

## Notes on the *Scaphyglottis fusiformis* complex (Orchidaceae, Epidendroideae) in Colombia with the description of two new species

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*Scaphyglottis baudoana* Szlach. & Kolan. and *S. rangeli* Szlach. & Kolan., two new orchid species from Colombia, are described and illustrated. Their taxonomic affinities are discussed and information of their distribution and ecology is provided. They are placed within an identification key to species of the *Scaphyglottis fusiformis* complex.

The genus *Scaphyglottis* was proposed by Poeppig and Endlicher (1836), but the type species, *S. graminifolia* ( $\equiv$  *Fernandezia graminifolia*) was only selected over 100 years later (Dressler 1960).

The wide infrageneric morphological variation of *Scaphyglottis* provoked transfers of many species to numerous segregate genera, e.g. *Costaricaea*, *Euothonaea*, *Hexadesmia*, *Pachysytele*, *Platyglottis*, *Reichenbachanthus* and *Tetragamestus* (Barbosa Rodrigues 1881, Brongniart 1842, Reichenbach 1852, 1854, Schlechter, 1923, Williams 1942). The morphological diversity of *Scaphyglottis* is not reflected in the results of molecular studies (Dressler *et al.* 2004) indicating the genus as broadly defined to be a natural group, which should embrace all of the taxa mentioned above.

*Scaphyglottis s. lato* contains caespitose plants with a creeping rhizome and narrowly cylindrical or stipitate, 1–3-leaved pseudobulbs. The resupinate flowers are arranged into fasciculate or race-

mose, often successive inflorescences. The tepals are similar in shape and the lip is either entire or 3-lobed, sometimes ornamented with calli. The lip movability and the number of pollinia (4 or 6) were usually the base of segregating smaller genera from *Scaphyglottis s. lato*.

Most of the *Scaphyglottis* species are epiphytes, but they are usually able to survive growing on broken branches as semiterrestrials. The plants are found in the humid to wet forest or cloud forest, however *S. micrantha* was reported also from seasonally dry forests (Dressler 2005).

In the broader concept the genus embraces about 60 species distributed from Bolivia and Brazil to Mexico, with the greatest species diversity in Costa Rica and Panama. Ortiz-Valdivieso and Uribe-Vélez (2007) listed 32 species of *Scaphyglottis* occurring in Colombia. Three of them are sometimes placed in *Hexadesmia* and two others in *Reichenbachanthus*.

One of the species, which is widely distributed in Colombia and characterized by rather

flexible habitat requirements is *S. fusiformis*. The geographical range of this orchid extends from Guatemala to Peru and Brazil and it was reported growing in wet forests between 100 and about 2000 m a.s.l. The first report on *S. fusiformis* from Colombia comes from a collection of Gilberto Escobar, housed in AMES (Garay 1970).

Our recent revision of the orchid material stored in Colombian herbaria resulted in discovery of two new species of the *Scaphyglottis fusiformis* complex (cf. Table 1).

***Scaphyglottis baudoana*** Szlach. & Kolan., *sp. nova* (Figs. 1 and 2)

TYPE: Colombia. Chocó, Region del Rio Baudo, 2 February–29 March 1967, *H.P. Fuchs* 22329 (holotype COL).

ETYMOLOGY: In reference to the place of the origin of the type specimen.

Pseudobulbs up to 6 cm long, 0.3 cm in diameter, erect, thickened, fusiform, unifoliate. Leaf up to 10 cm long, 0.4 cm wide, linear or linear-ligulate, conduplicate, apically obtuse and emarginate. Inflorescence fasciculate. Flowers nodding. Floral bracts 3 mm long. Pedicel and ovary up to 19 mm long, filiform. Dorsal sepal up to 9 mm long and 3.5 mm wide, oblong-elliptic, short acuminate, 5-nerved. Petals up to 9 mm long and 3.5

mm wide, oblong-elliptic, obtuse, shortly acuminate, somewhat oblique, 3-nerved, lateral nerves branching. Lateral sepals up to 10 mm long and 3.6 mm wide, ovate-lanceolate, acuminate, subfalcate, 4–5-nerved. Lip up to 10.5 mm long, sessile, constricted above middle; basal part 6.5 mm long and 5 mm wide, obovate, apical part 4 mm long, 6.5 mm wide, obreniform, retuse, margins somewhat crisped. Gynostemium 7 mm long.

DISTRIBUTION AND ECOLOGY: Known so far from Colombian department of Chocó. No habitat record. Flowering February–March.

