

THE GENUS *CYMBIDIUM* SW. (ORCHIDACEAE) IN ODISHA, INDIA

Sarat Misra

Orchid Study Centre, C-89, HIG, Baramunda Housing Board Colony, Bhubaneswar-751 003, Odisha, India

Abstract

Cymbidium Sw. was known by two epiphytic species in the orchid flora of Odisha. One *C. macrorhizon* Lindl., a terrestrial mycotrophic species, collected recently, forms an addition to the orchid flora of Odisha, while extending range of this species southwards into peninsular India.

Introduction

GEOGRAPHICALLY, THE state of Odisha in Eastern India is a climatic border between North and South India. This is appropriately reflected in its flora; Odisha is the meeting ground for the flora of North and South India. The family Orchidaceae is well represented in the state with 137 species in 50 genera (Misra, 2014).

Cymbidium Sw. is an Indo-Malesian genus, mostly epiphytic, less frequently terrestrial, and rarely with mycotrophic species. It is characterized by clustered growth habit, bulbous stem generally covered with closely overlapping sheathing leaf bases, long strap-shaped coriaceous leaves, a lateral drooping or erect inflorescence with many large and attractive flowers. *Cymbidium* is known in India with 26 species, 3 subspecies and 2 varieties (Misra, 2007) and is well distributed in the North and NorthEastern region. In Odisha, it was known with just 2 epiphytic species i.e. *C. aloifolium* Sw. and *C. bicolor* subsp. *obtusum* Du Puy & Cribb (Misra, 2004, 2007, 2014). Recently *C. macrorhizon* Lindl., a terrestrial species with mycotrophic habit, has been collected and is enumerated here.

A key is provided here for identification of the species in the field.

- 1a. Plants epiphytic, autotrophic; leaves 6-8 in number, 45-75 long; Inflorescence from base of pseudo-stem, hanging, many-flowered.
- 2a. Leaves leaf-green, 25-35 mm wide; Inflorescence pendulous, equal to or longer than the leaves; Sepals and Petals pale yellow, purple-streaked medially; mid-lobe of Lip purple-striped, side lobes reaching as high or higher than the column; Keels on blade clavately swollen and broken at middle *C. aloifolium*

- 2b. Leaves deep green, ca. 20 mm wide; Inflorescence arching, much shorter than the leaves; Sepals and Petals maroon with yellow margins; mid-lobe of Lip with irregular purple blotches; side lobes not reaching higher than the column; Keels on blade mildly sigmoid..... *C. bicolor* subsp. *obtusum*
- 1b. Plants terrestrial, mycotrophic, leafless; Inflorescence terminal from rhizome, erect, 5-6 flowered; Sepals cream, purple-streaked medially; Lip cream with a few purple blotches..... *C. macrorhizon*

Enumeration of the Species

The enumeration provides correct name of the taxon dealt with, the basionym, and synonyms, if any, and is followed by citation of species with brief notes on the phenology, ecology and its occurrence in the state. The distribution record, both within the states of India and outside, is based on available literature (Fig. 1. a-c).

Cymbidium aloifolium (L.) Sw.

Nov. Act. Soc. Reg. Sci. Upsal. 6:73.1799; Hook.f., Fl. Brit. India 6:10.1890 (in part); Fischer in Gamble, Fl. Pres. Madras 3(8):1436.1928; Mooney, Suppl. Bot. Bihar & Orissa: 214.1950; Tiwari & Maheshwari, Ind. For. 89:429.1963; Ramakrishna in Pullaiah, Fl. Andhra Pr. 3: 935. 1997; Misra, Orch. Orissa:523.2004 & Orch. Odisha- a handbook: 268. 2014. *Epidendrum aloifolium* L., Sp.Pl. ed. 1: 953. 1753.

Type

India, Kerala, Malabar. Illustration in *Rheede*, Hort. Malab.t.8.1703.

Ecology

Grows in moist deciduous mountainous forests (200-800m), at moderate heights, usually on forks of tree



Fig. 1a-c: a, *Cymbidium aloifolium* (L.) Sw.; b, *Cymbidium bicolor* subsp. *obtusum* Du Puy & Cribb.; c, *Cymbidium macrorhizon* Lindl. (Photo c: courtesy: K. K. Mandal)

trunks; sometimes found growing on rocks.

Flowering

April-June; blooming from base upwards, several flowers bloom at a time and last for about one wk.

