

Psilochilus antioquiensis (Triphoreae, Orchidaceae), a new species from Colombia

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Received 1 Oct. 2012, final version received 21 Oct. 2012, accepted 7 Nov. 2012

Kolanowska, M. 2013: *Psilochilus antioquiensis* (Triphoreae, Orchidaceae), a new species from Colombia. — *Ann. Bot. Fennici* 50: 115–118.

Psilochilus antioquiensis, a new orchid species from Colombia, is described and illustrated. The differences between *P. antioquiensis* and some similar species are discussed, and a key to the Colombian species of *Psilochilus* is provided. Information about the ecology and distribution of the new species is also given.

Psilochilus was described by Barbosa-Rodrigues (1882), however many of the species have been classified under *Pogonia* or related taxa (e.g. Cogniaux 1906, Williams 1970). In Pfitzers' (1888–1889) classification, the genus was not distinguished and the species were placed within *Cleisthes* as a section. The taxonomic distinctness of the genus *Psilochilus* was proposed by Ames (1922) and confirmed later by Dressler and Dodson (1960), Brieger (1975), Szlachetko (1995) and Rothacker (2005).

Not only the generic distinctness of *Psilochilus* was problematic, but also its tribal and subtribal classification. Lindley (1840) classified it within Arethuseae (as *Pogonia*), while Schlechter (1911) first included it in Nerviliinae (Polychondreae) and later (Schlechter 1926) transferred it to Vanillieae together with *Triphora* and *Monophyllorchis*. Dressler and Dodson (1960) placed all three genera into Pogoniinae. The distinctness of Triphoreae from Pogoniinae was first indicated by Ames (1922), and was confirmed by the chromosome number-based research of Baldwin and Speese (1957). Brieger (1975) applied those studies into Sch-

lechters' system moving *Triphora* and *Nervilia* into Nerviliinae, but keeping *Psilochilus* and *Monophyllorchis* in Pogoniinae. *Psilochilus* was transferred first by Dressler (1979) to Triphoreae based on the lack of a clearly incumbent anther, the sinuous epidermal cell walls, and the abscission layer between the ovary and perianth.

Currently the generic distinctness of *Psilochilus* as well as its classification within Triphoreae is recognized by most orchidologists (e.g. Szlachetko 1995, Chase *et al.* 2003).

Psilochilus consists of nine terrestrial species (Rothacker 2007, Kolanowska & Szlachetko 2012) characterized by an erect, terete stem with sheathing, petiolate or sessile leaves. The terminal raceme consists of just few successive, resupinate flowers. The tepals are free and the sepals are keeled. The free lip is clawed, and 3-lobed. The gynostemium of *Psilochilus* is elongate, arcuate with a prominent column part and a rudimentary column-foot. There are four narrowly-oblong and powdery pollinia.

The geographical range of *Psilochilus* extends from the southern Brazil to southern Mexico and the Caribbean. The species thrive

