

SCAPHYGLOTTIS COBANENSIS (ORCHIDACEAE, EPIDENDROIDEAE), A NEW SPECIES FROM GUATEMALA

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Abstract. *Scaphyglottis cobanensis* Archila, Szlach. & S. Nowak (Orchidaceae, Epidendroideae) is described and compared with the morphologically close species *S. bifida* (Rchb. f.) C. Schweinf. and *S. lindeniana* (A. Rich. & Galeotti) L. O. Williams. The new species is illustrated with SEM images of the labellum and gynostemium.

Key words: epiphyte, Guatemala, new species, *Scaphyglottis*, taxonomy

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INTRODUCTION

The genus *Scaphyglottis* Poepp. & Endl. (Orchidaceae, Epidendroideae) includes *ca* 75 accepted species; several new species were proposed recently (Dressler 2002, 2004; Archilla 2012; Archilla & Chiron 2013; Kolanowska 2013; Szlachetko & Kolanowska 2013a, b, 2014). Representatives of *Scaphyglottis* are distributed from Mexico to Brazil and Bolivia; the diversity center of the genus is Costa Rica and Panama. Most species grow epiphytically, but semiterrestrial species on broken branches and even lithophytes are sometimes recorded. The most common habitats of *Scaphyglottis* species are humid and wet forest as well as cloud forest (Dressler 2005; Szlachetko & Kolanowska 2013a).

Morphologically, *Scaphyglottis* species are characterized by the presence of pseudobulbs arising from the rhizome or the apical part of older pseudobulbs, resupinate or nonresupinate flowers with free, similar sepals, usually wider than the petals, and commonly a prominent column-foot. High diversity of leaf blade and internode shape, the form of the lip and its fusion with the gynostemium, and number of pollinia,

have resulted in the division of *Scaphyglottis* into smaller, morphologically more coherent genera: *Costaricaea* Schltr., *Hexisea* Lindl., *Platyglottis* L. O. Williams, *Reichenbachanthus* Barb. Rodr. and *Tetragamestus* Rchb. f. However, molecular studies of *Scaphyglottis* (Dressler *et al.* 2004) support the earlier proposal to conserve the genus *sensu lato* (Dressler 1994).

Recent studies of *Scaphyglottis* by the senior author in Guatemala revealed a peculiar species which we describe here as new. Including the newly proposed entity, 17 species have been recorded in Guatemala so far.

TAXONOMIC TREATMENT

Scaphyglottis cobanensis Archila, Szlach.

& S. Nowak, *sp. nov.*

Figs 1 & 2

Scaphyglottis cobanensis is similar to *S. bifida* (Rchb. f.) C. Schweinf. and *S. lindeniana* (A. Rich. & Galeotti) L. O. Williams but is easily distinguished by its rose to dull brownish flowers, the lip truncate at the base, and large, ligulate, acute leaves.

HOLOTYPE: GUATEMALA. Cobán, San Pedrito, alt. 1450 m, Sep. 2014, *F. Archila s.n.* (BIGU; ISOTYPE: USCG).

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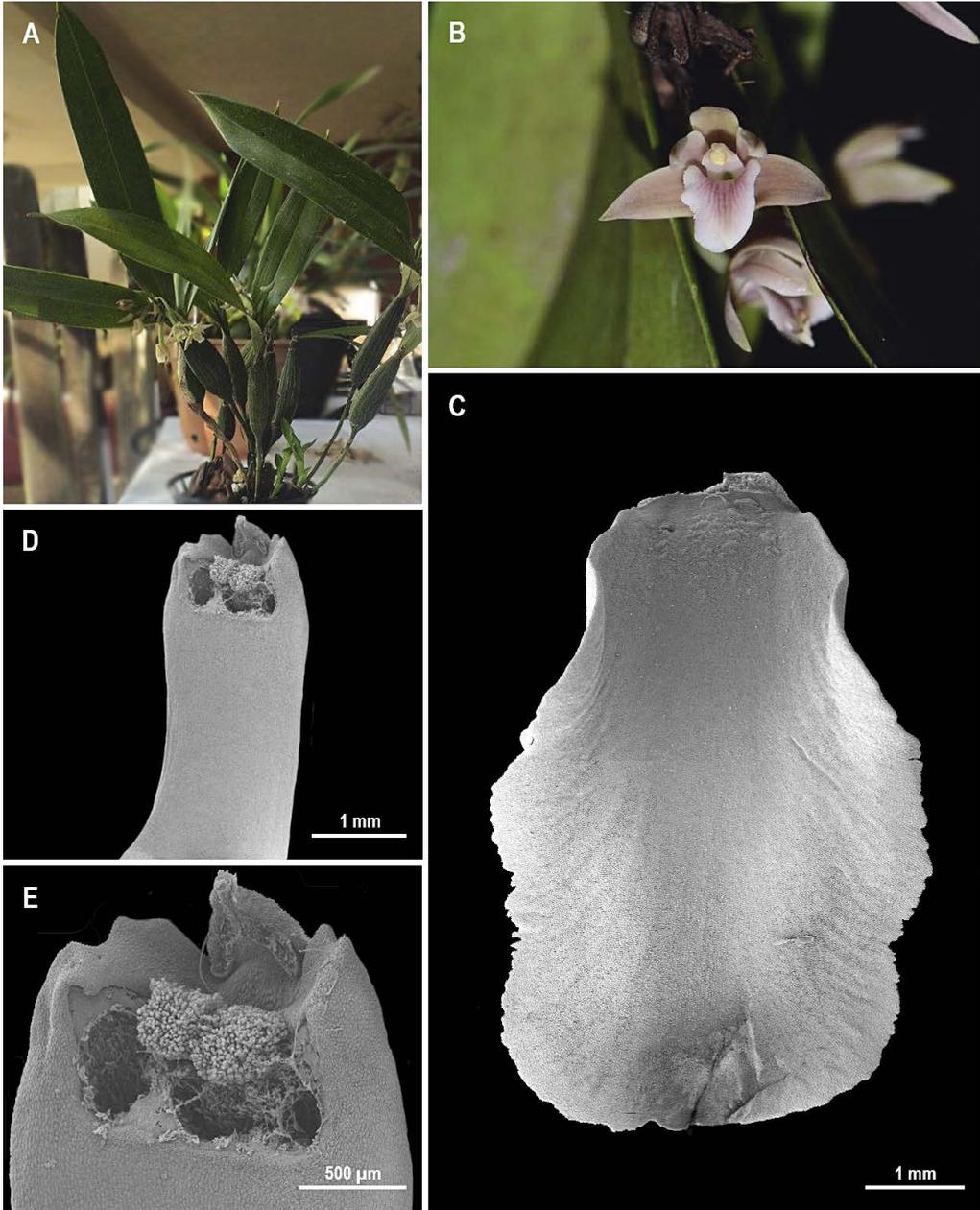


