

A NEW SPECIES OF *STELLILABIUM* (ORCHIDACEAE) FROM SOUTHERN COLOMBIA

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Abstract. A new species of *Stellilabium* Schltr. is described and illustrated based on Colombian material. The novelty is distinguished from the similar *S. pogonostalix* (Rchb. f.) Garay & Dunst. and *S. alticola* Dodson & Escobar by its ovate lip, which is broadest near the middle. An identification key for the Colombian *Stellilabium* species is provided.

Key words: Andes, biodiversity, Telipogoninae

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INTRODUCTION

The orchid genus *Stellilabium* Schltr. was described by Rudolf Schlechter (1915) based on *S. astroglossum* (Rchb. f.) Schltr. The author found that this species differed from other *Telipogon* Kunth species in its smaller plant size and its flower morphology: elliptic to ovate sepals, denticulate petals, and ovate lip with small lateral lobes. Over ten years later the second species of *Stellilabium* was described by Ames and Schweinfurth (1925). The relationships between *Stellilabium* and two other genera later described by Schlechter (1921) *Sodiroella* Schltr. and *Dipterostele* Schltr. were discussed by Braas and Lückel (1982a, b), Garay and Romero-González (1998) and Dressler (1999), but currently most authors include *Dipterostele* and *Sodiroella* in *Stellilabium*. Molecular research suggested that all species of *Stellilabium* should be lumped in *Telipogon* (Williams *et al.* 2005), but in our opinion the observable morphological differences between representatives of the two taxa – peduncle and rachis form (flattened in *Stellilabium*, cylindrical or triquetrous in *Telipogon*; Dressler 2003) and flower morphology (all tepals similar

in *Stellilabium* and dissimilar in *Telipogon*) – are sufficient to maintain them as separated genera.

Representatives of *Stellilabium* do not produce pseudobulbs and their stem is short. The small conduplicate leaves are sometimes absent during flowering. The tiny resupinate flowers of *Stellilabium* are arranged in a lateral, racemose or paniculate, few- to many-flowered inflorescence which is longer than the leaves. The lip is entire or 3-lobed, usually covered with hairs. The gynostemium is short, relatively robust, with a hairy or pubescent column part. Four obovoid to obliquely obovoid pollinia are produced.

About 50 species are currently grouped in *Stellilabium*. The geographical range of the genus extends from western South America and Venezuela to Costa Rica and Mexico in the north. Species of *Stellilabium* grow as twig epiphytes, usually in wet cloud forest. Their occurrence has been reported from premontane and montane areas up to ca 2500 m a.s.l.

So far 7 representatives of the genus have been reported from Colombia: *S. alticola* Dodson & Escobar, *S. andinum* (L. O. Williams) Garay & Dunst., *S. atropupureum* P. Ortiz, *S. hirtzii* Dodson and *S. lankesteri* (Ames) Dressler (Ortiz

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Valdivieso & Uribe Vélez 2007; Pérez Escobar *et al.* 2011; Bernal *et al.* 2015). The national flora is rather poorly recognized, and in the last few years numerous new species of Orchidaceae have been described from this region (e.g., Kolanowska & Szlachetko 2014; Hills & Weber 2012; Dalström & Ruíz Pérez 2012). In neighboring Ecuador, with a land area four times smaller than Colombia territory, 11 species of *Stellilabium* have been found (Dodson 2004).

Our research in southern Colombia revealed a distinctive species of *Stellilabium*, which is described here as new.

TAXONOMIC TREATMENT

Stellilabium valdiviesoanus Kolan. & R. Medina Tr., *sp. nov.* Figs 1 & 2

Species resembling *S. pogonostalix* (Rchb. f.) Garay & Dunst. and *S. alticola* distinguished by the ovate lip which is the broadest near the middle.

HOLOTYPE: COLOMBIA. Putumayo. Lower part of the village La Cumbre. Alt. 2150 m. 1 Mar. 2014. *R. Medina T. 186* (MEDEL).

Plant minute, up to 5 cm tall. Leaves 1–2 cm long, 0.3–0.5 cm wide, oblong-elliptic, acute. Flowers produced singly in succession, yellowish green with bases of petals and lip flushed maroon, veins of petals and lip brownish. Floral bracts up to 2.3 mm long, ovate, subacute. Ovary 3.5 mm long. Dorsal sepal 3 mm long, 1 mm wide, ovate-lanceolate, acute, 1-veined. Petals 3.2 mm long, 1.3 mm wide, elliptic, acute, 3-veined, glandular near base. Lateral sepals 2.9 mm long, 0.9 mm wide, obliquely lanceolate-ovate, acute, 1-veined. Lip 3 mm long, 1 mm wide, ovate, obtuse, with two horn-like appendages at base, 3-veined, base glandular-pubescent, margins minutely ciliate. Gynostemium 0.7 mm long, with tufts of setose hairs with stellate apices on both anther sides. Capsule 6 mm long.

