

A new species of *Scaphyglottis* (Orchidaceae, Epidendroideae) from Colombia

Dariusz L. Szlachetko · Marta Kolanowska

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Abstract A new species of *Scaphyglottis* from Colombia is described, illustrated and placed within the key for the determination of national *Scaphyglottis* species. Its taxonomic affinity is briefly discussed and the information about its distribution and ecology are provided.

Keywords Colombia · Orchids · New species · *Scaphyglottis* · Taxonomy

Introduction

Since the description of *Scaphyglottis* in 1836 (Poeppig and Endlicher 1836), its infrageneric classification has been debated by taxonomists. The leaf blade and internode shapes, form of the lip and its fusion with the gynostemium, and number of pollinia were the principle characters considered as a basis for the delimitation of separate genera—*Costaricaea* Schltr., *Hexisea* Lindl., *Platyglottis* L.O. Williams, *Reichenbachanthus* Barb.Rodr., and *Tetragamestus* Rchb.f. Those taxa were accepted in various combinations by scientists. Ames (1937) recognized *Reichenbachanthus* and monotypic *Costaricaea* as synonyms of *Hexisea*, while Adams (1988) limited the latter genus to *H. bidentata* and *H. imbricata*. The recent molecular insight on the classification of *Scaphyglottis* (Dressler et al. 2004) confirmed the earlier proposal of Dressler (1994) to conserve the genus in its wider concept (Dressler 1994).

The general characteristic of *Scaphyglottis* comes down to the presence of the pseudobulbs arising from the rhizome as well as apices of older pseudobulbs, the resupinate or non-resupinate flowers with free, similar sepals that are commonly wider than the petals and usually, a prominent column-foot.

Of about 150 specific names published under *Scaphyglottis*, the total of about 60 species are accepted nowadays and novelties within the genus are still being described (Dressler 2002; Dressler 2004).

Most *Scaphyglottis* species grow epiphytically, however, they are sometimes found on broken branches as semi-terrestrials. The most common habitats of these plants are the humid and wet forests as well as cloud forests (Dressler 2001).

The geographical range of the genus extends from Mexico to Brazil and Bolivia to the south. About 70 % species occur in Costa Rica and Panama (Dressler 2001). On the list of Colombian orchids, Ortiz and Uribe (2007) placed 32 *Scaphyglottis* taxa, including two species classified by the authors as *Reichenbachanthus*. Almost all of them, except *S. aurea* (Rchb.f.) Foldats, were found in the lowlands and lower montane regions up to 2,000 m a.s.l. (Ortiz Valdivieso and Uribe Vélez 2007).

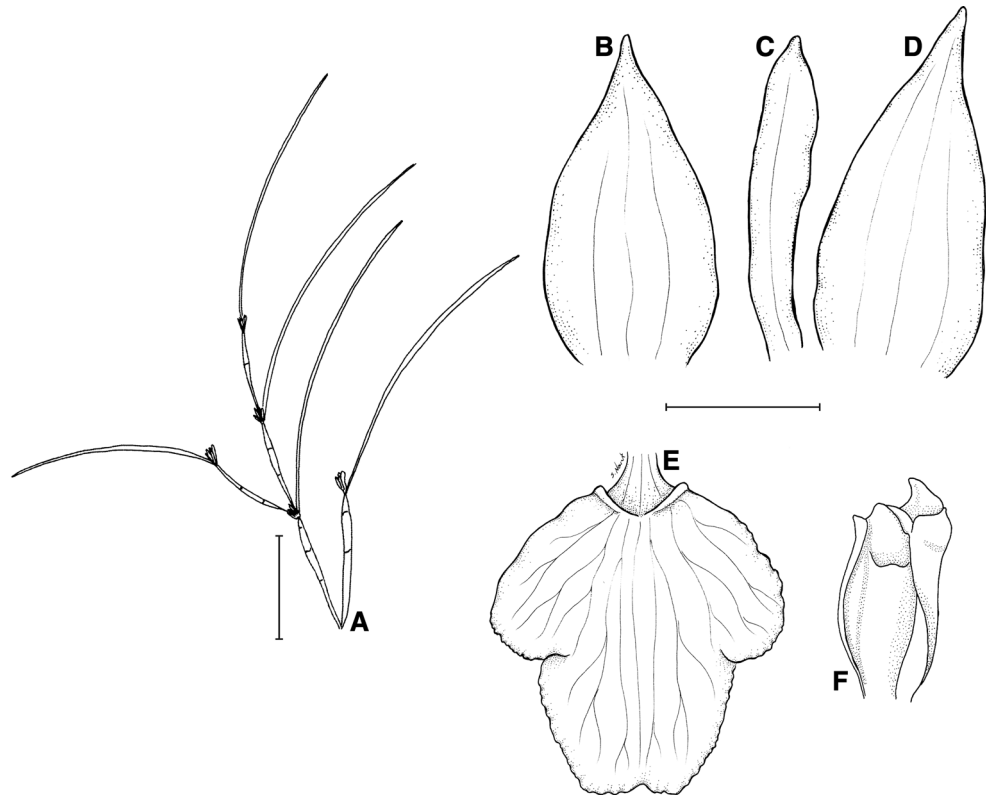
Recent studies on *Scaphyglottis* conducted in a few Colombian herbaria revealed the existence of a distinctive species which is described here as new. The characteristics and a line-drawing of the novelty are provided together with information about its ecology.

