

FOUR NEW RECORDS OF *DENDROBIUM* (ORCHIDACEAE) TO MANIPUR (INDIA)

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ABSTRACT

Four species of *Dendrobium* Sw. (Orchidaceae) viz. *D. amoenum* Wall. ex Lindl., *D. capillipes* Rchb.f., *D. crystallinum* Rchb.f. and *D. salaccense* (Blume) Lindl. are reported as new distributional records for the first time to Manipur. All the species are enumerated with brief description and illustrations.

Keywords: *Dendrobium*, Orchidaceae, New records, Manipur

INTRODUCTION

The genus *Dendrobium* Sw. (Orchidaceae) comprises of about 1100 species distributed in tropical and sub tropical habitats of India, China, Japan, Tahiti, Malesia, New Guinea, Australia, and New Zealand (Wood, 2006). A review of literature reveals that the genus is represented by about 115 species, 2 sub species and 1 variety in India of which about 75 species including 1 variety are found in N. E. India and about 50 species in Manipur (Kumar & Kumar, 2005; Misra, 2007; Rao, 2007; S.Zote & al., 2009; Nanda & al., 2012). Under the programme of Intensification of Research in High Priority Areas, the Science and Engineering Research Board (SERB), Department of Science and technology, Government of India, New Delhi has established the Centre for Orchid Gene Conservation of Eastern Himalayan Region (COGCEHR) at Hengbung in Senapati District of Manipur in 2010. With a view to understand the distribution range of various orchid species in Eastern Himalayan Region, the team of scientists of COGCEHR conducted several explorations in various states of N.E. India and samples of several species are brought under cultivation in the Field Gene Bank of the Centre as a part of *ex situ* conservation. Among the flowered species under cultivation, four *Dendrobium* species collected from different districts of Manipur have been critically studied and identified as *D. amoenum* Wall. ex Lindl., *D. capillipes* Rchb.f., *D. crystallinum* Rchb.f., and *D. salaccense* (Blume) Lindl. which are not known so far from Manipur. Hence, these species are reported in the present paper for the first time as new additions to the state.

All the four species are enumerated below in alphabetical order with brief description and colour photos of habit and dissected floral parts.

ENUMERATION

Dendrobium amoenum Wall. ex. Lindl., Gen. Sp. Orch. Pl.: 78.1830; Hook. f., Fl. Brit. India 5: 738. 1890; H. P. Wood, Dendrobiums: 605, 2006; S. Z. Lucksom, Orch. Sikkim and N. E. Himal.: 591.2007; H. J. Chowdhery, Orch. Fl. Arunachal Pradesh : 283. 1998.

Stems 12 - 30 × 0.2cm., fleshy, erect, enclosed by tubular translucent sheaths at nodes. Leaves 7 - 10 × 0.7 - 1.1cm., oblong - oblanceolate, acute. Inflorescence fasciculate, 2 - 3 flowered. Floral bracts 0.4 - 0.8cm long, lanceolate, translucent white. ovary 3 - 3.7cm long, terete, purplish green. Flowers white, fragrant, c.3.5cm across. Sepals and petals white with purple tinged tips. Lip white, purple at apex, greenish yellow at the middle, puberulous along the midvein on disc, clawed towards base with deep purple tip; lateral lobes convolute, purplish striped on each side, Column small, white, broad at base and narrower towards apex; foot longer than column, deep purple with yellow blotch at tip; stigmatic surface green. Anther cap small, white, erose at front margin. Pollinia translucent yellow.

