

A NEW *CYRTOCHILUM* (ORCHIDACEAE) FROM BOLIVIA

STIG DALSTRÖM

Marie Selby Botanical Gardens, 811 South Palm Avenue, Sarasota, Florida 34236-7726 USA.
Email: sdalstrom@selby.org

ABSTRACT. A large-flowered and spectacular, previously known *Cyrtochilum* (Orchidaceae; Oncidiinae) from Bolivia is described, illustrated, and compared with similar species.

Key words: Orchidaceae, Oncidiinae, *Cyrtochilum*, Bolivia

INTRODUCTION

This showy *Cyrtochilum* species originally was collected by a team led by Roberto Vásquez, an orchid authority in Bolivia, in an area well known for its richness in orchids and other epiphytic plants. Dried specimens of *R. Vásquez 436* were then brought to the herbarium of the Marie Selby Botanical Gardens (SEL) in Sarasota, Florida, where they have remained incorrectly determined as *Oncidium aemulum* Rchb.f., [= *Cyrtochilum aemulum* (Rchb.f.) Kraenzl.]. The main specimen (the holotype), which includes the vegetative parts, also incorrectly determined, is deposited at the Herbarium Vasquezianum in Santa Cruz, Bolivia.

TAXONOMIC TREATMENT

***Cyrtochilum graciellae* Dalström** sp. nov.

TYPE: Bolivia—Chapare, Tablas, ca. 2500 m, 1 July 1980, *R. Vásquez et al. 436* (Holotype: Herb. Vasquezianum; Isotype: SEL). FIGURE 1.

Haec species *Cyrtochilo aemulo* (Rchb.f.) Kraenzl., et *Cyrtochilo falcipetalo* (Lindl.) Kraenzl., similes est sed columnae apice rotundo et sepalis petalisque flavis bruneoguttatis differt.

Plant epiphytic or terrestrial, more or less caespitose to distant on a creeping, bracteate rhizome. **Pseudobulbs** ovate, unifoliate to trifoliate, subtended basally by distichous sheaths, the uppermost foliaceous. **Leaves** subpetiolate, conduplicate, narrowly obovate, acuminate, 30–50 × 2–5 cm. **Inflorescence** axillary from the uppermost sheaths, initially erect, then wiry, paniculate with widely spaced 3–12-flowered side branches, up to 2 m or more long; bracts large, conspicuous, more or less appressed, scalelike, 10–15 mm long. **Flowers** more or less stellate. **Pedicel with ovary** 3–4 cm long. **Sepals** clear yellow with large irregular brown spots; dorsal sepal basally auriculate, unguiculate to spatulate, cordate ovate, acute, undulate, 27–35 × 21–30 mm; lateral sepals slightly oblique, ba-

sally somewhat auriculate, spatulate, cordate to broadly cuneate, ovate acute to rounded, undulate, 30–35 × 15–28 mm. **Petals** clear yellow with few, smaller brown spots; basally broadly linear, geniculate, unguiculate, cordate, acute, strongly undulate, 23–25 × 15–20 mm. **Lip** yellowish brown with a yellow apex; rigidly attached to the base of the column, then projecting forward in a 90° angle from the column, then distinctly bent down above the callus, cuneate, trilobate with hastate, slightly up-curved, acute, ridged sidelobes and an elongate, narrowly ligulate, acute, somewhat canaliculate, apically recurved frontlobe, 23–27 × 9–13 mm. **Callus** yellow; of a fleshy, central, longitudinal, spreading, multi-ridged structure, extending from the base up to ¼ the length of the lamina, terminating in series of centrally slightly pubescent, variable and dissimilar lobes and denticles. **Column** dull greenish, more or less covered by dark brown-purple, less so ventrally and apically; erect, clavate, almost straight, with distinct basal, lateral lobes, then slightly concave ventrally and rounded apically, with variable, shortly digitate to distinctly bilobed, erect wings on each side of the stigmatic surface, ca. 10 mm high from the lip. **Anther cap** yellow, globular, slightly lobulate dorsally, and slightly buccinate laterally. **Pollinarium** of two obovoid to pyriform, cleft pollinia, on an almost circular to broadly obovate ca. 1.8 mm long stipe, with an elongate, cuspidate viscidium.

