

IDENTITY OF *COELOGYNE ANGUSTIFOLIA* SENSU WIGHT (ORCHIDACEAE)

There has been confusion on the identity of *Coelogyne angustifolia* ever since its publication by Robert Wight (1851). It has been treated as a synonym of *C. odoratissima* Lindl. and *C. breviscapa* Lindl. Wight himself was doubtful about the taxonomic status of the species he had dealt with. The specimen he made use of for his description was more or less identical with the already described species—*C. angustifolia* of Richard (1841). The only difference he could make out in his specimen was the obtuse tip of the midlobe of lip as against the acute tip in Richard's species.

Hooker (1890) has considered *C. angustifolia* of Wight distinct from that of Richard's and treated the former as a synonym under *C. breviscapa* Lindl. and the latter under *C. odoratissima* Lindl. Hooker is correct in treating *C. angustifolia* Rich. as conspecific with *C. odoratissima* Lindl. but not in the case of *C. angustifolia* of Wight. The only character which prompted him to treat *C. angustifolia* of Wight as identical with *C. breviscapa* Lindl. is "sheaths of the scape imbricating, none becoming foliaceous", a character variable during ontogeny, and an aspect which is discussed later in this paper. Hooker (1890) himself was confused as is evident from his note—"very near to *C. odoratissima*" under *C. breviscapa*. This misconception of the "sheaths" character at a particular stage in *C. angustifolia* of Wight, made him treat it as a synonym of *C. breviscapa*, whereas the two are quite distinct.

Kränzlin (1907) followed by Fischer (1928) considers *C. angustifolia* of Wight and that of Richard as distinct, making *C. angustifolia* of Richard as a variety under *C. odoratissima* Lindl. following Lindley (1852) and treating *C. angustifolia* of Wight as a distinct species. While giving *C. angustifolia* of Wight specific status the nomenclatural validity of the epithet, *angustifolia* is overlooked as it is a later homonym of Richard's (1841). But the problem does not arise here, since Kränzlin's *C. angustifolia* Wt. is considered a synonym of *C. odoratissima* Lindl.

The previous workers have taken into consideration the young (undeveloped) and developed leaves of the scape at the time of flowering as the main criterion for specific delimitation in this genus. The leaves referred to as "sheaths" or "inner sheaths" (Wight 1851, Hooker 1890, Fischer 1928) may be