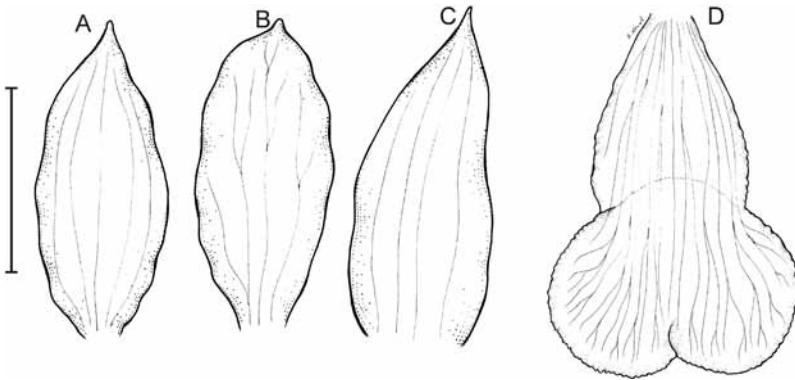
This is an easily distinguishable species in the *S. fusiformis* complex. *Scaphyglottis baudoana* is characterized by a sessile, ecallose lip, and the sepals and petals that are much wider than in *S. fusiformis*.

***Scaphyglottis rangeli*** Szlach. & Kolan., *sp. nova* (Figs. 2 and 3)

TYPE: Colombia. Cauca. Isla de Gorgona. Playas y zonas cercanas a las instalaciones del Inderena. Trocha en direccion a la playa de Pablo VI, alt. ca. 150 m, 10–14 September 1987, *J.L. Fernandez A., O. Rangel, G. Lozano & al.* 7452 (holotype COL). — PARATYPES: Colombia. Cauca, Mpio. Guapi. Parque Nacional Natural Gorgona — Isla de Gornilla, 14 Sep. 1987, *G. Lozano, O. Rangel & Est. Postgrad.* 5894 (COL!); Chocó, Mpio. Nuqui. Corregimiento de Coqui,

**Table 1.** Comparative morphology of *Scaphyglottis baudoana*, *S. rangeli* and *S. fusiformis*.

Character	<i>Scaphyglottis baudoana</i>	<i>Scaphyglottis rangeli</i>	<i>Scaphyglottis fusiformis</i>
Pseudobulbs	unifoliate	bifoliate	usually unifoliate
Leaf	linear or linear-ligulate	oblong-ligulate	linear or linear-ligulate
Pedicel and ovary	up to 19 mm long	up to 10 mm long	up to 10 mm long
Dorsal sepal	oblong-elliptic, short acuminate	ligulate-lanceolate, subobtuse	ligulate to lanceolate, obtuse, acute to acuminate
Petals	oblong-elliptic, obtuse, shortly acuminate, somewhat oblique	linear-oblancheolate, acute to subobtuse, almost straight	oblong-elliptic to oblancheolate, acute to obtuse, falcate
Lateral sepals	ovate-lanceolate, acuminate, subfalcate	oblong-ligulate, short acuminate, subfalcate	ligulate to ovate-lanceolate, obtuse to acuminate, subfalcate
Lip	basal part obovate, apical part obreniform, retuse	basal part oblong-obovate, apical part transversely elliptic-obreniform, truncate or emarginated at apex	broadly pandurate, apical part transversely elliptic to obreniform, subundulate, retuse



**Fig. 1.** *Scaphyglottis baudoana*, dissected perianth (drawn by S. Nowak from the holotype). — **A:** Dorsal sepal. — **B:** Petal. — **C:** Lateral sepal. — **D:** Lip. Scale bar = 5 mm.



**Fig. 2.** Distribution of *Scaphyglottis baudoana* (square), *S. rangeli* (circles) and *S. fusiformis* (hatching) in Colombia.

quebrada Trapiche al SE de Coquí, 5°32'N, 77°15'W, alt. 100–160 m, February–March 1994, G. Galeano, A. Moreno, G. Moreno & J. Perea 5493 (COL!, sterile); Rio Atrato, Yuto, rocky margins of the river above Yuto, Alt. 70 m, 2 April 1958, Cuatrecasas & M. Llano 24134 (COL!, sterile).

