in Kendujhar district is one of the lesser botanically explored areas of Odisha state. The deep moist valleys here are the home to many rare species (Mooney, 1950). Field explorations in this region during July 1980 and July 1982 revealed (Misra 1980, 1982, 1987, 2004) the presence of 52 species of orchids including 2 novelties (Misra, 1986, 1997); 5 of these species are known in Odisha exclusively from this forest. One terrestrial orchid collected from this forest area looked like *Zeuxine gracilis* (Breda) Blume in vegetative morphology. However, a critical study of the floral features proved it to be very distinct from the species of *Zeuxine* Lindl. so far known from India and adjoining countries, and hence described here as a new species.

***Zeuxine mooneyi* S. Misra sp. nov.**

(Fig.1)

Zeuxine sp. S. Misra, Orch. Orissa: 325. 2004.

Type: INDIA. Odisha. Kendujhar district, Rebana forest, Panasapani, c. 800 m, 12 July 1982, S. Misra 734 (Holotype: CAL). Flowered in cultivation at Brahmapur in January 1983.

Zeuxine mooneyi in its habit resembles *Z. gracilis* (Breda) Blume and *Z. claudenstina* Blume. However in the latter two species the lateral sepals are free. The lobules of the epichile of the lip are divergent in a 'T' \pm at right angles to the axis of the lip; the blades of the lobules upturned, irregular rectangular or squarish with \pm truncate apices. The papillar glands located slightly inside the hypochile are respectively horn-shaped or conical. In the new species the lateral sepals are connate on their inner edges all along save the apices. The epichile of the lip is decurved about the middle; the lobules do not appear as individuals; instead when flattened the two together, appear as one rectangular blade with an irregular undulate front edge and a round-cornered back edge. The papillar glands located right at the base of the hypochile are incurved with peltate heads.

Terrestrial scattered herbs, rise vertically to 8 - 25cm high from a horizontal stem-like creeping rhizome. Rhizome long and fleshy, terete, rooting at nodes; roots c. 2mm thick, puberulent, swollen at base. Stem leafy, dark green, fleshy, smooth, 3 - 5mm thick, sheathed at nodes. Leaves spiral, scattered, 5 - 7, soft-herbaceous, of a thin texture, non-articulate, sheathing at base; sheaths tubular, 6 - 16mm long, light brown, glabrous; petioles 5 - 7mm long, widening at base; lamina ovate-lanceolate, acuminate, 20 - 60 \times 10 - 27mm, margins undulate, more so on ageing, deep green, fading during flowering; densely and minutely papillose imparting a velvety touch; with three dark green coloured veins and reticulate veinlets (marked on drying) on upper face; pale green beneath. Inflorescence terminal, erect, c. 10cm long; peduncle very slender, covered densely with retrose hairs, with two oblong-lanceolate, apiculate sterile bracts; raceme c. 4.5cm long, 8 - 10 -flowered. Bracts narrowly lanceolate, apiculate, c. 13 \times 4mm, shorter above, margins thin and pale, pubescent with colourless hairs. Pedicel and ovary obliquely fusiform, somewhat flattened laterally, pubescent, c. 7 \times 2mm. Flowers resupinate, \pm tubular, 4 - 5 \times 3mm. Sepals and petals membranous, 3-veined, sparingly punctulate; sepals sparingly hairy