Flowering: May - June

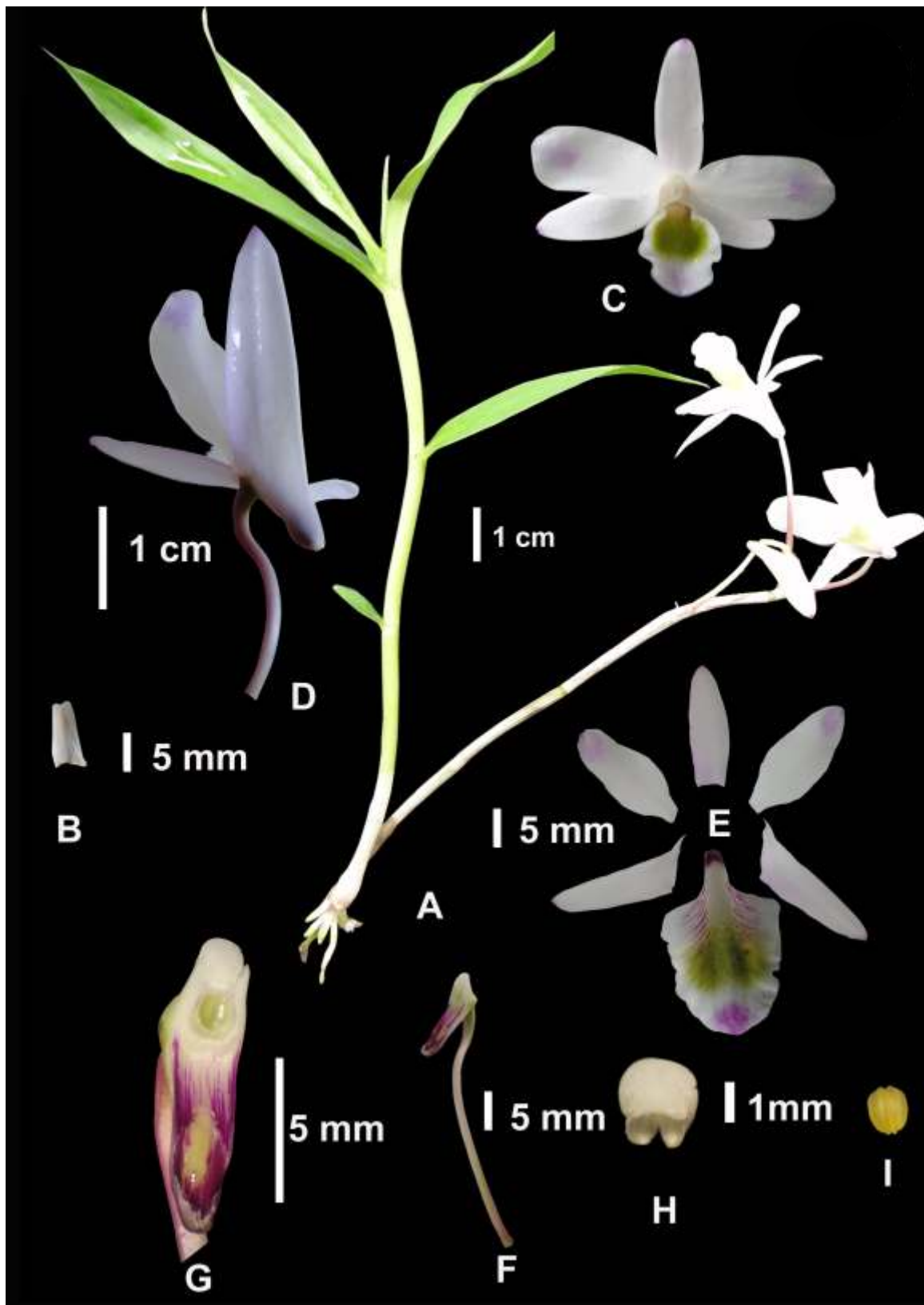


Plate 1: *Dendrobium amoenum* Wall. ex. Lindl. **A.** Habit **B.** Bract **C. & D.** Front view & Lateral view of flower **E.** Sepals, petals and lip **F.** Column and ovary **G.** Front view of column **H.** Anther cap **I.** Pollinia

Specimen examined : Ukhrul District, Kamjong, 1598 m, N-24°50.886', E-94°30.732', Y. Nanda 00372 (COGCEHR Herbarium, Hengbung, Manipur).

Distribution : India (Sikkim, Arunachal Pradesh, Manipur), Nepal, Bhutan, Myanmar

Notes : S.Z. Lucksum (2007) has reported that the middle portion of the lip is yellow in Sikkim specimens. However, in the specimens collected from Manipur the middle portion of the lip is greenish yellow. As this species is reported so far from Sikkim, Arunachal Pradesh and now from Manipur, there is every possibility that it may occur in the in between states viz. Assam Meghalaya and Nagaland.

Dendrobium capillipes Rchb.f., Gard. Chron. 1867: 997. 1867; Hook. f., Fl. Brit. India 5: 751. 1890; H. P. Wood, Dendrobiums: 604. 2006.