Occurrence

Baleswar distt.: Kuldha; Khurdha distt.: Barabara. Kendujhar distt.: Rebana; Malkangiri distt.: Balimela-Chitrakonda; Mayurbhanj distt.: Simlipal; Rayagada distt.: Niyamgiri hills; Sundargad distt.: Chunaghat etc. Frequent.

Cymbidium bicolor subsp. *obtusum* Du Puy & Cribb.

The Genus *Cymbidium*: 70.1988; Pearce & Cribb, Orch. Bhutan: 260.2002; Misra, S., Notes on *Cymbidium bicolor* Lindl. from India. Proc. Nat. Conf. Orch. Soc. India, March 2017. Abstracts: 5.2017. *C. bicolor* sensu Seidenf. Opera Bot. 72: 81.t.44.pl.5b.1983 (*syn.excl.*); *ibid.* 114:338.1992 (*syn. excl.*); Misra, *op. cit.*: 526 & 270. *C. pendulum* sensu King & Pantl., Ann. Roy. Bot. Gard. Calcutta 8: 188.t.251.1898; Pradhan, Ind. Orch. 2:475.1979.

Type

Thailand, Uttaradit, Menzies & Du Puy 120 (holo K).

Flowering

February - March. All the flowers bloom simultaneously and last for about one wk.

Ecology

Grows in semi-evergreen forest (600-900 m), under dense shade, in moist localities. It grows usually at low heights.

Occurrence

India, Odisha, Mayurbhanj distt.; Simlipal forest; occasional.

Distribution

India, Nepal, Bhutan, China, Myanmar, Laos, Vietnam, Cambodia.

Cymbidium macrorhizon Lindl.

Gen. Sp. Orch. Pl.: 162.1833; Hook.f., Fl. Brit. India 6:9.1890; Pradhan *op.cit.*:470.

Type

Kashmir, Icon Royle (holo K-Lindl.)

Scattered leafless herbs with underground rhizomatous stem. Inflorescence raceme, erect, 12-15 cm high, bearing 5-6 ascending well-spaced flowers. Pedicelled ovary 23-27 mm long, pale green. Flowers 30-35 mm across. Sepals spreading, oblong-lanceolate, acute, narrowed to base, 24-28×6-7mm; lateral sepals 20-24×5-6mm. Petals arched over the column, 18-21×5-6mm; both sepals and petals are cream, medially purple-

streaked. *Lip* 3-lobed, ca. 15×8mm; lateral lobes narrow, erect, with inflexed margins; mid-lobe oblong-triangular, obtuse, recurved, margin undulate; cream with a few large purple blotches; disc with two elongated lamellar ridges.

Flowering

June.

Ecology

Grows in tropical moist deciduous forest (ca. 600 m), under shade in damp humus along with leaf-litter.

Occurrence

Odisha, Sundargad district, Koida forest block; rare.

Distribution

India (Himachal Pradesh, Uttarakhand, Meghalaya, Arunachal Pradesh, Nagaland, Mizoram), Pakistan, Nepal, China, Myanmar, Thailand, Laos, Cambodia.

The locality of occurrence of this species in Koida forest block is an orchid-rich area of Odisha (Misra, 2004,

2014). One terrestrial species *Liparis udaii* S. Misra was described from its vicinity as a novelty (Misra, 2009). It is also the home, next only to Similipal in Mayurbhanj district, to another terrestrial orchid *Goodyera thailandica* Seidenf., that formed a new record to the flora of India (Misra, 1988). The present occurrence of *C. macrorhizone* forms an addition to the orchid flora of Odisha, while extending its range southwards into peninsular India, and is thus significant.

References

Misra, S. 1988. The genus *Goodyera* in Orissa, India. *J. Orchid Soc. India*, **2**(1-2): 19-23.

Misra, S. 2004. *Orchids of Orissa*. Bishen Singh Mahendra Pal Singh, Dehra Dun, India.

Misra, S. 2007. *Orchids of India - A Glimpse*. Bishen Singh Mahendra Pal Singh, Dehra Dun, India.

Misra, S. 2009. A new species of *Liparis* L.C. Richard (Orchidaceae) from Odisha, India. *J. Orchid Soc. India*, **23**(1-2): 87-90.

Misra, S. 2014. *Orchids of Odisha – A Handbook*. Bishen Singh Mahendra Pal Singh, Dehra Dun, India.