**ETYMOLOGY:** Dedicated to co-collector of the type specimen, O. Rangel.

Small herb. Pseudobulbs up to 9 cm long, 0.3–0.4 cm in diameter, erect, thickened, fusiform, basally long-attenuate, bifoliate. Leaves

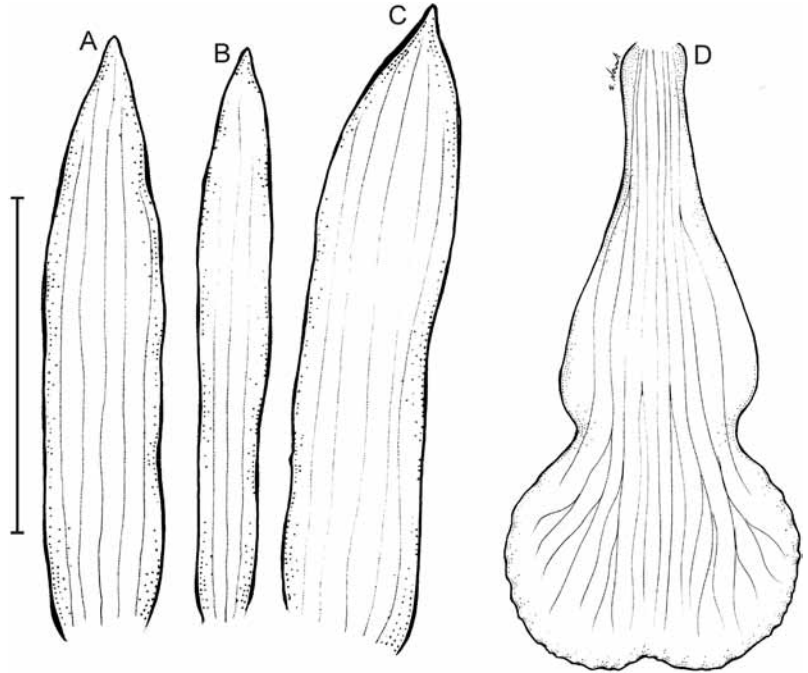
up to 10 cm long and 1.6 cm wide, erect, oblong-ligulate, conduplicate, apically obtuse and emarginate. Inflorescence fasciculate, 1-flowered or shortly racemose. Flowers pedicellate, campanulate, nodding. Pedicel and ovary to 10 mm long. Dorsal sepal up to 9 mm long and 2 mm wide, ligulate-lanceolate, subobtuse, 5-nerved. Petals up to 8.7 mm long, 1.1 mm wide, linear-oblancoate, acute to subobtuse, almost straight, 3-nerved. Lateral sepals up to 9 mm long and 2.5 mm wide, oblong-ligulate, short acuminate, subfalcate. Lip up to 9 mm long, indistinctly clawed, gradually transformed into lamina, constricted in apical third, basal part oblong-obovate, apical part 3 mm long, 3.5 mm wide, transversely elliptic-obreniform, truncate or emarginated at apex. Gynostemium 7.5 mm long.

**DISTRIBUTION AND ECOLOGY:** This species is known from Colombian Pacific coast, departments of Cauca and Chocó. Alt. 70–160 m a.s.l. Terrestrial or lithophytic. Flowering in February–April, September.

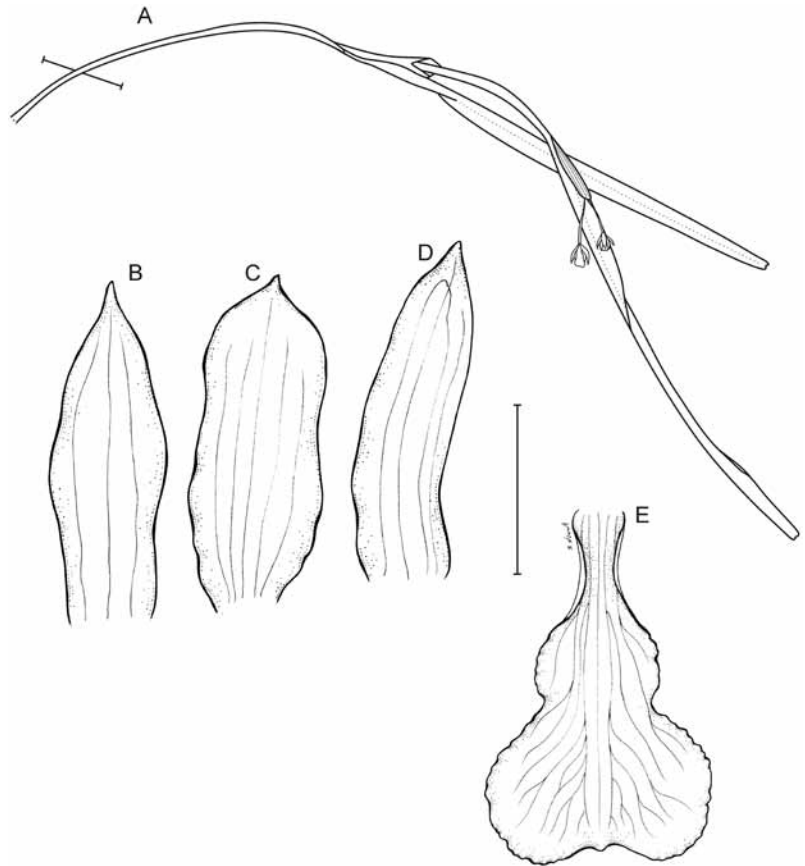
This species is easily separable from *S. fusiformis* by having bifoliate pseudobulbs, wider leaves, ca. 5–6 times longer than wide (vs. ca. 15 times longer than wide in the latter), and narrower sepals and petals. The lip of *S. rangeli* lacks callus. The lip of *S. fusiformis* has a hump-like callus placed near the bottom of the channelled claw.

