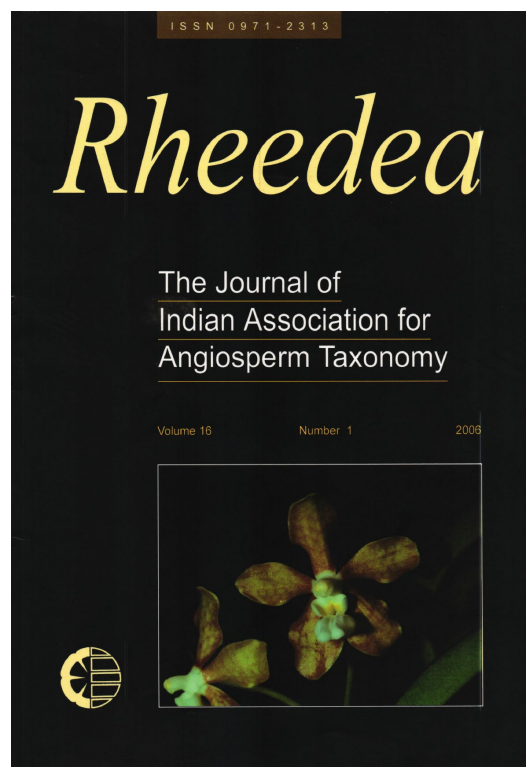




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A New Species of *Dendrobium* Sw. (Orchidaceae) from Meghalaya, India

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Abstract

A new species, *Dendrobium meghalayense* C. Deori et al., is described and illustrated from Khasi and Jaintia Hills district, Meghalaya. It differs from its allied species *D. longicornu* Lindl. and *D. wattii* (Hook. f.) Reichb. f. in having an unlobed rhomboid lip, emarginate-mucronate and dentate-serrate at apex, leaf apices obtusely bilobed and petal margins subserrate towards apex.

Keywords: *Dendrobium meghalayense*, New species, Khasi and Jaintia Hills, Meghalaya

Introduction

The genus *Dendrobium* Sw. distributed throughout Indo-Malesia comprises of 1400 species (Pearce & Cribb, 2002) with a little over 100 species in India. More than 80 species occur in Northeastern region. The genus exhibits amazing diversity in vegetative as well as floral morphology including colour and fragrance. A number of species such as *D. denudans* D. Don., *D. devonianum* Paxt., *D. longicornu* Lindl., *D. nobile* Lindl., *D. transparens* Lindl., etc. show a wide range of variations. Critical investigation of these variations has led to interesting findings such as a new species (*D. numaldeorii* Deori et al., 2004), a rediscovery (*D. pychnostachyum* Lindl., Deori & Phukan, 2004), a new record (*D. dantaniense* Guill., Deori et al., 2006) and many other rewarding observations that require confirmation.

One *Dendrobium* plant with white flowers bloomed in the Garden of Botanical Survey of India, Shillong in October 2004. It looked allied to *D. longicornu* Lindl. and *D. wattii* (Hook. f.) Reichb. f. of the section *Formosae* Benth. & Hook. f. While studying specimens lodged in the Regional Herbarium (ASSAM), Shillong, the authors came across four herbarium sheets (*H. Deka 18385*) collected from Khasi and Jaintia Hills, Meghalaya on 19.08.1959 and misidentified as *D. longicornu*. On close observation these specimens proved to be identical with the newly

bloomed plant. Live specimens of *D. longicornu* cultivated in National Orchidarium, Shillong and identified herbarium sheets of this species from Meghalaya, Nagaland and Mizoram were further studied. A comparison of newly bloomed species with true *D. longicornu* brought out many differences in vegetative and reproductive characters. Subsequently, type and protologue of *D. longicornu* Lindl. (Lindley, 1830) and other pertinent literature (Kataki, 1986; Hynniewta, 2000; Rajbhandari & Bhattarai, 2001; Pottinger et al., 1984; Seidenfaden, 1985) were consulted. This helped us to conclude that the newly bloomed *Dendrobium* and the four sheets (*H. Deka 18385*) belong to a single species and the same is new to science. It is described below:

***Dendrobium meghalayense* C. Deori, Sarma, Hynniewta et Phukan, sp. nov. Figs 1, 2k-o**

Dendrobium longicornu auct. non Lindl.: Seidenf., *Opera Bot.* 114: 219. t.139.1992.