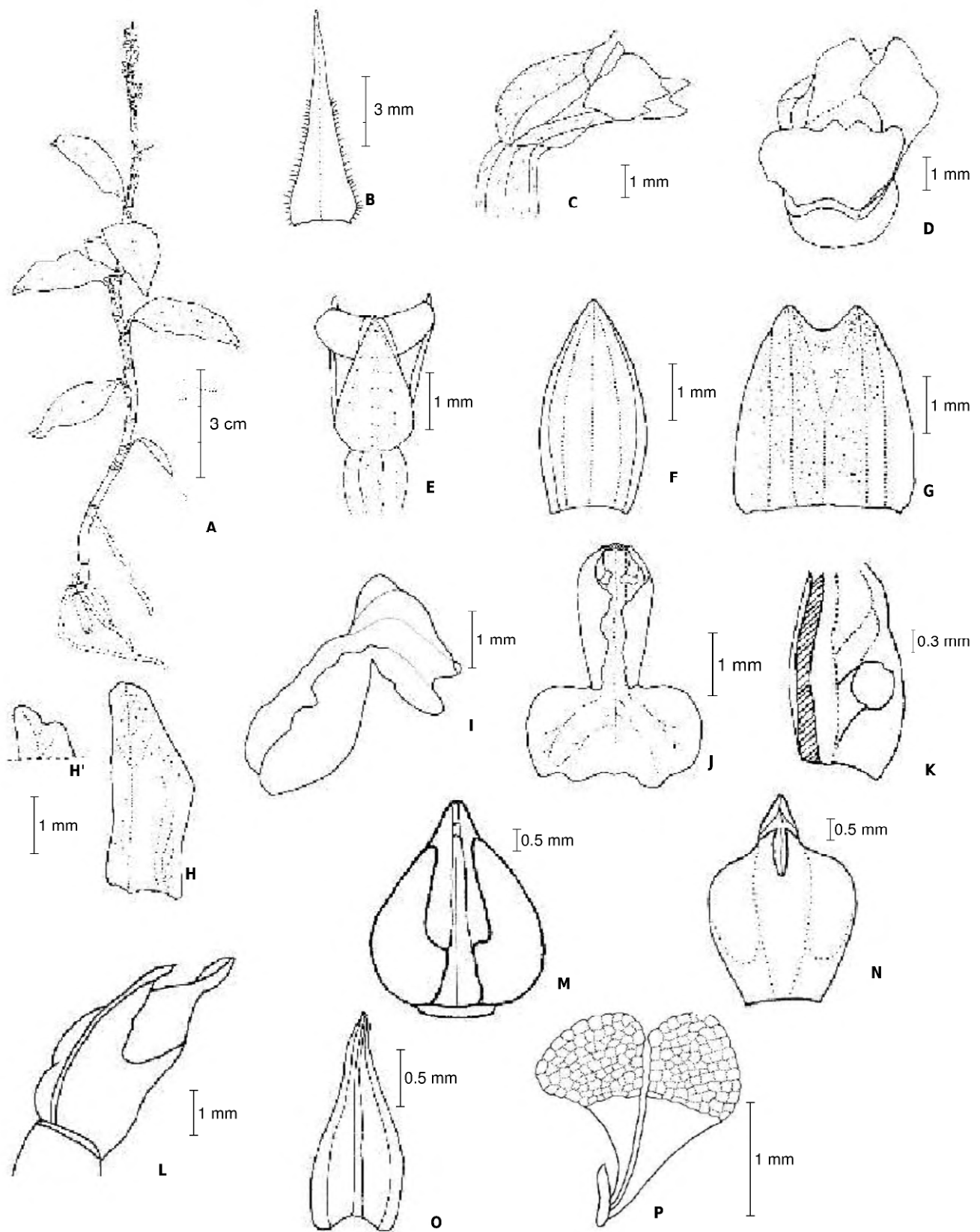


Fig. 1. *Zeuxine mooneyi* S. Misra : **A.** habit, **B.** bract, **C, D, & E.** flower, seen from side, front and top, **F.** dorsal sepal, **G.** synsepal, **H.** petal, **H'.** tip of petal of a different form, **I. & J.** lip, seen from side and top, **K.** part of hypochile showing the gland, **L.** column, seen from side, **M. & N.** column, seen from top, and under-face showing the rostellum, **O.** anther, pollinarium removed, **P.** pollinarium (a-d, f-l & o. SM 734; e, h', m, n & p. SM 734-A). Drawing and inking: S. Misra.

outside. Dorsal sepal ovate, acute, cymbiform, 3.5 - 4 × 2.5mm; lateral sepals connate at their inner edges for the entire length save the subacute apices, margins rolled in holding the blade of the lip; the synsepal oblong-lanceolate, round-notched at apex, c. 4 × 3.5mm, 5-veined; outermost veins prominent, two adjoining veins thin, central one faint. Petals oblong, obliquely narrowing on the outer edge to a truncate apex, notched or not, c. 4 × 1.5mm. Lip sessile, c. 4 × 3mm; hypochile adnate to the sides of the column forming a sac, c. 2.25 × 1.25mm, edges erect, margins turned in, irregularly undulate; with a slender papillar emergent gland on each side of the sac right at the base within; gland short, incurved, with a peltate head; sac orange-yellow outside; epichile abruptly widened to a transverse lamina at right angles to the axis of the lip, decurved from about the middle; white, tip brownish; when flattened, it forms a somewhat rectangular blade with an irregular undulate front edge and a back edge with rounded corners. Column erect, attenuate towards the apex, c. 5 × 1.5mm, with a greenish ridge on its back. Rostellum erect, obovate, narrowly and deeply notched at the apex, green, fleshy, c. 1.75 × 1.5mm. Anther dorsal, erect, light yellow, narrowly cordate, acute, subequal to rostellum, c. 1.65 × 0.7mm, 2-loculed, the locules contiguous. Pollinarium c.1.5mm long; pollinia sectile, two, obpyriform, cream-coloured; caudicle conspicuously cuneate, lamellar, hyaline; viscidium ventral, linear-oblong, waxy white, c. 0.5mm long.

Flowering : January -February.

Fruiting : Not seen.

Habitat : Evergreen forest, at c. 800 m, on a stream bank, with humus-rich soil, under dense shade.

Distribution : INDIA. Odisha, Kendujhar district, Rebana forest, Panasapani; rare.

Etymology : This species is named after late H. F. Mooney, formerly of the Indian Forest Service, for his immense contribution to the Botany of Bihar and Orissa.

Note: This species was dealt as *Zeuxine* sp. under the genus *Zeuxine* Lindl. with morphological description and drawing in Orchids of Orissa (presently known as Odisha) (Mishra, 2004), but could not be described as a new species, as the designated type material was misplaced. The species could not be subsequently located elsewhere in the state. Recently during an attempt to organize the herbarium sheets of the author for making a gift of these to different institutions, the specimen *S. Misra* 734 (designated holotype) could be located and was deposited in CAL.

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