***Scaphyglottis fusiformis* (Griseb.) Schultes (Figs. 2 and 4)**

Bot. Mus. Leaflet 17(7): 205, t. 1956 (Figs. 380–383). —



**Fig. 3.** *Scaphyglottis rangeli*, dissected perianth (drawn by S. Nowak from the holotype). — **A:** Dorsal sepal. — **B:** Petal. — **C:** Lateral sepal. — **D:** Lip. Scale bar = 5 mm.



**Fig. 4.** *Scaphyglottis fusiformis*. — **A:** Habit (drawn by M. Kolanowska from K463476. Scale bar = 2 cm). — **B:** Dorsal sepal. — **C:** Petal. — **D:** Lateral sepal. — **E:** Lip. (**B–E** drawn by S. Nowak from COL525665. Scale bar = 3 mm).

*Hexadesmia fusiformis* Griseb. in Fl. Brit. W. I.: 623. 1864.  
— TYPE: Trinidad. Bradford in Herb. Hance 5283 (K!, W!) & Maracas (K, BR).

Small herb, up to 25 cm tall. Pseudobulbs 3.5–6 cm long, 0.3–0.4 cm in diameter, erect, thickened, fusiform, basally long-attenuate, usually unifoliate. Leaf 7–13 cm long, 0.4–0.6 cm wide, erect, linear or linear-ligulate, basally conduplicate, apically obtuse and emarginate. Inflorescence fasciculate, 1-flowered or shortly racemose. Flowers pedicellate, campanulate, nodding, sepals and petals creamish green, almost translucent, with purple stripes, lip white. Pedicel and ovary to 10 mm long, filiform, included in a loose, scarious basal bract 10 mm long. Dorsal sepal 4.0–8.5 mm long, 1.5–2.5 mm wide, ligulate to lanceolate, obtuse, acute to acuminate. Petals 4.0–7.8 mm long, 0.9–2.8 mm wide, oblong-elliptic to oblanceolate, acute to obtuse, falcate. Lateral sepals 4.0–8.5 mm long, 1.5–2.5 mm wide, ligulate to ovate-lanceolate, obtuse to acuminate, subfalcate. Lip 5.0–8.0 mm long, 2.5–5.0 mm wide, long and narrowly clawed; callus hump-like at bottom of claw, broadly pandurate above, very obscurely 3-lobed, apical part much expanded, transversely elliptic to obreniform, subundulate, retuse, apex more or less truncate.

**HABITAT:** On trees in moist to wet forest, coffee and cocoa plantations, rarely on remnant trees in pastures or on rocks or logs.

**DISTRIBUTION:** Costa Rica, Panama, Bolivia, Peru, Ecuador, Colombia, Venezuela, Trinidad, Guyana, Suriname, French Guiana, Brazil. Alt. 200–1400 m a.s.l.

**REPRESENTATIVE SPECIMENS EXAMINED.** — Colombia. Comissaria Caquetà, Alt. 1302 m, March 1939, *O. Renz* 3407 (RENZ); without locality, *G. Escobar* 676 (AMES, SP).

### Key to the species of the *Scaphyglottis fusiformis* complex

1. Pseudobulbs bifoliate ..... *S. rangeli*
1. Pseudobulbs unifoliate ..... 2
2. Lip bilobulate at apex ..... *S. bilobulata*
2. Lip unlobed ..... 3

3. Lip sessile ..... *S. baudoana*
3. Lip clawed ..... 4
4. Lip ecallose ..... *S. brachyphylla*
4. Lip with hump-like callus at base ..... *S. fusiformis*

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