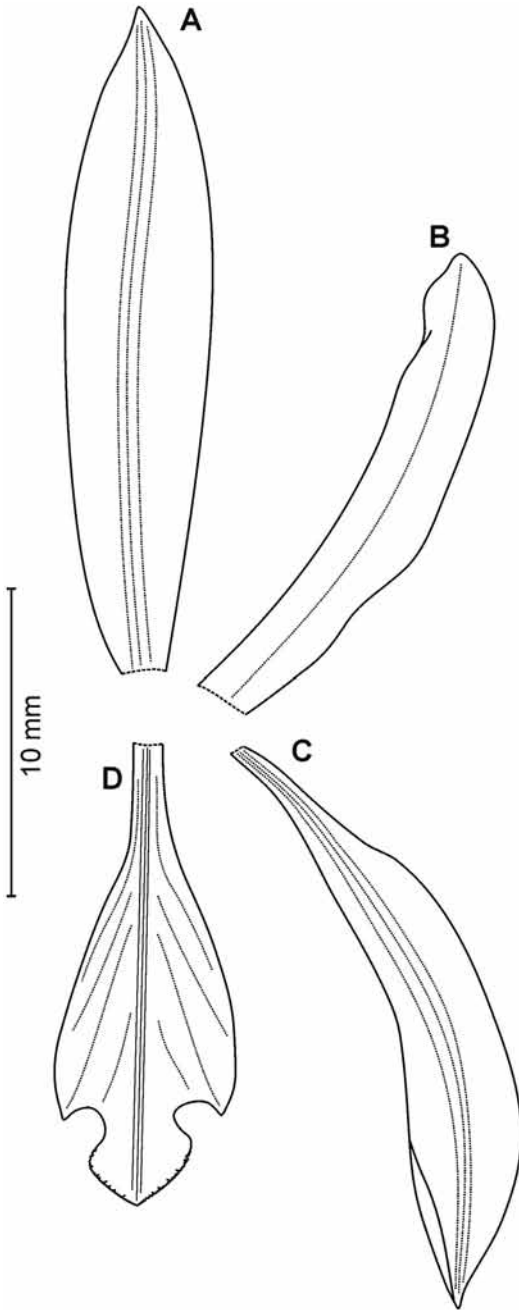


Fig. 1. *Psilochilus antioquiensis*, dissected perianth. — **A:** Dorsal sepal. — **B:** Petal. — **C:** Lateral sepal. — **D:** Lip. Drawn from the holotype.

in wet montane and cloud forests up to about 2000 m a.s.l. (Rothacker 2005). Just four *Psilochilus* species have been reported from Colombia so far (Ortiz-Valdivieso & Uribe-Vélez 2007, Kolanowska & Szlachetko 2012), and only *P.*



Fig. 2. Holotype of *Psilochilus antioquiensis*.

maderoi was found in the department of Antioquia (Idárraga-Piedrahíta *et al.* 2011).

During examination of the orchid herbarium material stored in MEDEL, a new distinct species of *Psilochilus* was found and it is described here.

Psilochilus antioquiensis* Kolan., *sp. nova
(Figs. 1 and 2)

TYPE: Colombia. Dept. Antioquia, Mun. Jardín, Microcuenca El Clavel, Reserva Natural Cuchilla Jardín Támesis. 5°36'20"N, 75°46'30"W, 2000–2400 m. 18 May 2006 Jorge A. Pérez Zabala *et al.* 2619 (holotype MEDEL).

ETYMOLOGY: In reference to the Colombian department of Antioquia, where the type specimen was collected.

Plant over 20 cm tall (holotype is damaged in lower part of stem). Leaves few, just two present in holotype, sheathing, sessile; blade ovate, acute, 6–9 cm long and 2–3 cm wide. Bracts ovate, acute, 1–1.6 cm long and 0.5–0.6 cm wide. Inflorescence few (5)-flowered. Flowers greenish, lip with violet margins, column violet. Dorsal sepal 20.5–22 mm long and 4.5–4.75 mm wide, narrowly elliptic, obtuse to subacute, 3-veined. Lateral sepals 19–19.5 mm long and 3–4 mm wide, narrowly elliptic-oblong, slightly oblique, obtuse to subacute, 3-veined. Petals 16–17 mm long and 2.5–3 mm wide; linear, obtuse, 1-veined. Lip 14.5–15.5 mm long, clawed; claw about 3–3.5 mm long; lateral lobes 8–8.5 mm long, 2–2.5 mm wide, triangular-falcate, apices obtuse to subacute, not exceeding base of middle lobe; middle lobe 3–3.5 mm long and 3–3.5 mm wide, suborbicular, apex obtuse to subacute, margins slightly crenulate; apices of lateral lobes distant from base of middle lobe; disc with 3 keels extending from claw up to apex of middle lobe. Gynostemium 12–13 mm long.

DISTRIBUTION AND HABITAT: So far this species is known only from the type locality. According to the information on the herbarium sheet label, the population was found growing terrestrially amongst litter of montane forest at about 2000–2400 m a.s.l.

Vegetative characters suggest a relation of the new species with *P. macrophyllus*, from which it differs by the lip being much smaller than the sepals, with short lateral lobes, reaching only to the basal part of the middle lobe and with the apices distant from the base of the middle lobe (Appendix). However, based on the floral characters, such as the lip being shorter than the sepals with short lateral lobes, *P. antioquiensis* resembles *P. physurifolius*, reported from Costa Rica, Panama and Venezuela (Rothacker 2007). However, *P. antioquiensis* differs by the sessile leaves and a short claw (Fig. 3 and Appendix). The taxonomic affinities of *P. antioquiensis* are therefore unclear and additional, most likely genetic research, should be carried out.

