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

MARTA KOLANOWSKA¹ & DARIUSZ L. SZLACHETKO

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

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, Rhamphorrhynchus 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 colmn-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.

¹ Corresponding author

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, obtuse. 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 sheath).
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 (sub-pandurate in *M. rioitayanus*) and narrow epichile lobules (ligulate vs ovate-elliptic).

**Key to Peruvian species of *Microchilus***

| 1'. Spur prominent, over half of lip length | 2'. Spur subglobular | 3'. Hypochile subrectangular, ca twice longer than wide | 4'. Dorsal sepal up to 6 mm long, lip epichile 1 mm long, 3 mm wide across, hippocrepiform | 5'. Lip epichile not pubescent | 6'. Lip hypochile widest near apex | 7'. Lip hypochile not pubescent | 8'. Epichile lateral lobes not falcate | 9'. Epichile middle lobe minute, apiculate | 10'. Lip epichile pubescent | 11'. Epichile lateral lobes subquadrate, widened towards apices |
| 13'. Lip epichile pubescent on whole surface | 14'. Lip epichile pubescent | 15'. Lip epichile not pubescent | 16'. Lip epichile not apiculate | 17'. Epichile lateral lobes ovate, distinctly falcate | 18'. Spur equally wide along its length | 19'. Epichile lateral lobes not falcate | 20'. Lip hypochile gradually narrowing along apex | 21'. Lip hypochile not squeezed near connection with epichile |

Acknowledgements. We are grateful to the Curator and staff of the Missouri Botanical Garden herbarium for their kind hospitality and assistance during visits and for making specimens available on loan, to Paul Ormerod and an anonymous reviewer for their valuable comments on the manuscript, and to Natalia Olędrzyńska for preparing the illustrations of the new species. The research described here was supported by the Polish Ministry of Science and Higher Education (research grant no. 8124/B/PO1/2011/40).
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Received 28 September 2014