

A NEW SPECIES OF *MICROCHILUS* (GOODYERINAE, ORCHIDACEAE) FROM PERU

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Abstract. A new species of *Microchilus* Presl is described and illustrated based on Peruvian material. The new entity resembles *M. laegaardii* Ormerod, from which it differs by the long leaf petiole and sheath, as well as by spur length and lip form. A key for identification of Peruvian *Microchilus* species is also provided.

Key words: biodiversity, *Microchilus*, Neotropics, Peru

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As currently recognized, the Neotropical *Microchilus* Presl (Orchidaceae), comprising over 135 species, is the largest genus of Goodyerinae (Ormerod 2013). Since the description of this genus (Presl 1827) over 160 taxa have been applied to *Microchilus*, but its relation with *Erythrodes* Blume was unclear and for years representatives of the former were included in *Erythrodes* (e.g., Ames 1922). The revised concept of Neotropical Goodyerinae (Garay 1977; Ormerod 2002; Ormerod & Cribb 2003) changed this approach; currently *Erythrodes* is considered to be restricted to the Asian tropics, while Neotropical taxa previously classified within this genus are included in *Aspidogyne* Garay, *Kreodanthus* Garay, *Ligeophila* Garay, *Microchilus* C. Presl, and *Platythelys* Garay. Recently Meneguzzo (2012) synonymized *Ligeophila*, *Platythelys*, *Rhamphorhynchus* Garay and *Stephanothelys* Garay with *Aspidogyne*. However, since the morphological limits between them are explicit we prefer to maintain them as separated genera.

Despite the ongoing discussion of generic limits within Goodyerinae, the distinctiveness of *Microchilus* is generally accepted. Recent studies of this taxon yielded descriptions of over 100 new species (e.g., Ormerod 2002, 2005, 2007,

2008, 2009, 2013; Kolanowska 2014; Szlachetko & Kolanowska 2014). The geographical range of the genus extends from Mexico to Argentina, with the greatest diversity observed in the northern Andes.

Representatives of *Microchilus* are terrestrial, occasionally lithophytic, rarely epiphytic plants with leafy stems. Their shortly petiolate leaves are obliquely lanceolate to elliptic and the resupinate flowers are arranged in a racemose inflorescence. The bipartite lip is spurred. The gynostemium is slender, erect, and lacks a column-foot. The motile, oblong-ovate anther is 2-chambered. Four sectile pollinia are produced. The rostellum is erect, elongate, triangular to oblong, and its remnant is deeply or shallowly notched.

During studies of the Andean orchids we came across a distinctive plant of *Microchilus* which is described here as a new species.

***Microchilus cuscoensis* Kolan. & Szlach., sp. nov.**
Fig. 1

Species similar to *Microchilus laegaardii* Ormerod, distinguished by the long leaf petiole and sheath, the spur being longer than the tepals, the large lip, and the wide epichile with ligulate lobules.

