

## *Pseudocymbidium dodsonii* (Orchidaceae, Maxillariinae), a new species from Ecuador

Dariusz L. Szlachetko & Monika Lipińska

**Summary:** Description and illustration of a new species from the orchid genus *Pseudocymbidium*, *P. dodsonii* sp. nov., is presented. Its taxonomic affiliation is briefly discussed. A key to the species of the genus is provided.

**Keywords:** taxonomy, new species, determination key, *Pseudocymbidium*, Maxillariinae, Neotropics

Generic delimitation within the Neotropical orchid subtribe Maxillariinae has been problematic since the description of the genus *Maxillaria* by Ruiz and Pavon in 1794 (BLANCO et al. 2007). For a long time, this large genus has been considered an assemblage of morphologically disparate taxa (WHITTEN et al. 2007a, b). This has led to the suspicion of the non-monophyletic character of Maxillariinae (BLANCO et al. 2007). In 2012 (SZLACHETKO et al.), *Pseudocymbidium* was excluded from *Maxillaria* on a molecular and morphological basis (*sensu* BLANCO et al. 2007). The genus *Pseudocymbidium* Szlach. & Sitko embraces four species: *P. canarinum* (D. E. Benn. & Christenson) Szlach. & Sitko, *P. linearis* (C. Schweinf.) Szlach. & Sitko, *P. leforii* (D. E. Benn. & Christenson) Szlach. & Sitko and *P. lueri* (Dodson) Szlach. & Sitko (SZLACHETKO et al. 2012). Plants have a characteristic habit: they are somewhat reminiscent of cymbidiums. Pseudobulbs are surrounded by more or less prominent foliaceous sheaths. Leaves and sheaths are similar, linear-lanceolate, long-acuminate, grass-like and very long. Inflorescences are single-flowered, much shorter than leaves. Flowers are produced singly or in fascicles. The plants often grow on tree branches.

### Description and taxonomy

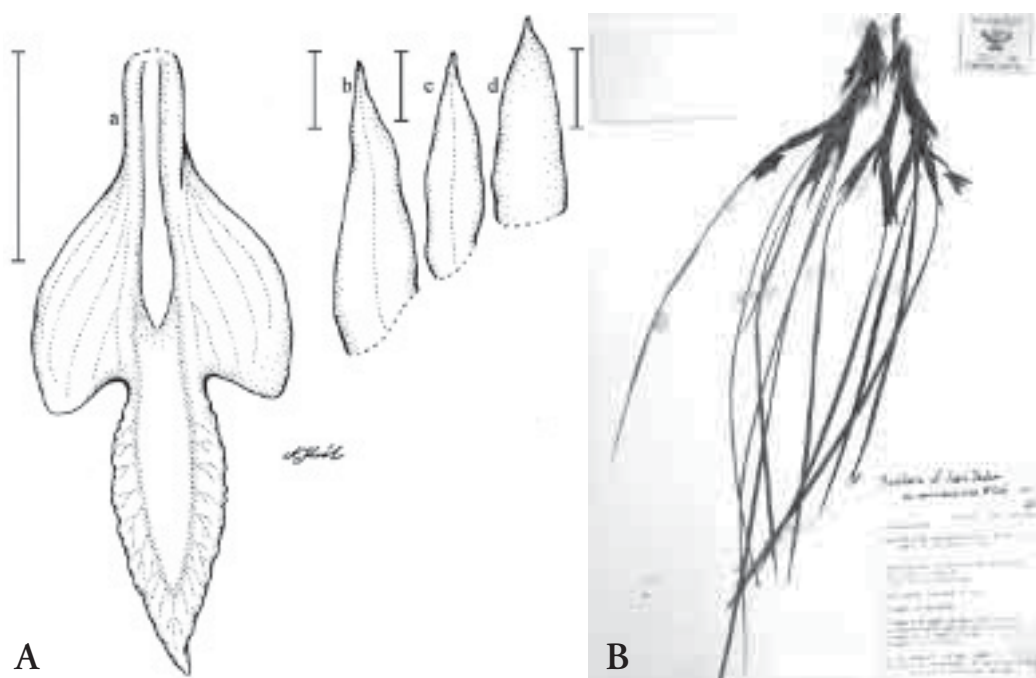
During revision of the orchid material kept at Missouri Botanical Garden Herbarium [MO], authors came across material which does not fit the description of any species previously described. So, this material is proposed as new species:

*Pseudocymbidium dodsonii* Szlach. & M. Lipińska, sp. nov. (Fig. 1)

**Diagnosis.** The plants are similar to *Pseudocymbidium lueri* (Dodson) Szlach. & Sitko, but with grass-like (instead of semiterete) leaves and deeply 3-lobed lips with prominent lateral lobes, which are obliquely rhombic (*vs.* oblong-ovate), and the middle lobe is ovate-lanceolate, acute, keeled on the outside (*vs.* ligulate, truncate to emarginate).

**Type.** Ecuador. Morona-Santiago. Road Mendez to Morona, km 45 to 63. Alt. 800–1000 m. 22 Nov 1989. C. Dodson, N. Williams, E. Hagsater & M. Whitten 17852a [Holotype: RPSC! – right hand specimen]. (Orchids of RPSC transferred to MO)

**Etymology.** Dedicated to Dr Calaway H. Dodson, an eminent collector and specialist of the Ecuadorean orchids.



**Figure 1.** A – Flower segments of *Pseudocymbidium dodsonii* (holotype) drawn by A. Król. a – lip, b – dorsal sepal, c – petal, d – lateral sepal. Scale bars = 5 mm; B – herbarium sheet, holotype at the right hand [RPSC].