Cyrtochilum graciellae differs from other similar species by a combination of features. The rounded apex of the column readily separates it from species such as *C. aemulum* (Rchb.f.), Kraenzl. (FIGURE 2A) and *C. falcipetalum* (Lindl.) Kraenzl. (FIGURE 2B). The lack of the daggerlike projections on the ventral side of the column in *C. graciellae*, as contrasted to *C. gargantua* (Rchb.f.) Kraenzl. (FIGURE 2C) and others, is another distinguishing character, particularly in combination with the clear yellow flowers spotted in brown, which superficially, very closely resemble those of *C. gargantua*.

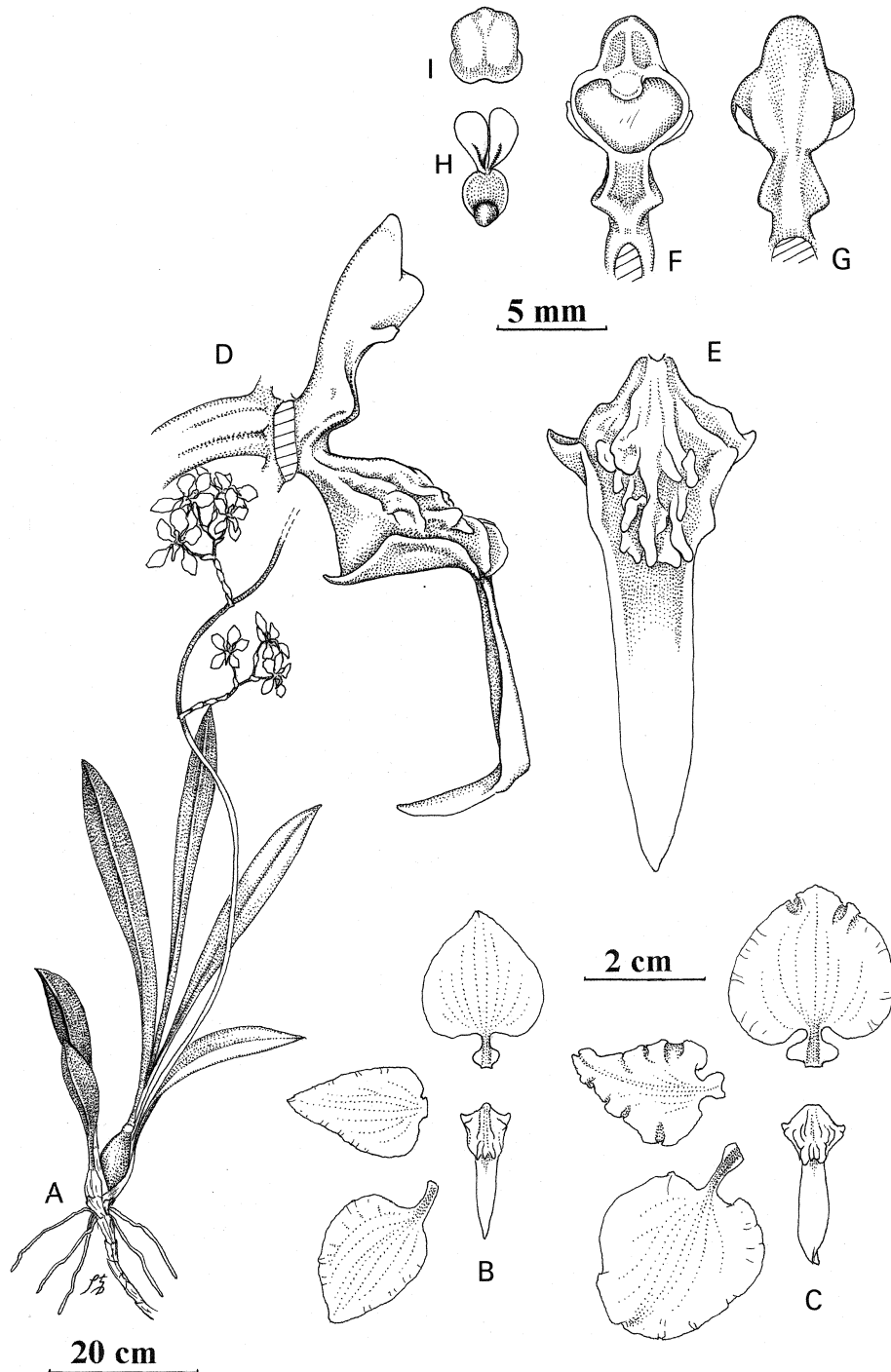


FIGURE 1. *Cyrtorchilum gracielae* Dalström. **A.** Habit. **B.** Floral diagram (flower from the apical portion of the inflorescence). **C.** Floral diagram (flower from the basal portion of the inflorescence). **D.** Column and lip, lateral view. **E.** Lip, ventral view. **F.** Column, frontal view. **G.** Column, dorsal view. **H.** Pollinarium. **I.** Anther cap. *R. Vasquez et al.* 436 (Holotype: Herb. Vasquezianum; Isotype: SEL). Drawings by the author.