Valde affinis *D. longicornu* Lindl. et *D. wattii* (Hook. f.) Rchb. f. differt a labio ad apicem integro rhombeus, emarginato-mucronata et dentato-serrata; folia obtuse bilobata et margine petalis ad apicem subserrata.

Type: INDIA, Meghalaya, Khasi and Jaintia Hills district, 1400 m., 19.08.1959, *H. Deka 18385 A*

(Holotype, ASSAM!) 18385 B-D (Isotypes, ASSAM!). Cultivated at National Orchidarium, Shillong, originally collected from Khasi and Jaintia Hills district, 9.10.2004, C. Deori 101162 (Paratype, ASSAM!).

Dendrobium meghalayense is distinct from its allied species *D. longicornu* Lindl. and *D. wattii* (Hook. f.) Rchb. f. in having an unlobed rhomboid lip which is

emarginate-mucronate and dentate-serrate at apex; leaf apices obtusely bilobed and petal margins subserrate towards apex.

Epiphytic sub-erect herbs. Stem 15-50 cm long, 3-5 mm thick in the middle, fractiflex towards the growing end, leafy on the apical half, sheathed; internodes 1-4.5 cm long. *Leaves* 4-7 × 0.7-1.1 cm, lanceolate,

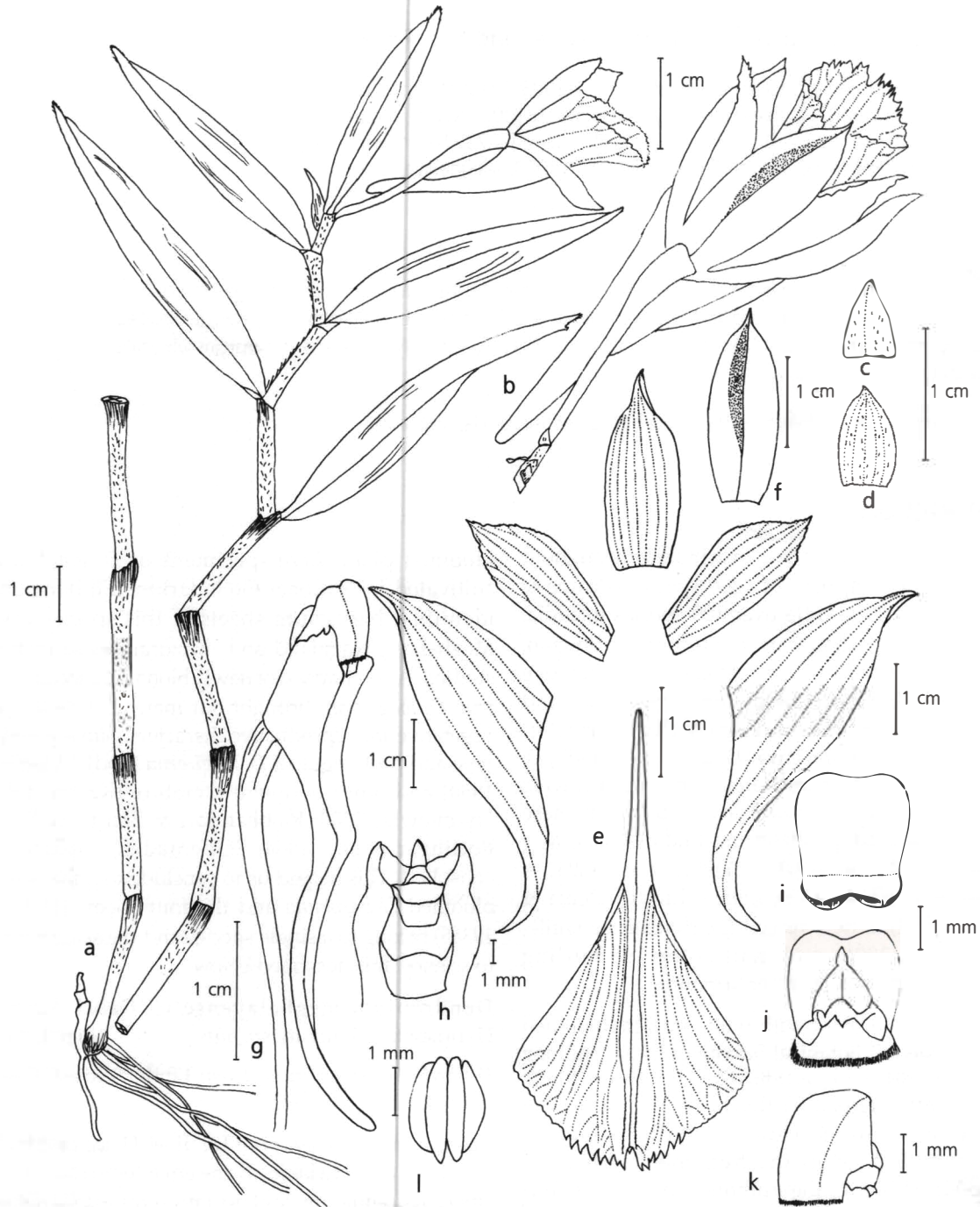