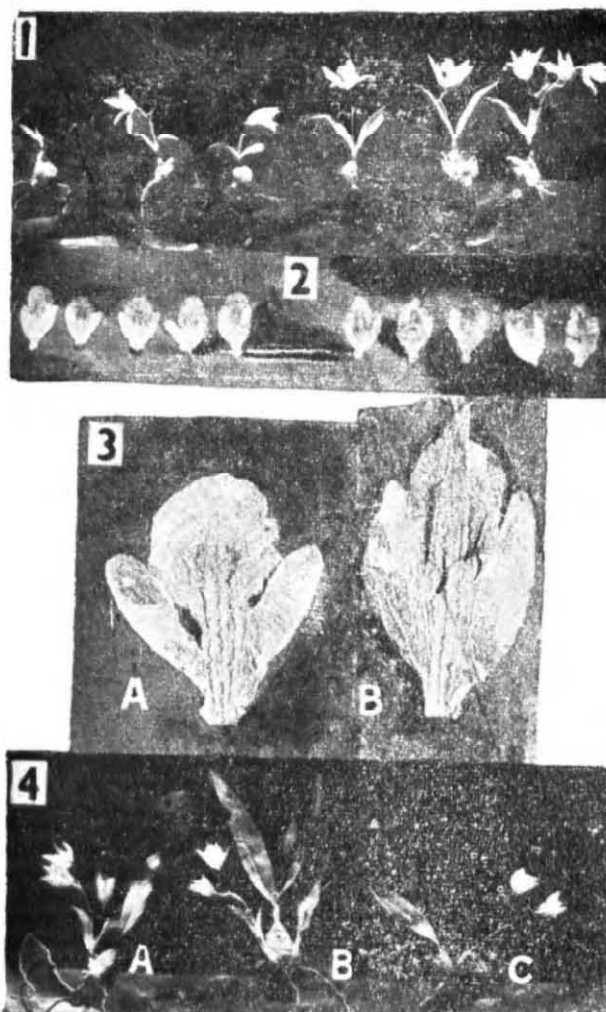


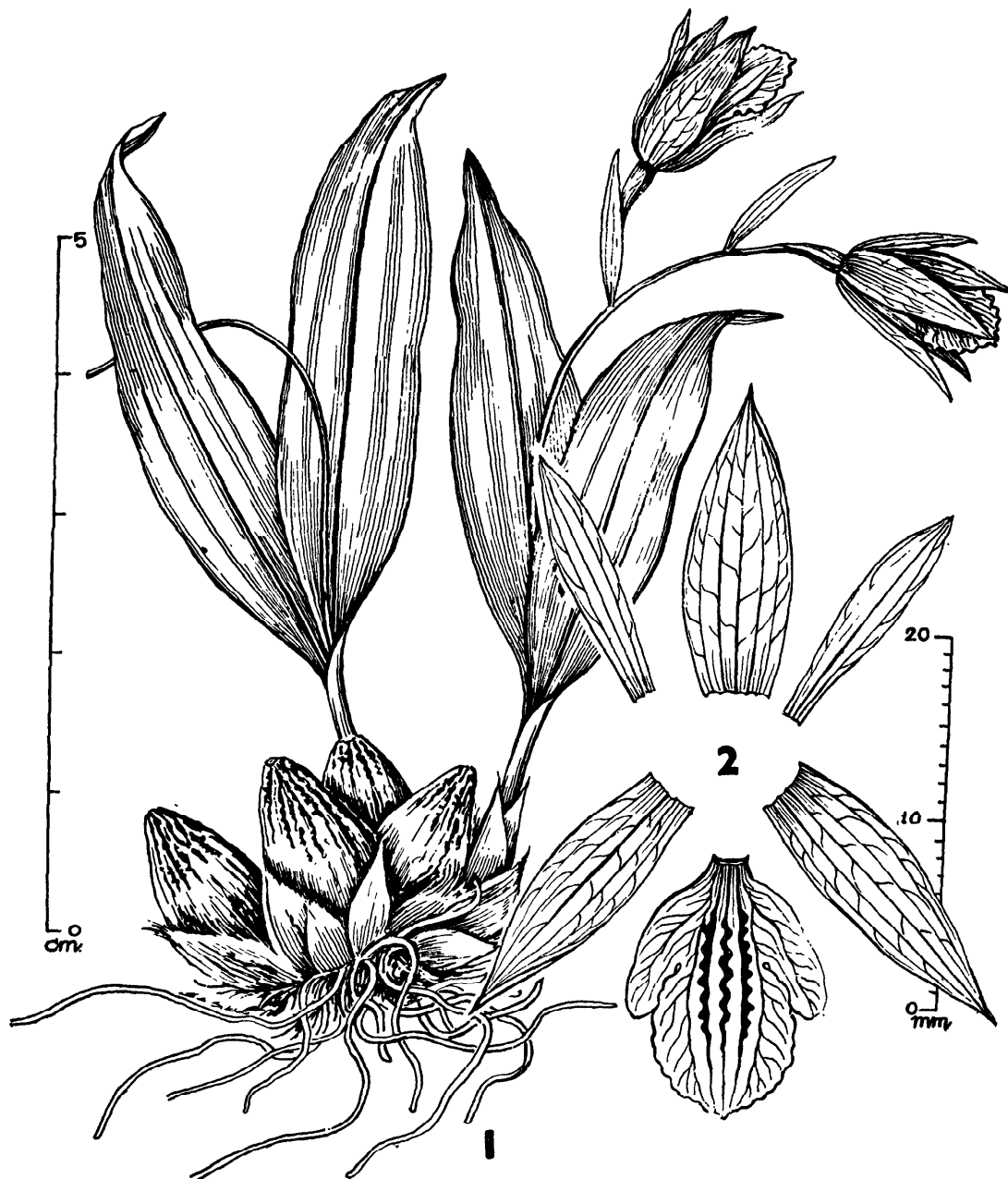
Plate 1: Figs. 1-4: Variation in leaves and midlobe of lip in *Coelogyne odoratissima* Lindl.

1. Variation in developmental stages of leaves $\times \frac{1}{2}$. 2. Variation in the shape of midlobe of lip $\times \frac{1}{2}$. 3 A-B. Two forms of midlobe of lip $\times 3$. A. Sub-orbicular. B. Broadly elliptic. 4 A-C. Pseudobulbs with two leaves and solitary leaf $\times \frac{1}{2}$. A. Solitary leaf. B. Two leaves. C. Solitary leaf.

foliaceous (if the leaves attained maturity) or non-foliaceous (if they are immature) according to the developmental stages. The specimens collected from different localities in Nilgiris, including the collection locality of Wight, show a gradual variation in developmental stages (heteroblastic development) of leaves attached to the scape (Plate 1). From studies on the herbarium specimens, as well as on live plants grown in the garden, we find that there is no difference between the leaves attached to the scape

(so called "sheaths") and regular ones, as the previous workers mistook. When young leaves sprout from immature pseudobulbs they are surrounded by scarious sheaths (referred to as "outer sheaths" by Hooker 1890) and at maturity of pseudobulbs the leaves fall off, thus giving rise to new pseudobulbs

in sympodial manner. Sometimes one of the two leaves falls off, and it looks as if the pseudobulbs have solitary leaves (Plate 1). Wight (1851) was misled by this phenomenon as evident from his description—"pseudobulbs.....one or two-leaved". However, they are invariably two-leaved.



Figs. 1-2 : *Coeloglyne odoratissima* Lindl.
1. Plant with flowering raceme. 2. Floral parts.