Epiphytic. Stems 6 - 7.5 × 0.5 - 1cm, fusiform, unbranched. Leaves c. 11.0 × 1.1cm, few, towards the apex of the stem, narrowly oblong, unequally bilobed at apex. Inflorescence c. 10.5cm long, laxly 2 - 3 flowered, with 2 or 3 membranous sheaths at base. Floral bracts pale green, c. 0.8 × 0.3cm, oblanceolate, acute. Ovary yellowish green, c. 0.15 × 0.2cm. Flowers spreading, golden yellow, with purplish red stripes on the inner side of the basal margins of lip. Sepals c. 1.1 × 0.5cm, lanceolate-oblong, acute. Petals c. 1.3cm × 0.8cm, broader, elliptic, obtuse. Lip c. 2.0 × 2 - 2.3cm, embracing the column towards base, papillose on disc and at base. Mentum c. 0.3cm. Column 0.4cm, broader and winged at apex, with purplish red stripes; anther cap c. 0.3cm, elongate triangular with minutely dentate front margin; pollinia oblong, translucent yellow.

Flowering : April

Specimen examined : Churachandpur District, 1621m, N-24°37.77', E-93°42.06', Y. Nanda 00371 (COGCEHR Herbarium, Hengbung, Manipur).

Distribution : India (Mizoram, Manipur), Bhutan, Myanmar, China, Laos, Thailand and Vietnam.

Dendrobium crystallinum Rchb.f. in Gard. Chron. 1868: 572. 1888; Hook. f., Fl. Brit. India 5: 739. 1890; H. P. Wood, Dendrobiums: 618. 2006.

Stem erect, fusiform. Inflorescence 1 or 2 flowered. Flowers white with pinkish purple tips and yellow on throat of lip, fragrant. Floral bracts c. 0.8cm., oblong, subacute. Sepals 2.7 - 3cm × 0.7 - 0.8cm, lanceolate, acute. Petals c. 2.7cm × 1.1cm, oblong-oblanceolate, acute. Lip c. 2.6cm × 2cm, obovate, obtuse, clawed at base, purplish at tip and deep yellow in the middle with maroon stripes towards lateral margins, minutely serrate at margin, densely pubescent on disc.; foot c. 0.4cm long, striped with purple, tinged with yellow towards apex with green tip. Anther cap c. 0.4cm × 2cm, narrowly conical, white, densely covered with crystalline papillae on the surface which are longer at apex; stigmatic surface green. Pollinia, oblong, translucent yellow.

Flowering : April

Specimen examined : Churachandpur District, 1621m, N-24°37.77', E-93°42.06', Y. Nanda 00373 (COGCEHR Herbarium, Hengbung, Manipur).

Distribution : India (Sikkim, Manipur), Bhutan, Myanmar, China, Laos, Thailand and Vietnam.

Dendrobium salaccense (Blume) Lindl. in Gen. Sp. Orch. Pl. 86. 1830; Lindl. in Bot. Reg. 30. misc. 62, 1844; Hook. f., Fl. Brit. India 5: 738. 1890; Seidenf. in Opera. Bot. 83: 244. 1985 & 114: 254. 1992; H. P. Wood, Dendrobiums: 689. 2006; S.Zote & al., in J.Orchid Soc. India 23:92.2009. *Dendrobium cathcartii* Hook. f., Fl. Brit. India 5 : 727.1890. *Dendrobium bambusifolium* Par. & Rchb. f., Trans. Linn. Soc. 30: 149. 1874; Hook. f. Fl. Brit. India 5:727. 1890.

Stems woody, up to 60cm long and 0.3cm thick. Leaves alternate, 9 - 1.2 × 0.8 - 1cm, narrowly oblong, unequally bilobed. Inflorescence 2-flowered, arising from nodes (opposite to leaf). Flowers c. 1.0cm across. Bract acuminate, ovate, c.0.2cm long. Flower greenish yellow, mentum 0.5cm long. Dorsal sepal c. 0.8 × 0.3cm, acute, narrowly ovate, greenish at base, entire, 5 veined. Lateral sepals c. 1.2 × 0.3cm, slightly similar to dorsal