Materials and methods

Dried herbarium specimens were examined according to the standard procedures. Each sheet studied was

D. L. Szlachetko · M. Kolanowska (✉)
Department of Plant Taxonomy and Nature Conservation,
University of Gdańskul, Wita Stwosza 59, 80-308 Gdańsk,
Poland
e-mail: martakolanowska@wp.pl

Fig. 1 *Scaphyglottis filifolius* Szlach. & Kolan.: **a** habit. Scale bar 5 cm; **b** dorsal sepal; **c** petal; **d** lateral sepal; **e** lip; **f** gynostemium. Scale bar 2 mm



photographed and the data were taken from the labels. Both vegetative and reproductive characters of every plant were studied. The shape and size of the pseudobulbs and leaves were examined first. Then the construction of the inflorescence and the shape and size of the floral bracts were studied. The morphology of the flower, including the gynostemium was examined after being softened in the boiling water. At the end, the measurements on the surface of each floral element were studied under a stereomicroscope.

Acronyms for herbaria cited in this paper follow *Index Herbariorum* (Thiers 2013, continuously updated). The CorelDraw v.12 software was used for the preparation of the distribution map.

Taxonomic treatment

Scaphyglottis filifolius Szlach. & Kolan., sp. nov. (Fig. 1)

Plants somewhat similar to *Scaphyglottis violacea* Lindl., but with 1-leafed pseudobulbs, ovate, acuminate sepals, shortly clawed lip with a prominent, transverse ridge just above the claw, otherwise ecallose.

Type: J.G. Ramírez & D. Cárdenas L. 1676-Colombia, Antioquia, Mpio. San Luis. Quebrada La Cristalina (25 Sep 1987), (COL!, holotype).