There is great variation in the shape of midlobe of the lip. It varies from sub-orbicular to broadly elliptic (Plate 1). This variation is only observed in plants collected from Avalanche, and not in the specimens collected from other localities. Further the Avalanche-specimens show the midlobe of the lip to be acute, as described by A. Richard, and specimens from other localities (Naduvattam, Doddabetta, etc.) show the midlobe of the lip obtuse. The variation observed in the populations from Avalanche, with intermediate forms from acute to obtuse, discount the taxonomic significance earlier attached to the two extreme shapes. However, the presence of variation in the populations of Avalanche and its apparent absence in other localities is of some interest, as all these localities are in the same phyto-geographical region. From studies on developmental variation of leaves and range of variation on the shape of midlobe of lip, the authors find no justification in keeping *C. angustifolia* of Wight as well as that of Richard as distinct and now treat them under *C. odoratissima* Lindl.

Coelogyne odoratissima Lindl. (in Wall. Cat. 1960. 1829, *nom. nud.*) Gen. Sp. Orch. 41. 1830; Hook. f. Fl. Brit. India 5: 834. 1890; C.E.C. Fischer in Gamble's Fl. Pres. Madras 1430. 1928. *C. angustifolia* A. Rich. in Ann. Sci. nat. ser. 2, 15: 16, t. 6. 1841, *synon. nov., sensu* Wt. Icon. 5 (1): 5, t. 1641. 1851; Kränz. in Pflanzenr. 32: 50. 1907; C.E.C. Fischer in Gamble's Fl. Pres. Madras 1430. 1928. *C. odoratissima* Lindl. var. *angustifolia* (A. Rich.) Lindl. Fol. Orch. 10. 1852; Kränz. in Pflanzenr. 32: 52. 1907; C.E.C. Fischer in Gamble's Fl. Pres. Madras 1430. 1928. *C. breviscapa sensu* Hook. f. Fl. Brit. India 5: 833. 1890, *pro parte*, non Lindl. (1852).

Epiphytic or lithophytic herb. *Pseudobulbs* 1.0-2.8 × 0.8-1.8 cm, ovoid or subglobose. *Leaves* two, 4-12 × 0.6-1.8 cm, arising from the top of pseudobulbs, elliptic, lanceolate, petioled. *Scape* 3-9 cm long with five laterally compressed sheaths; sheaths 0.7-2.2 cm long, ovate-oblong, acute, clasping the young leaves at the base of scape. Racemes 2-4 flowered, mostly 3. *Flowers* white, pedicellate, bracteate. Bracts 1.0-1.8 × 0.4-0.8 cm, elliptic, 7-

nerved, persistent. Pedicels with ovary 1.0-1.3 cm long. *Sepals* subequal, $\pm$ 1.8 × 0.8 cm, elliptic, 5-nerved, mucronate, with a median keel at the back; lateral sepals narrower than the dorsal ones. *Petals* $\pm$ 1.6 × 0.4 cm, obliquely elliptic, 3-nerved. *Lip* $\pm$ 1.6 cm long, broadly elliptic or obovate in outline, 3-lobed; midlobe sub-orbicular or broadly elliptic, obtuse to acute with wavy margins, yellowish tinged in the middle; disc with 3 crenate ridges extending to the end of midlobe; side lobes half as long as the midlobe, falcately ob'ong, embracing the column. *Column* $\pm$ 0.8 cm long, erect, winged on either side, hooded at the top with minute teeth; foot 0. *Anther* ovoid, brownish, attached near the apex of column; pollinia 4, in pairs, light yellow. Stigmatic surface broadly obovate. *Capsules* 1.5-2.5 × 0.8-1.2 cm, broadly ellipsoid, 6-angled; pedicel short (Plate 1, figs. 1-4 & Text figs. 1 & 2.).

Specimens examined: NILGIRIS: without precise locality, *Herb. Wight* 2066; Doddabetta, May 1883, *Lawson* s.n. (MH. 50345); Doddabetta, April 1971, *Rathakrishnan* 38082; Avalanche, Sept. 1886, *Lawson* s.n. (MH. 50247); Avalanche, April 1972, *Vivekananthan* 40724; Naduvattam, March 1887, *Lawson* s.n. (MH. 50344); Naduvattam, Jan. 1961, *Shetty* 11917; Ootacamund, May 1889, *Barber* 274; Pykara, May 1889, *Rangachari* s.n. (MH. 50348, 50349, 50350); Kundhas, Feb. 1911, *Fischer* 2526; Lakkadi, June 1970, *Shetty* 34107; T. R. Bazaar, Feb. 1972, *Sharma* 39873; Upper Bhavani, April 1972, *Vivekananthan* 40703 [MH.].

This species is often found in Sholas as an epiphyte on *Rhododendron nilagiricum* Zenk., *Rapanea wightiana* Mez, *Syzygium calophyllifolium* (Wt.) Walp., etc. It has also been observed as a lithophyte in open Grasslands of Doddabetta.

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