

***Cymbidium bicolor* Lindl. (Orchidaceae): a new report for the orchid flora of Nagaland, India**

**Chitta Ranjan Deb¹, Joyrison Kamba, Temjenokcha B. Longchar
and Hutoka Y. Jakha**

Department of Botany, Nagaland University, Lumami 798 627, Nagaland, India
¹Corresponding author, E-mail: debchitta@gmail.com

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Abstract

Cymbidium bicolor Lindl. (Orchidaceae) is reported as a new distributional record to the orchid flora for the Indian state of Nagaland. A detailed illustration of the species as well as its flowering in the wild is provided for easy identification in the field.

Key words: *Cymbidium bicolor*, New record, Nagaland.

INTRODUCTION

The genus *Cymbidium* of Orchidaceae was established in 1799 by Olof Swartz. The generic name is derived from the Greek 'cymbi' (a boat) in illusion to the shape of the lip. It is represented by about 50 species distributed in S.E. Asia, China, Japan, Indonesia, India and Australia. While the Genus is represented by 26 species in India out of which 2 species is endemic to the country (Misra 2007), there are 15 species, so far, reported from the state of Nagaland (Deb & Imchen 2008, 2011) During a recent field survey to document the orchid resources of Nagaland, the authors encountered the occurrence of a very interesting species in different districts of the state. After perusal of literature (Chowdhery 1998; Pearce & Cribb 2002) the identity of the specimen was confirmed as *Cymbidium bicolor* Lindl. which was not reported earlier from Nagaland (Hynniewta *et al.* 2000; Deb *et al.* 2003; Deb & Imchen 2008). So, the present finding is a new distributional record for the orchid flora of Nagaland. A detailed description along with photographs is provided for its easy identification in the field (Plate I). The voucher specimen is deposited in the herbarium of the Department of Botany, Nagaland University, Lumami, Nagaland, India.

Taxonomic treatment

Cymbidium bicolor Lindl., Gen. Sp. Orchid. Pl.: 164. 1833; Hook.f., Fl. Brit. India. 6: 11. 1890; H.J. Chowdhery, Orch. Arunachal Pradesh 253. fig. 150. 1998.

Plants 20 – 70 cm tall. Pseudobulbs 6 – 10 × 2.5 – 3.5 cm, narrowly ovoid, usually enclosed in persistent, bladeless 4 or 5 sheaths (6 – 9 cm), scarios fibrous with age. Leaves 5 – 7, 40 – 70 × 2.5 – 3.5 cm, linear-oblong, stiff and arching; leaf base 3 – 10 cm long. Inflorescence arching to pendent, 10 – 15 flowered; peduncles 8 – 12 cm, sheathed; sheaths 5, 3 – 4.5 cm long, spreading, boat-shaped and overlapping; rachis 8 – 20 cm long; floral bracts 2 – 4 mm long. Flowers 2.5 – 4 cm across when open; sepals and petals pale yellow and striped brown-maroon; lip white to cream-yellow, with a broad, central maroon-brown stripe; lip