The lip form of the new species resembles the drawing of lip provided by Rothacker (2007:

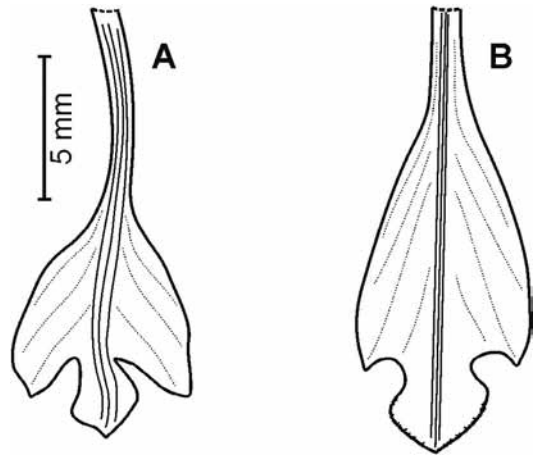


Fig. 3. Comparison of the lip shapes of *Psilochilus physurifolius* (A, Folsom et al. 6300, MO) and *P. antioquiensis* (B, Pérez Zabala et al. 2619, MEDEL).

fig. 4.3) based on the specimen ER220 and determined as *P. mollis*. However, the small size of the lip in comparison to the sepals observed in *P. antioquiensis* and sessile leaves easily separate the new species from *P. mollis*.

Key to the Colombian species of *Psilochilus*

1. Claw of lip with a distinct keel *P. carinatus*
1. Claw of lip not keeled 2
2. Lip short-clawed, claw about 1/5 of whole lip length ... 3
2. Lip long-clawed, claw 1/3–1/2 of whole lip length 4
3. Lip subequal in length to sepals, running towards base of the middle lobe, reaching about 1/3 of middle lobe length *P. macrophyllus*
3. Lip distinctly shorter than sepals, apices of lateral lobes distant from base of middle lobe, not exceeding base of middle lobe *P. antioquiensis*
4. Leaves petiolate, petiole 1–1.5 cm long *P. maderoi*
4. Leaves sessile *P. vallecana*

Acknowledgments

The curator and staff of HUA are thanked for their kind hospitality and assistance during the visit. I am grateful to Professor Dariusz Szlachetko for his valuable comments on the manuscript.

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Appendix. Comparison of *Psilochilus antioquiensis* with two morphologically similar species.

Characters	<i>P. macrophyllus</i>	<i>P. antioquiensis</i>	<i>P. physurifolius</i>
Leaves	sessile	sessile	distinctly petiolate
Sepals	11–12 mm long, linear-oblong, acute-acuminate	19–22 mm long, narrowly elliptic to elliptic-oblong, obtuse to subacute	19–21 mm long, linear-oblong, acute
Petals	10–11 mm long, about 2 mm wide, linear, obtuse to subacute	16–17 mm long; linear, obtuse	18–19 mm long, linear-oblong, acute
Lip	12–15 mm long, 3-lobed; disc with 2 longitudinal keels extending up to near the apex of the lip	14.5–15.5 mm long, 3-lobed; disc with 3 keels extending from the claw up to the near apex of the lip	15–17 mm long; disc with 2–3 longitudinal keels extending from the claw up to near the apex of the lip
Lip claw	short, less than 25% of the lip length	short, less than 25% of the lip length	long, about half of the lip length
Lip lateral lobes	up to 6 mm long, 1.0–2.5 mm wide, sharply acute to acute-obtuse; extending up to about 1/3–1/2 of the length of the middle lobe, apices not distant from the middle lobe	8–8.5 mm long, 2.0–2.5 mm wide, triangular-falcate, apices obtuse to subacute, not exceeding the base of the middle lobe; apices distant from the base of the middle lobe	about 7 mm long, triangular-falcate, apices acute, not exceeding the base of the middle lobe; apices distant from the base of the middle lobe
Lip middle lobe	4–6 mm long, suborbicular to subquadrate, margins crisped	3–3.5 mm long, suborbicular, apex obtuse to subacute, margins crisped	about 4 mm long, suborbicular to rounded, margins crisped