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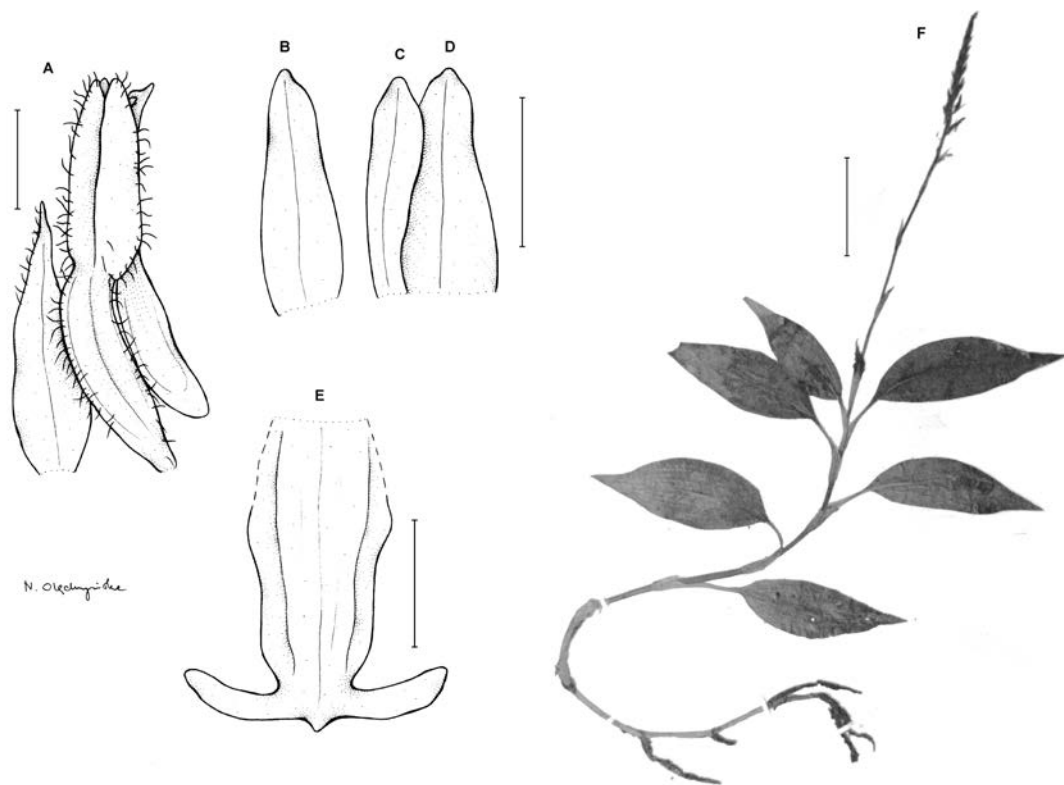


Fig. 1. *Microchilus cuscoensis* Kolan. & Szlach., *sp. nov.* A – flower, B – lateral sepal, C – petal, D – dorsal sepal, E – lip, F – holotype. Scale bars: A–E = 3 mm; F = 5 cm. A–E drawn by N. Olędrzyńska from the holotype.

HOLOTYPE: PERU. Cusco: La Convención. Dist. Echarati, Monte Cristo, 13°30'S 72°19'W, Alt. 1447 m, 29 Jul. 2005, *I. Huamantupa, C. Pacheco, D. Gutierrez, A. Oroz* 6435 (MO; Isotype: CUZ).

Plant *ca* 45 cm tall, slender. Leaves 6, petiolate; blade up to 8 cm long, 3 cm wide, narrowly elliptic, acuminate, acute; petiole and sheath 4 cm long. Sheathing bracts cymbiform. Rachis *ca* 9 cm long (not fully developed), laxly many-flowered, shortly pubescent. Flowers white, sepals ciliate along margins. Floral bracts *ca* 9 mm long, broadly lanceolate, subacute, pubescent along margins. Pedicellate ovary *ca* 7.5 mm long, pubescent. Dorsal sepal *ca* 4.6 mm long, 1.3 mm wide, ovate-lanceolate, obtuse. Lateral sepals *ca* 4.6 mm long, 1.2 mm wide, broadly lanceolate, obtuse. Petals agglutinate to the dorsal sepal, *ca* 4.6 mm long, 0.8 mm wide, obliquely oblanceolate, ob-

tuse. Lip *ca* 7.5 mm long, 6.3 mm wide across epichile lobes; hypochile 6.6 mm long, 3.7 mm wide, rectangular-elliptic; epichile 0.9 mm long, bilobed, lobes obliquely ligulate, obtuse, somewhat falcate; disc 5-veined. Spur *ca* 5 mm long, 1 mm wide, oblongoid, obtuse.

ETYMOLOGY. In reference to the place of origin of the holotype.

HABITAT, ECOLOGY AND DISTRIBUTION. This species was found growing in humid montane forest at *ca* 1450 m a.s.l. Flowering in July. So far it is known exclusively from eastern slopes of the Peruvian Andes.