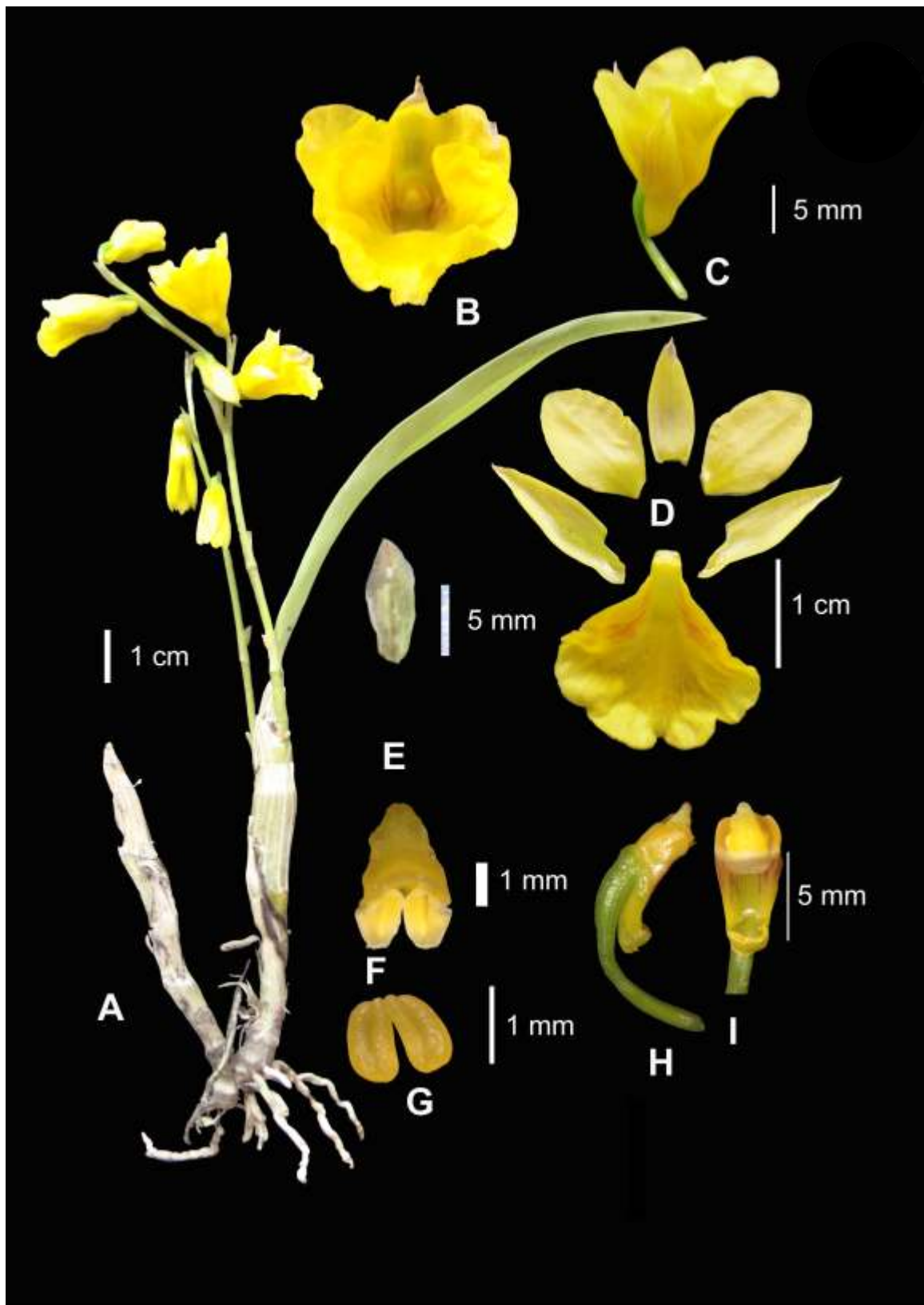


Plate 2: *Dendrobium capillipes* H. G. Rchb. **A.** Habit **B. & C.** Front and lateral view of flower **D.** Sepals, petals and lip **E.** Bract **F.** Anther cap **G.** Pollinia **H. & I.** Front and lateral view of column and ovary.