Figure 1. *Dendrobium meghalayense* C. Deori et al. - a. Habit; b. Flower; c. Peduncle sheath; d. Floral bract; e. Sepals, petals and lip; f. Dorsal sepal, dorsal view; g. Ovary + pedicel, Column and column foot, side view; h. Column, front view; i. Anther, ventral view; j. Anther, dorsal view; k. Anther, side view; l. Pollinia. (a. after H. Deka 18385A (holotype, ASSAM); b-l. after C. Deori 101162 (paratype, ASSAM))

obliquely and obtusely bilobed at apex, distichous, hirsute at apex with 3-4 prominent nerves; sheaths 1-4.5 cm, broad sparsely hirsute. *Inflorescences* axillary, terminal, 1-2-flowered arising from short peduncles borne on the nodes of foliate or defoliate stems; peduncles short, sheathed; sheaths 5-5.5 × 2.5-3 mm, ovate, acuminate, 2 in number, sparsely hirsute, 1-

nerved; floral bracts 7-7.5 × 2.5-3.5 mm, ovate, acuminate, hirsute, 5-6-nerved. *Flowers* 5.1-5.3 cm long from tip of dorsal sepal to tip of mentum, 2.6-2.7 cm across, sepals and petals white with deep serrate lip, sweetly fragrant; pedicel and ovary 4.1-4.6 cm long, slender, ovary curved, ridged, light green; dorsal sepal 1.8-2.1 × 0.7-1 cm, 5-6 mm at