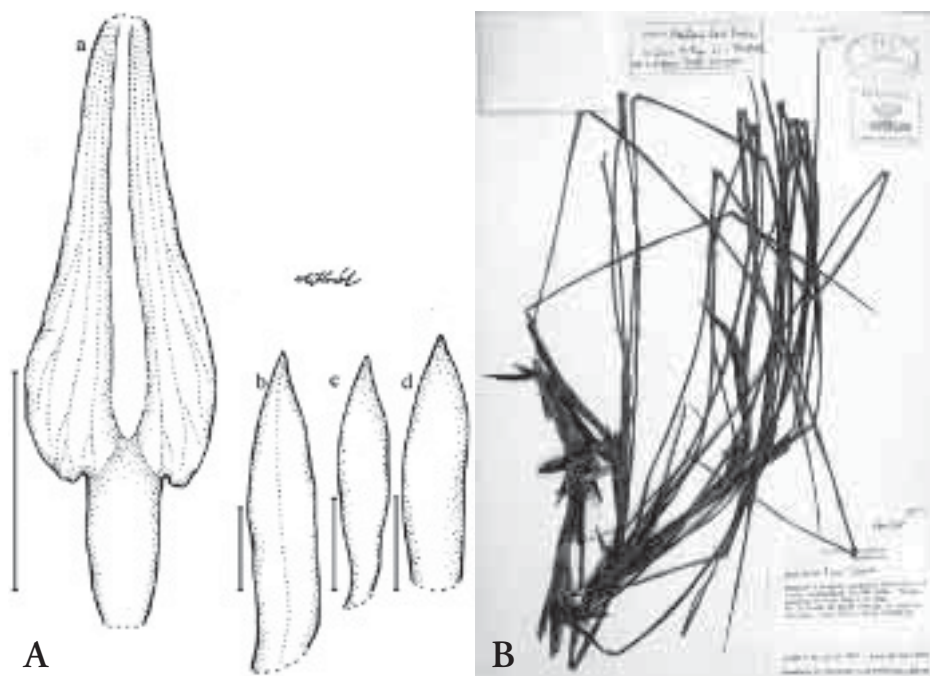
**Description.** Plants pendent. Pseudobulbs 2.5 cm long, 0.3 cm in diameter, cylindrical, 1-leaved, enclothed in semi-scarious sheaths. Leaf up to 25 cm long and 0.3 cm wide, thin, grass-like, acute. Inflorescence 1-flowered. Peduncle up to 2 cm long, covered with some sheaths. Flowers medium-sized, bright yellow, with the lip streaked with red on the backside. Floral bracts up to 16 mm long, oblong, acute. Pedicel and ovary up to 16 mm long. Dorsal sepal 14 mm long, 4 mm wide, oblong-triangular, acute to acuminate, several-nerved. Petals 14 mm long, ca 3.5 mm wide, obliquely elliptic-lanceolate, subacuminate, few-nerved. Lateral sepals 20 mm long, 5 mm wide, obliquely narrowly triangular, acuminate, several-nerved. Lip 16 mm long in total, deeply 3-lobed near the middle, callus oblong, glabrous, in the lower half of lamina; lateral lobes 9 mm long, 7 mm wide across lateral lobes, obliquely rhombic, rounded at the apex; the middle lobe 7 mm long, 3 mm wide, ovate-lanceolate, acute, keeled on the outside, thickened along midvein, wrinkled along margins. Gynostemium 6 mm long, clavate, somewhat swollen at the apex, column foot 6 mm long.

**Ecology.** Wet lower montane forest.

**Distribution.** Known only from the type collection.

**Notes.** *Pseudocymbidium dodsonii* is similar in habit to *P. lueri* (Dodson) Szlach. & Sitko (Fig. 2), but both species can easily be distinguished on the basis of a series of characters. First of all, the leaves of *P. dodsonii* are thin, grass-like, whereas in *P. lueri* they are semiterete, grooved on the adaxial surface. The lip of the new entity is deeply 3-lobed with prominent lateral lobes being obliquely rhombic and the middle lobe ovate-lanceolate, acute, keeled on the outside. The lip of *P. lueri* is shallowly 3-lobed with oblong-ovate lateral lobes and the middle lobes are ligulate, truncate to emarginate. The middle lobe of *P. dodsonii* is as long as the lateral lobes, while the

# A new species of *Pseudocymbidium* (Orchidaceae, Maxillariinae)



**Figure 2.** A – Flower segments of *Pseudocymbidium lueri* (holotype) drawn by A. Król. a – lip, b – dorsal sepal, c – petal, d – lateral sepal. Scale bars = 5 mm; B – holotype [RPSC].

length ratio of these lip segments in *P. lueri* is 2:1. The new species is somewhat similar to *P. canarinum* from Peru, but it can be easily distinguished by the middle lobe of the lip which is ovate-lanceolate, acute. In the latter species, the middle lobe of the lip is elliptic, obtuse-rounded and bullate over its entire surface.

## Key to the species of *Pseudocymbidium*

- 1 Plant erect, slender ..... *P. linearis*
- 1\* Plant pendent ..... 2
- 2 Lip midlobe acute at the apex ..... *P. dodsonii*
- 2\* Lip midlobe elliptic, obtuse-rounded ..... 3
- 3 Lip callus pubescent ..... *P. leforii*
- 3\* Lip callus glabrous ..... 4
- 4 Lip deeply 3-lobed, middle lobe bullate over its entire surface ..... *P. canarinum*
- 4\* Lip obscurely 3-lobed, the middle lobe not bullate ..... *P. lueri*

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