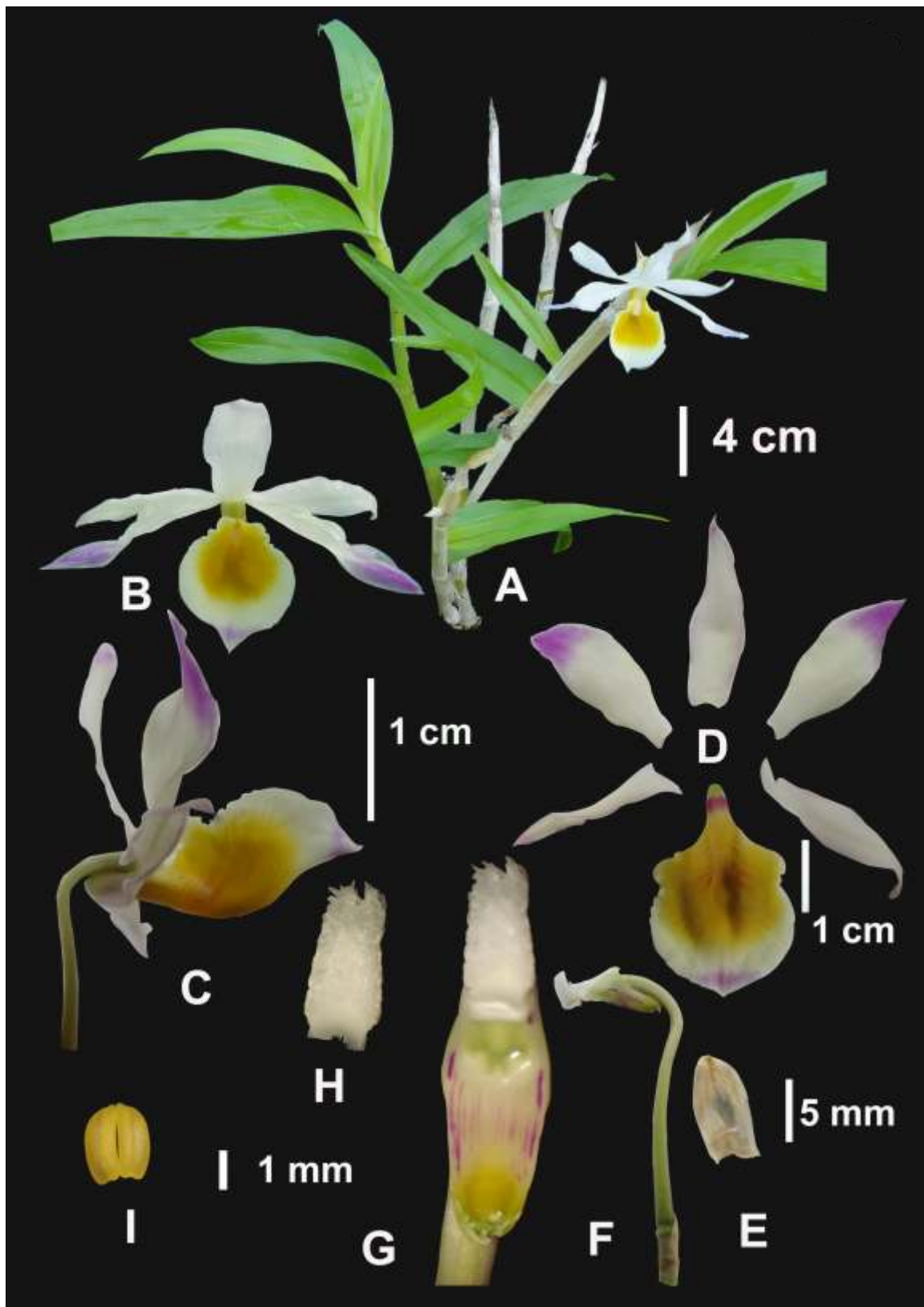


Plate 3: *Dendrobium crystallinum* H. G. Rchb. **A.** Habit **B. & C.** Front and lateral view of flower **D.** Sepals, petals and lip **E.** Bract **F. & G.** Front and lateral view of column and ovary. **H.** Anther cap **I.** Pollinia