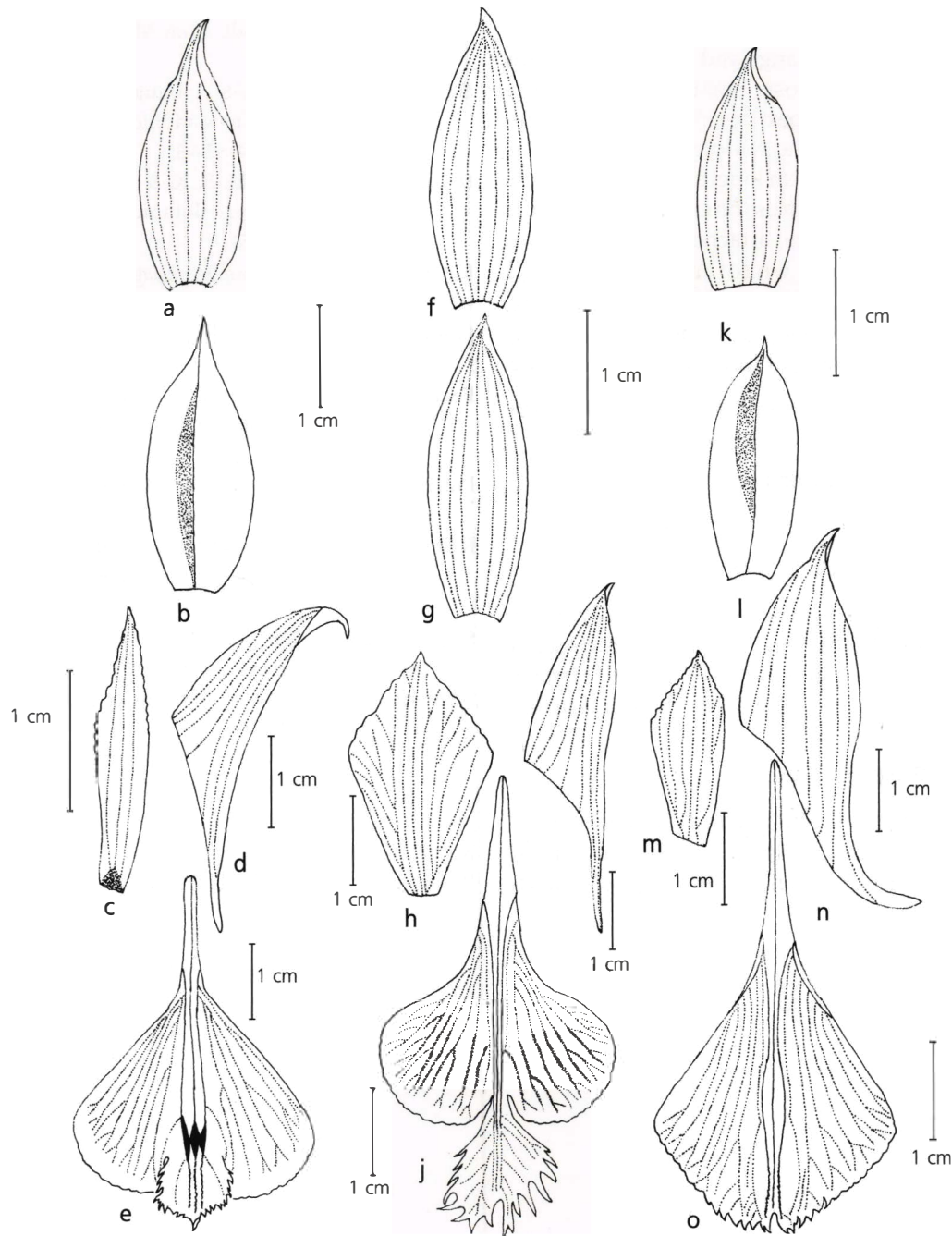


Figure 2. *Dendrobium longicornu* Lindl.- a. Dorsal sepal, ventral view; b. Dorsal sepal, dorsal view; c. Petal, ventral view; d. Lateral sepal, ventral view; e. Lip, front view. *Dendrobium wattii* (Hook. f.) Rchb. f.- f. Dorsal sepal, ventral view; g. Dorsal sepal, dorsal view; h. Petal, ventral view; i. Lateral sepal, ventral view; j. Lip, front view. *Dendrobium meghalayense* C. Deori et al.- k. Dorsal sepal, ventral view; l. Dorsal sepal, dorsal view; m. Petal, ventral view; n. Lateral sepal, ventral view; o. Lip, front view. (a-e. after C. Deori 101103 (ASSAM); f-j. after A. A. Mao 107116 (ASSAM); k-o. after C. Deori 101162 (paratype, ASSAM)).

base, broadly oblong acuminate, 7-nerved, keeled dorsally towards apex; lateral sepals 4.5-4.7 × 1.2-1.5 cm at the centre, base broader 2.7-3.2 cm, oblong-triangular, acuminate, keeled, 7-nerved, adnate at base to form a mentum; mentum 2.9-3 cm long, funnel shaped; petals 2-2.2 × 0.75-0.9 cm, 3-4 mm at base, rhombate, acuminate, sub-serrate towards the apex, 3-nerved, laterals branched; lip 4.5-5 × 2.5-2.7 cm, unlobed, rhomboid white, 14-nerved, nerves deep orange and branched towards apex, branches papillose; emarginate-mucronate and dentate-serrate at apex; disc 3-ridged with light-deep orange band at the middle of the hypochile; column with foot 3.5-4 cm long, slender, white with light orange shade towards the curved foot; stelidia 2, toothed, acute, white; attachment acute, white; rostellum rectangular, white; anther 3-3.5 × 2-2.5 mm, oblong-elliptic with emarginate apex, white, glabrous, frontage woolly; pollinia 2-2.5 mm long, 4 in 2 pairs, pairs unequal, yellow, edges subacute.

Etymology: The new species is named after the State of Meghalaya.

Flowering: August-November.

Habitat: Subtropical forests up to 1400 m.

Distribution: India (Meghalaya), endemic.

Note: Seidenfaden (1992) has given sketch of a flower after a plant collected from Khasia Hills by Hook. f. & Thomson and referred by Hook. f. to *Dendrobium longicornu*. This, in our opinion, is *D. meghalayense*.

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