Fig. 1. *Scaphyglottis cobanensis* Archila, Szlach. & S. Nowak, *sp. nov.* A – plant, B – flower, C – labellum, D – column, E – apical part of column.

Plant epiphytic, up to 15 cm tall; roots *ca* 0.09 cm in diameter, numerous, flexuous, simple; pseudobulbs *ca* 12 cm long and 2.5 cm in diameter, abruptly stalked, oblong-ellipsoid, lat-

erally compressed, bifoliate; leaves up to 12 cm long and 3 cm wide, ligulate, attenuate towards base and acute apex. Flowers open a few at a time, produced along elongate inflorescence,

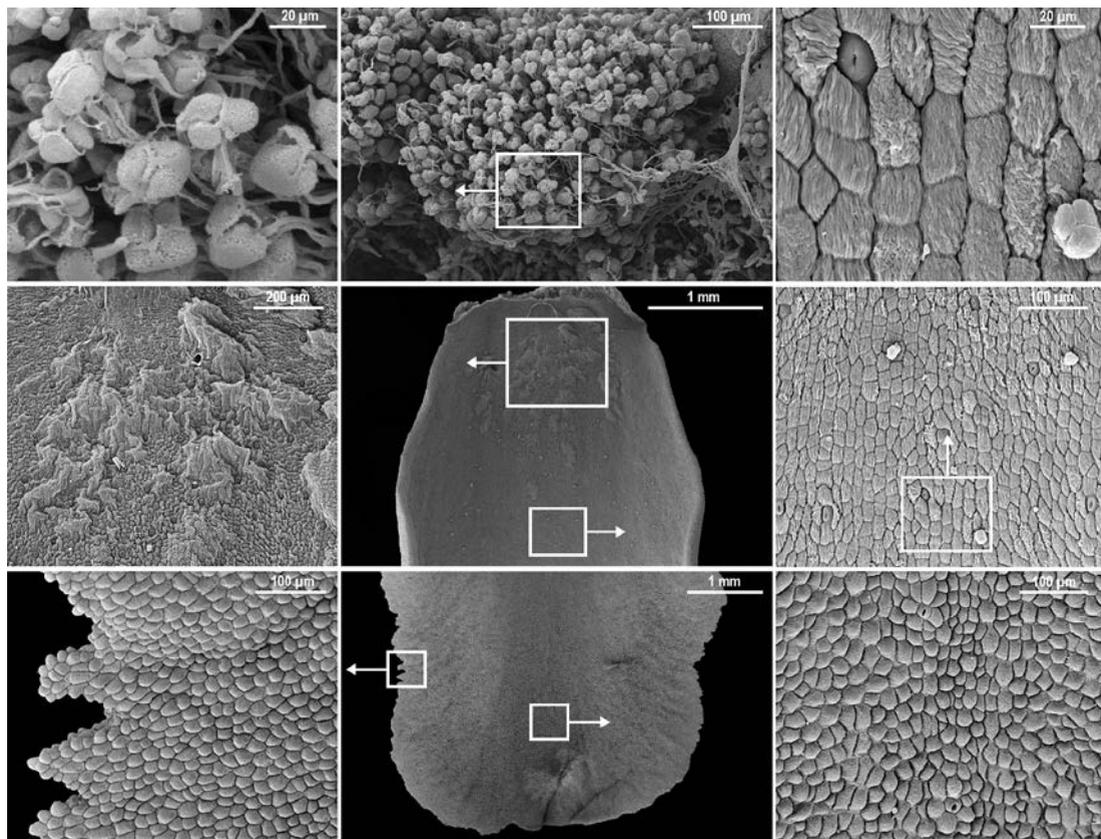


Fig. 2. *Scaphyglottis cobanensis* Archila, Szlach. & S. Nowak, *sp. nov.* Micromorphological details of pollinia and labellum.