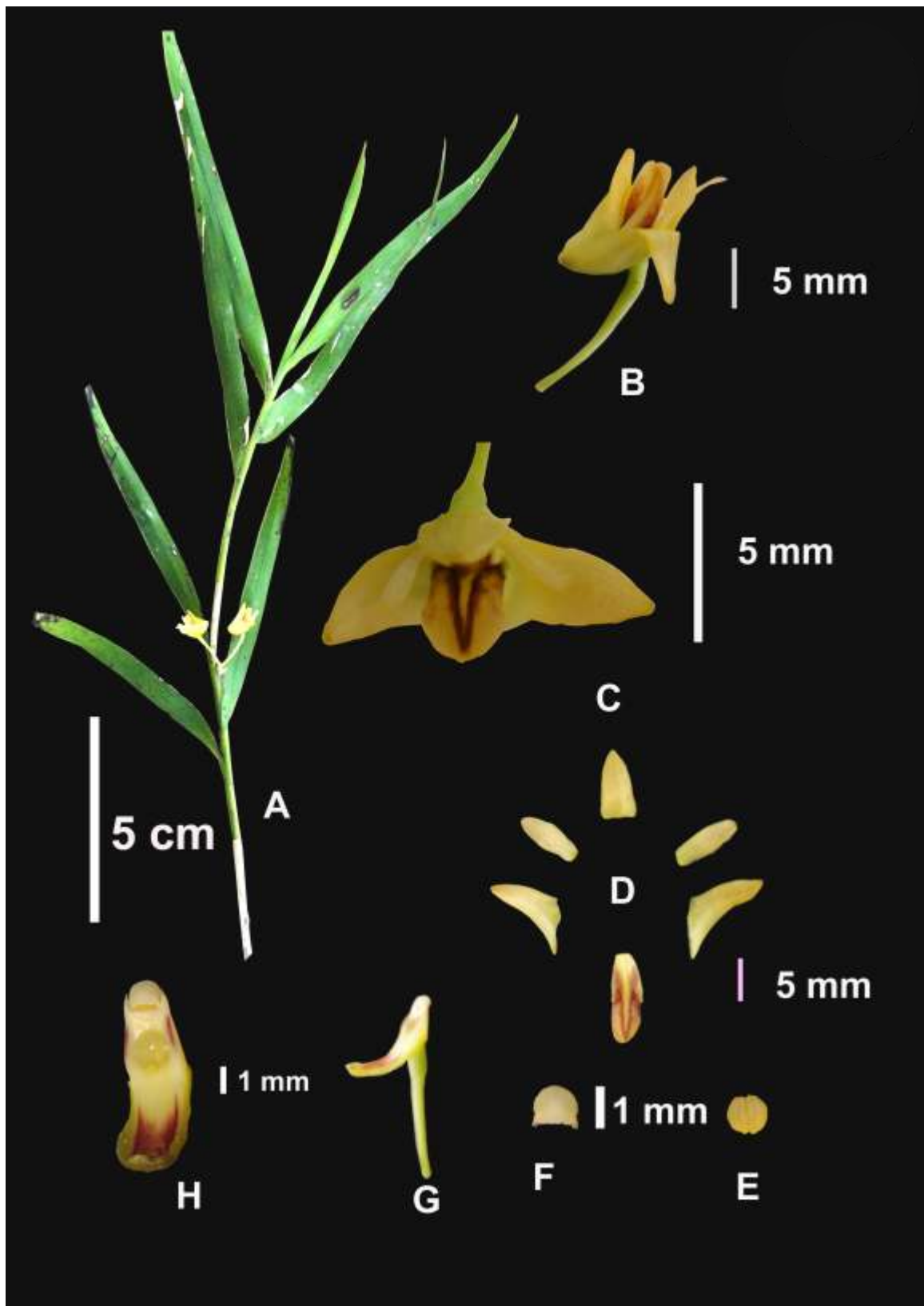


Plate 4 : *Dendrobium salaccense* (Bl.) Lindl. **A.** Habit **B. & C.** Front and lateral view of flower **D.** Sepals, petals and lip **E.** Pollinia **F.** Anther cap **G. & H.** Front and lateral view of column and ovary.

sepal. Lateral petals c. 0.7×0.1 cm, obtuse, oblong. Lip yellow with maroon blotch, trilobed ; lateral lobes not very distinct, c. 1.1×0.3 cm. Column c. 0.3×0.2 cm, yellow, maroon at apex; foot c. 0.5×0.2 cm, yellow. Anther cap white, margin entire, c. 0.1 cm. Pollinia 4, yellow. Ovary green, c. 1.5 cm long.

Flowering : April

Specimen examined : Senapati District, Injolum, 1127m, N-25°24.86', E-94°00.28', Nanda 00370 (COGCEHR Herbarium, Hengbung, Manipur).

Distribution : India (Sikkim, Arunachal Pradesh, Meghalaya, Mizoram, Manipur), Bhutan, Myanmar, China, Laos, Thailand and Vietnam.

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मणिपुर (भारत) के लिए डेंड्रोबियम (आर्किडेसी) के चार नये अभिलेख

वाई नन्दा, के चौलू, एच बी शर्मा, ए नागेश्वर राव एवं एस पी विज

सारांश

मणिपुर से पहली बार डेंड्रोबियम (आर्किडेसी) की चार जातियाँ डेंड्रोबियम अमोनियम, डेंड्रोबियम केपिलाइप्स, डेंड्रोबियम क्रिस्टेलिनम एवं डेंड्रोबियम सैलेक्सेंस की नये व्याप्ति अभिलेख की जानकारी के साथ संक्षिप्त वर्णन तथा चित्रांकन दिए गए हैं।