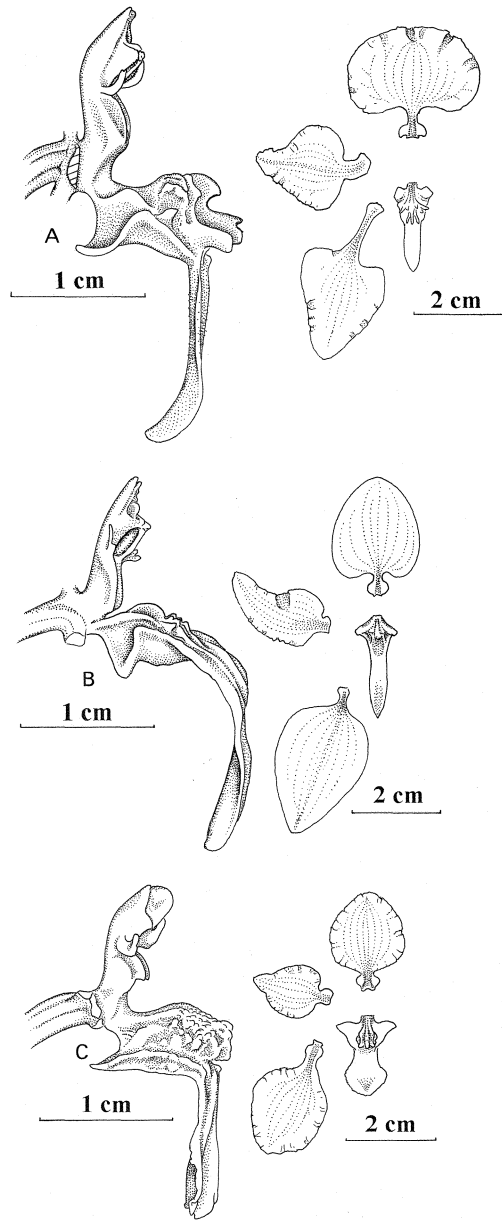


FIGURE 2. Comparison of three floral diagrams of *Cyrtochilum* species with lateral views of column and lip. **A.** *Cyrtochilum aemulum* (Rchb.f.), Kraenzl., *Dalström 1563* (SEL). **B.** *Cyrtochilum falcipetalum* (Lindl.) Kraenzl., *Linden 626* (K-L). **C.** *Cyrtochilum gargantua* (Rchb.f.) Kraenzl., *Dalström 2425* (SEL). Drawings by the author.

Cyrtochilum graciellae grows epiphytically or terrestrially in a very wet and botanically rich cloud forest area east of the city of Chapare, along the road to Villa Tunari. It grows together with numerous other showy or botanically interesting orchid species, such as *C. tetraplasium* (Rchb.f.) Dalström, *Masdevallia burianii* Luer & Dalström, *M. chaparensis* T.Hashim, *M. nitens* Luer, *M. tinekae* Luer, *M. vasquezii* Luer & R.Vásquez, *Odontoglossum dracoceps* Dalström, and *O. multistellare* Rchb.f. This area is being threatened by deforestation, and it may be just a matter of time until most of the forests outside of national parks and private reserves are lost. The orchid flora of Bolivia is rich but not particularly well known, despite efforts by Roberto Vásquez and others. Scientific inventories accompanied by extensive but responsible collecting are essential ingredients in the preparation of floristic treatments, which in turn form the basis for effective conservation efforts.

ADDITIONAL SPECIMENS: Bolivia—Chapare, Tablas Montes, in cloud forest, 2550 m, 26 Nov. 1999, *Dalström 2414-A*, color transparency (SEL).

ETYMOLOGY: Named in honor of Graciela McGillicuddy, a patron of the Marie Selby Botanical Gardens, for her support of science and conservation programs.

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