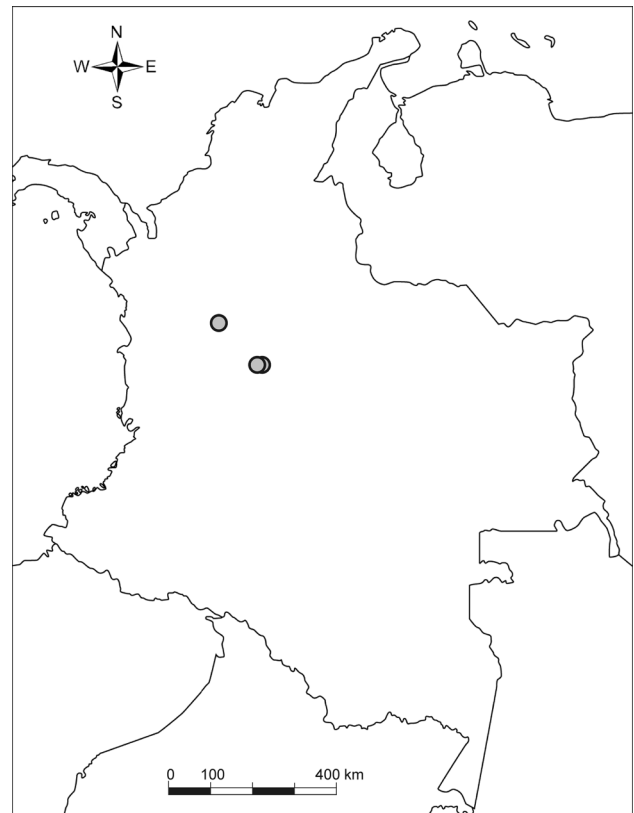


Fig. 2 Distribution of *Scaphyglottis filifolius* in Colombia

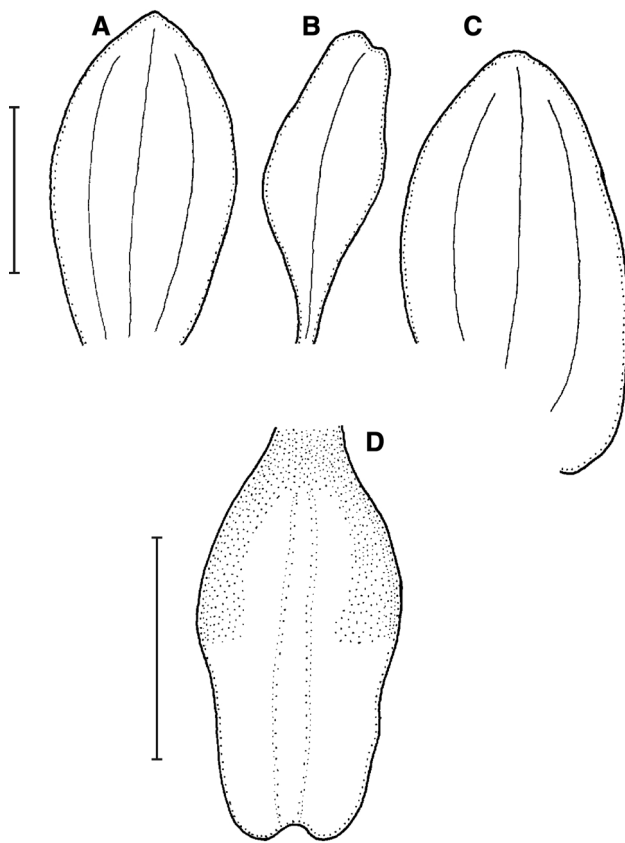


Fig. 3 *Scaphyglottis violacea* Lindl.: **a** dorsal sepal; **b** petal; **c** lateral sepal; **d** lip. Scale bars 2.5 mm. Redrawn from Foldats (1970)

Pseudobulbs 5–6 cm long, 0.3 cm wide, fusiform, unifoliate. Leaf up to 14 cm long and 0.1 cm wide, linear, grass-like, acute. Inflorescence fasciculate, with single flower opening in time. Flower small. Floral bracts 5 mm long. Pedicellate ovary 7 mm long. Dorsal sepal 4 mm long, 2 mm wide, ovate, acuminate, concave in the centre, 3-nerved. Petals up to 4 mm long and 0.4 mm wide, linear, somewhat expanded in the upper part, sub-obtuse, sub-falcate, 1-nerved. Lateral sepals 4 mm long, 2.3 mm wide, somewhat obliquely ovate to oblong-ovate, acuminate, 3-nerved. Lip cuneiform in general outline, shortly clawed; claw 0.3–0.4 mm long, narrow; lamina up to 4.2 mm long, 4 mm wide when spread, distinctly 3-lobed near the middle, at the base of lamina transverse ridge; the middle lobe 2 mm long and wide, reniform-sub-quadrate, truncate to emarginate; lateral lobes obliquely elliptic, rounded. Gynostemium 3 mm long.

Etymology: in reference to the exceptionally narrow leaf.

Distribution and ecology: known from Colombian departments of Antioquia and Cundinamarca (Fig. 2) where it was found at the altitudes of about 1,355–1,380 m. Flowering September–December.

Representative material: *J.G. Ramirez & D. Cardenas L. 1676*-Colombia, Antioquia, Mpio. San Luis. Quebrada La Cristalina (25 Sep 1987), (COL!); *A. Chaparro de Barrera & E. Barrera Torres 294*-Colombia, Cundinamarca, Mpio. Caparrapi. Vereda Ocunchi, alt. 1,355 m (8 Dec 1992), (COL!); *A. Chaparro de Barrera & E. Barrera Torres 295*-Colombia, Cundinamarca, Mpio. La Palma. Finca Senor Caceres, alt. 1,380 m (12 Nov 1992), (COL!).

Taxonomic notes: the new species is characterized by exceptionally narrow, almost filiform leaves, relatively broad sepals, widest near the base and lip having a prominent transverse callus between claw and lamina. The plants are somewhat similar to *S. violacea* widely distributed from Peru to Venezuela, but from this species *S. filifolius* may be distinguished by the unifoliate pseudobulbs (vs bifoliate in *S. violacea*), ovate, acuminate sepals (vs sepals oblong-oblancoate to elliptic, obtuse), linear petals (vs petals oblong-oblancoate) and lip which is ecallose except for the prominent, transverse ridge just above the claw (vs lip disc thickened at the base) (Fig. 3).