NOTES. Species similar to Ecuadorian *Microchilus laegaardii* Ormerod, distinguished by the leaf petiole and sheath about half as long as the blade (vs blade 3 times longer than petiole and

sheaths), ciliate floral bracts, the lip much longer than the tepals (vs lip shorter than tepals) and the ligulate lobes of the wide epichile (vs lobes oblong, epichile 3.5 mm wide in *M. laegaardii*). Moreover, the spur of the new species is longer than the tepals, while in *M. laegaardii* it is distinctly shorter than the sepals and petals (spur 3 mm long in *M. laegaardii*). This character also distinguishes the new species from *M. arietinus* (Rchb.f. & Warm.) Ormerod. From this orchid *M. cuscoensis* also differs by the narrow lobules of the lip epichile (ovate in *M. arietinus*). From the Peruvian representative of *M. arietinus*-complex, *M. rioitayanus* Ormerod, the new species can be distinguished based on lip hypochile shape (subpandurate in *M. rioitayanus*) and narrow epichile lobules (ligulate vs ovate-elliptic).

KEY TO PERUVIAN SPECIES OF *MICROCHILUS*

1. Spur minute, less than half of lip length 2
- 1* Spur prominent, over half of lip length 7
 2. Spur oval 3
 - 2* Spur subglobular 5
3. Hypochile ligulate, *ca* four times longer than wide *M. major* C. Presl
- 3* Hypochile subrectangular, *ca* twice longer than wide 4
 4. Dorsal sepal 2.9–3 mm long, lip epichile *ca* 0.8 mm long, 1.8–1.9 mm wide, lunate *M. riopalenquensis* Ormerod
 - 4* Dorsal sepal up to 6 mm long, lip epichile 1 mm long, 3 mm wide across, hippocrepiform *M. ovatus* (Lindl.) D. Dietr.
5. Lip epichile pubescent ... *M. plowmanii* Ormerod
- 5* Lip epichile not pubescent 6
 6. Lip hypochile widest near base *M. peytonorum* Ormerod
 - 6* Lip hypochile widest near connection with epichile *M. capitatus* Ormerod
7. Lip hypochile pubescent 8
- 7* Lip hypochile not pubescent 14
 8. Epichile lateral lobes falcate 9
 - 8* Epichile lateral lobes not falcate 12
9. Epichile middle lobe prominent, triangular *M. astilleroensis* Ormerod
- 9* Epichile middle lobe minute, apiculate 10
 10. Lip epichile glabrous *M. constrictus* Ormerod
 - 10* Lip epichile pubescent 11
11. Epichile lateral lobes narrowly ovate, narrowing towards apices *M. ensicalcar* Ormerod
- 11* Epichile lateral lobes subquadrate, widened towards apices *M. campanensis* Ormerod
 12. Lip hypochile ornamented by single pubescent pad 13
 - 12* Lip hypochile ornamented by pair of pubescent pads *M. microcaprinus* Ormerod
13. Lip epichile pubescent only at base *M. palmazuensis* Ormerod
- 13* Lip epichile pubescent on whole surface *M. pacaizapae* Ormerod
 14. Lip epichile pubescent 19
 - 14* Lip epichile not pubescent 15
15. Lip spur clavate 16
- 15* Lip spur oblongoid to cylindrical 17
 16. Lip epichile with an apicule *M. minor* C. Presl
 - 16* Lip epichile not apiculate *M. anchoriferus* (Schltr.) Ormerod [= *M. marmoratus* (C. Schweinf.) Ormerod]
17. Epichile lateral lobes ligulate, slightly falcate *M. cuscoensis* Kolan. & Szlach.
- 17* Epichile lateral lobes ovate, distinctly falcate 18
 18. Spur narrowed near apex *M. leucostictus* Rchb. f. ex Szlach. & Kolan.
 - 18* Spur equally wide along its length *M. lechleri* Ormerod
19. Epichile lateral lobes falcate *M. arietinus* (Rchb. f. & Warm.) Ormerod
- 19* Epichile lateral lobes not falcate 20
 20. Lip hypochile incised near middle 21
 - 20* Lip hypochile gradually narrowing along apex *M. atalayae* Ormerod
21. Lip hypochile squeezed near connection with epichile *M. riotayanus* Ormerod
- 21* Lip hypochile not squeezed near connection with epichile *M. fosteri* Ormerod

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