rose or dull brownish, lip dull whitish lilac with darker veins; ovary pedicellate, white; dorsal sepal up to 9 mm long and 2.8–3.0 mm wide, oblong, acute-acuminate at the apex, bent forward over the gynostemium; lateral sepals up to 10 mm long and 2.9–3.0 mm wide, obliquely oblong-triangular, acuminate, basally somewhat concave; petals up to 8.5 mm long and 2.0–2.1 mm wide, oblong, falcate, acute at apex; labellum up to 6.3 mm long and 3.0–3.1 mm wide, subpandurate in general outline, base truncate, median margins crenulate-denticulate, apical part unciniate. Gynostemium 6.7 mm long and 1.2 mm wide; column foot 1.8 mm long.

ETYMOLOGY. In reference to the type locality, the area surrounding the city of Cobán.

PHENOLOGY. The flowering specimens of *Scaphyglottis cobanensis* were observed in September and October.

DISTRIBUTION AND ECOLOGY. The new species is known so far from only one locality near San Pedro in Guatemala. It was collected as an epiphyte growing on tree trunks and branches. Its population was found in mountain forest at 1450 m a.s.l.

NOTES. *Scaphyglottis cobanensis* along with *S. bifida* (Fig. 3) and *S. lindeniana* (Fig. 4) form a group of species previously included in the genus *Hexadesmia* Brongn., which are easily distinguishable from other *Scaphyglottis* species by their peculiar habit: stalked, usually rather massive, laterally compressed pseudobulbs gathered in fascicles, with usually two large leaves at the apex, and flowers arranged along an elongate inflorescence.

The new entity resembles both *S. lindeniana* and *S. bifida*. In contrast to the former, *S. cobanensis* has rose to dull brownish flowers, the lip

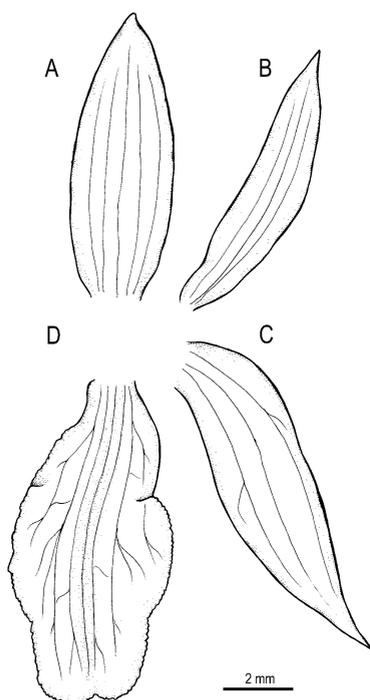


Fig. 3. *Scaphyglottis bifida* (Rchb. f.) C. Schweinf. A – dorsal sepal, B – petal, C – lateral sepal, D – labellum (drawn by S. Nowak from Saunders s.n., W).

is truncate at the base, the lip margins are irregularly dentate, and the leaves are large, ligulate and acute. The flowers of *S. lindeniana* are yellowish to yellow-greenish, the lip is attenuate towards the base, the margins are almost entire and the leaves are shortly bilobate at the apex. The pseudobulbs of *S. bifida* gradually narrow towards the stalked base, the brownish yellow or brownish green flowers are gathered in fascicles of few-flowered inflorescences, and the lip is rounded at the base, obscurely trilobate near the middle, with the middle lobe being split into two lobules. Hence the lip appears to be quadrilobate. Additionally, the flowering season of the new species is reported here as occurring in September and October, whereas the other species were noted to produce flowers in January and February.

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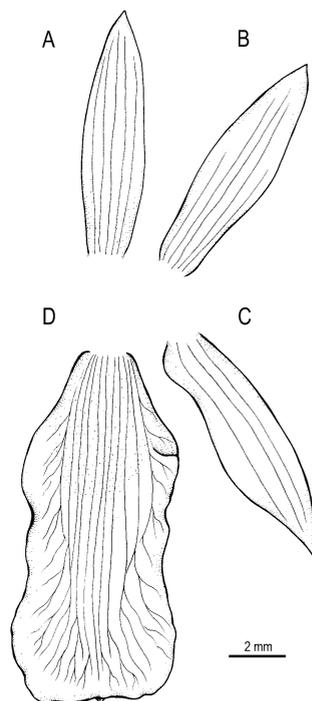


Fig. 4. *Scaphyglottis lindeniana* (A. Rich & Galeotti) L. O. Williams; A – dorsal sepal, B – petal, C – lateral sepal, D – labellum (drawn by S. Nowak from Powell 229, MO).

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