Key to the Colombian species of *Scaphyglottis*

1. Lip immovable 2
- 1* Lip movable..... 3
2. Lateral sepals linear-lanceolate, lip lateral lobes rounded..... *Scaphyglottis emarginata*
- 2* Lateral sepals obliquely oblong-ovate to ovate-lanceolate, lip lateral lobes obtuse-triangular *Scaphyglottis reflexa*
3. Lip distinctly 3-lobed..... 4
- 3* Lip entire or obscurely 3-lobed..... 18
4. Inflorescence a fascicle of 1-2 flowers..... 5
- 4* Inflorescence a fascicle of more than two flowers..... 13
5. Leaves grass-like, usually less than 0.5 cm wide 6
- 5* Leaves linear-lanceolate to elliptic, usually more than 0.5 cm wide 8
6. Lip middle lobe sub-quadrate..... *Scaphyglottis exilis*
- 6* Lip middle lobe sub-triangular..... 7
7. Lip middle lobe acuminate, lateral lobes rounded..... *Scaphyglottis chocoana*
- 7* Lip middle lobe acute, lateral lobes obtuse..... *Scaphyglottis longicaulis*
8. Leaves linear-ligulate, bilobulate at the apex..... 9
- 8* Leaves lanceolate, acute..... 11
9. Lip middle lobe decurved, sub-quadrate, margins crenulate *Scaphyglottis triloba*
- 9* Lip middle lobe not decurved, sub-orbicular-flabellate or sub-quadrate, apex bifid..... 10

10. Lip middle lobe widest at base, rounded at the apex..... *Scaphyglottis bilineata*
 10* Lip middle lobe widest at the apex, truncate.....
Scaphyglottis lueckelii
 11. Lateral lobes obliquely sub-quadrate, short..... *Scaphyglottis stricta*
 11* Lateral lobes obliquely obovate, rounded..... 12
 12. Lip middle lobe rounded, obtuse..... *Scaphyglottis boliviensis*
 12* Lip middle lobe long acuminate, acute..... *Scaphyglottis huebneri*
 13. Middle lobe of the lip emarginate, retuse 14
 13* Middle lobe of the lip apiculate, acute to obtuse.....
Scaphyglottis modesta
 14. Lip longer than tepals..... 15
 14* Lip sub-equal in length to tepals..... 16
 15. Leaves elliptic to oblong-lanceolate *Scaphyglottis bifida*
 15* Leaves linear-oblong..... *Scaphyglottis behrii*
 16. Leaf about 0.1 cm wide..... *Scaphyglottis filifolius*
 16* Leaf more than 0.3 cm wide..... 17
 17. Lip 3–3.5 mm long, middle lobe elliptic-obovate.....
Scaphyglottis violacea
 17* Lip 6–8.5 mm long, middle lobe ligulate to rectangular.....
Scaphyglottis stellata
 18. Inflorescence a fascicle of few flowers..... 19
 18* Inflorescence 1-2-flowered..... 20
 19. Lip about 10 × 5 mm, sub-pandurate..... *Scaphyglottis coriacea*
 19* Lip 2.5–4 × 1.5–2.5 mm, obovate to oblong.....
Scaphyglottis minutiflora
 20. Leaves oblong-elliptic to elliptic-lanceolate..... 21
 20* Leaves linear..... 23
 21. Pedicellate ovary about 20 mm long, lip panduriform-obovate..... *Scaphyglottis arctata*
 21* Pedicellate ovary about 3–4 mm long, lip spatulate..... 22
 22. Sepals up to 3.5 mm long, petals sub-obtuse.....
Scaphyglottis sickii
 22* Sepals up to 2.5 mm long, petals emarginate.....
Scaphyglottis signata
 23. Sepals linear-lanceolate, ligulate to lanceolate..... 24
 23* Sepals elliptic-ovate..... 26
 24. Lip spatulate to cuneate-flabellate..... 25
 24* Lip oblong-ovate..... *Scaphyglottis isochiloides*
 25. Apical part of the lip obtuse..... *Scaphyglottis esuriens*
 25* Apical part of the lip apical part semi-orbicular.....
Scaphyglottis fusiformis
 26. Lip anchoriform..... *Scaphyglottis gentryi*
 26* Lip sub-quadrate, cuneate-ovate, oblong-lanceolate to ovate 27
 27. All tepals similar in size and shape..... 28
 27* Petals distinguished from sepals..... 31
 28. Leaves less than 5 mm wide *Scaphyglottis sessilis*
 28* Leaves more than 5 mm wide 29
 29. Tepals elliptic to ovate-elliptic *Scaphyglottis aurea*
 29* Tepals lanceolate-oblong to ovate-oblong..... 30
 30. Stems usually simple, or just with few branches.....
Scaphyglottis punctulata
 30* Stems branched..... *Scaphyglottis summersii*
 31. Lip flabellate, cuneate-ovate..... 32
 31* Lip sub-quadrate to ovate-quadrate..... *Scaphyglottis livida*
 32. Pseudobulbs stipitate *Scaphyglottis graminifolia*
 32* Pseudobulbs cylindric-fusiform *Scaphyglottis prolifera*

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