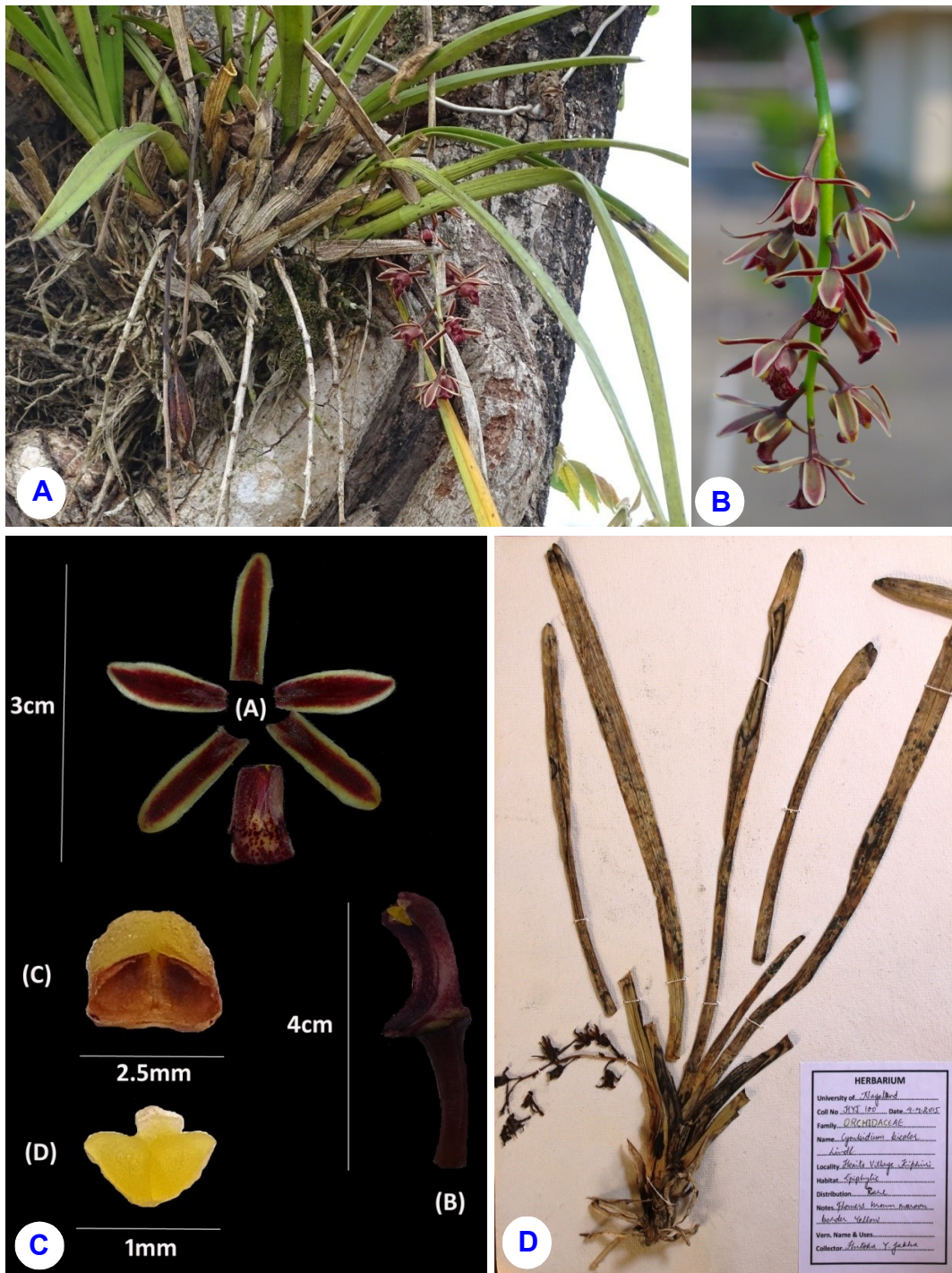


PLATE I: *Cymbidium bicolor* Lindl. (Orchidaceae) : **A.** Habit; **B.** Inflorescence; **C.** Dissected flower parts (a) perigone with lip (b) pedicel, column and ovary (c) anther cap (d) pollinia; **D.** Herbarium specimen HYJ100 (NUH!).

white or cream-colored, with a yellow patch at base, lateral lobes mottled with maroon or red, callus cream-yellow, column cream-colored; pedicel and ovary 0.8 – 4 cm long; sepals 1.5 – 1.8 x 0.4 – 0.5 cm, similar, narrowly oblong to obovate-oblong, obtuse to subacute, erect to spreading. Petals 1.4 – 1.8 x 0.4 – 0.6 cm, narrowly oblong-elliptic and spreading; lip 1.2 – 1.8 x 1 – 1.6 cm, saccate at base, papillose to shortly pubescent; lateral lobes clasping the column, not exceeding, erect, obtuse and recurved; mid-lobe 5 – 8 x 5.5 – 7 mm, broadly-elliptic, rounded and mucronate at apex; callus 2 ridged, entire, minutely papillose-pubescent; column curved, winged at apex, 0.8 – 1 cm long; foot short. Anther cap ca 2.5 mm across; pollinia 2, ca 1 mm, pyramidal. Fruits 4 – 5 x 2 – 2.5 cm, cylindric-ellipsoid.

Key to the closely related species

- 1a. Lateral lobes of lip exceeding the column and anther cap, veined with maroon
 *C. aloifolium*
- 1b. Lateral lobes of lip not exceeding the column and anther cap, finely mottled with maroon *C. bicolor*

Flowering: March – April

Specimens cited: Honito village Kiphiri district, Nagaland; 04.04. 2015, Altitude 782 m; GPS Location N 25°47' 10.6" and E 94° 44' 44.7"; *HYJ100* (NUH!).

General Distribution: Nepal, NE India (Arunachal Pradesh, Assam, Manipur, Meghalaya, Nagaland, Sikkim), Bhutan, China, Myanmar, Thailand.

Note: With the addition of present species, the genus *Cymbidium* is now represented by 16 species in Nagaland.

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LITERATURE CITED

- Chowdhery, H.J. 1998. *Orchid flora of Arunachal Pradesh*. Bishen Singh Mahendra Pal Singh, Dehradun, India.
- Deb, C.R. & Imchen, T. 2008. *Orchid Diversity of Nagaland*. Scichem Publishing House, Udaipur, Rajasthan, India.
- Deb, C.R. & Imchen, T. 2011. Orchids of horticultural importance from Nagaland, India. *Pleione* 5(1): 44 – 48.
- Deb, C.R.; Jamir, N.S. & Temjensangba. 2003. Orchid Diversity of Nagaland. A revised status. *J. Orchid Soc. India*. 17(1-2): 1 – 15.
- Hynniewta, T.M.; Kataki, S.K. & Wadhwa, B.M. 2000. *Orchids of Nagaland*, Botanical Survey of India, Calcutta, India.
- Misra, S. 2007. *Orchids of India (A glimpse)*. Bishen Singh Mahendra Pal Singh, Dehradun, India.
- Pearce, N.R. & Cribb, P.J. 2002. *The Orchids of Bhutan*. Flora of Bhutan Vol. 3, Part 3, Pp. 257 – 271. Royal Botanic Garden, Edinburgh and Royal Government of Bhutan.