ETYMOLOGY. Dedicated to Pedro Ortiz Valdivieso (1926–2012), an eminent Colombian orchidologist.

DISTRIBUTION AND ECOLOGY. The new species is known so far exclusively from southern

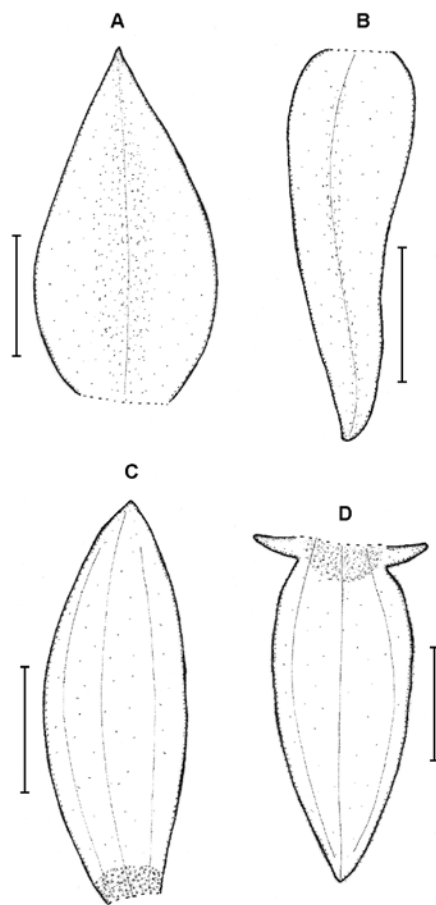


Fig. 1. *Stellilabium valdiviesoanus* Kolan. & R. Medina Tr., *sp. nov.* – dissected perianth. A – dorsal sepal, B – petal, C – lateral sepal, D – lip. Scale bars = 1 mm. Drawn from holotype.

Colombia in the valley of the Sibundoy River. It was found growing epiphytically in recovered forest at ca 2150 m a.s.l. Flowering in March and April.

TAXONOMIC NOTES. This species resembles *S. pogonostalix* (Rchb. f.) Garay & Dunst. and most resembles *S. alticola*. In both of those species the lip is oblong to oblong-ovate, widest near the apical third, equally wide along the basal part (vs lip ovate widest near the middle and narrowing below to the base as well as up to the apex). From the first species it also differs by its successive inflorescence (vs flowers produced simultaneously) and minutely ciliate margins of the lip (vs margins



Fig. 2. *Stellilabium valdiviesoanus* Kolan. & R. Medina Tr., *sp. nov.* A – plant habit, B–D – various views of flower. Photo R. Medina.

hispid). Another similar species is the Costa Rican *S. bullpenense* J. T. Atwood, which is a much taller plant (up to 10 cm) with ciliate petals and the gynostemium very densely covered dorsally with branched bristles. Moreover, in this species the lip is widest in the apical third.

KEY TO THE COLOMBIAN SPECIES
OF *STELLILABIUM*

- | | |
|--|---|
| 1. Gynostemium glabrous | <i>S. hirtzii</i> Dodson |
| 1*. Gynostemium with tufts of hairs | 2 |
| 2. Lip distinctly and abruptly narrowing in apical part | <i>S. microglossum</i> (Schltr.) Dodson |
| 2*. Lip gradually narrowing towards apex | 3 |
| 3. Petals broadly elliptic | 4 |
| 3*. Petals lanceolate to oblanceolate | 5 |
| 4. Lip broadest near base, narrowing towards apex | <i>S. morganiae</i> Dodson |
| 4*. Lip narrowing in apical third, ± equally broad towards basal 2/3 | |
| | <i>S. lankesteri</i> (Ames) Dressler |
| 5. Lip entire, lacking appendices at base | |
| | <i>S. atropupureum</i> P. Ortiz |

- 5* Lip 3-lobed or with distinct appendices at base. . . . 6
 6. Flowers produced singly in succession 7
 6* Flowers produced simultaneously
 S. andinum (L. O. Williams) Garay & Dunsterv.
 7. Lip oblong to oblong-ovate, widest well below
 middle **S. alticola** Dodson & Escobar
 7* Lip ovate
 S. valdiviesoanus Kolan. & R. Medina Tr.

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