

Redefinition of the orchid genus *Pseudoliparis* Finet, with descriptions of new species

Dariusz L. SZLACHETKO, Hanna B. MARGOŃSKA,
Laboratory of Plant Taxonomy and Phytogeography,
Gdańsk University, Al. Legionów 9, PL-80-441 Gdańsk, Poland.
biodarek@univ.gda.pl

ABSTRACT

The genus *Pseudoliparis* Finet is characterised by subsimilar sepals and petals, by unlobed or obscurely 3-lobed lip, auriculate basally, and by the gynostemium structure, especially by narrowly triangular, acute rostellum, subequal in length to the anther, and horn or ridge on the dorsal surface of the column part. Three new species are described and illustrated: *P. curviauriculata* Szlach. & Marg., *sp. nov.*, *P. raciborskii* Szlach. & Marg., *sp. nov.* and *P. van-royenii* Szlach. & Marg., *sp. nov.* Their taxonomic affinities are briefly discussed. Additionally, 19 new combinations are proposed.

KEY WORDS

Pseudoliparis,
Orchidaceae,
Australasia.

RÉSUMÉ

Nouvelle définition du genre Pseudoliparis Finet (Orchidaceae) et description de nouvelles espèces.

Le genre *Pseudoliparis* Finet se caractérise par des sépales et pétales presque semblables, par un labelle non lobé (ou obscurément 3-lobé) auriculé à la base, et par la structure du gynostème, en particulier le rostellum, qui est étroitement triangulaire, aigu, de longueur comparable à celle de l'anthère et présentant une corne ou une crête sur la face dorsale de la colonne. Trois nouvelles espèces sont décrites et illustrées : *Pseudoliparis curviauriculata* Szlach. & Marg., *sp. nov.*, *P. raciborskii* Szlach. & Marg., *sp. nov.* et *P. van-royenii* Szlach. & Marg., *sp. nov.* Leurs affinités taxonomiques sont brièvement discutées. En outre, 19 nouvelles combinaisons sont proposées.

MOTS CLÉS

Pseudoliparis,
Orchidaceae,
Australie.

The cosmopolitan subtribe Malaxidinae constitutes large and variable group of small terrestrial and epiphytic orchids, very interesting from the taxonomic point of view. In the recent attempt of its clarification 16 genera have been recognised in Malaxidinae (SZLACHETKO 1995), with the largest, *Crepidium* Blume, including over 200 species. Most of them occur in Australasia, especially in New Guinea.

While publishing *Systema Orchidialium*, the senior author was aware that *Crepidium sensu lato* is rather a polymorphic taxon. Recent studies of the herbarium and living materials as well as spirit collections gave a good background for dividing this genus into two, *Crepidium* Blume and *Pseudoliparis* Finet. Both of these genera differ in the flower morphology and, what is more important, in the gynostemium structure.

The genus *Crepidium* includes species with a prominent cavity at the lip base, surrounded by a fovea of various size and form. In all species examined sepals and petals are dissimilar, with the latter being usually linear. The gynostemium is elongate, dorsiventrally flattened and slightly arched. The cordate or broadly ovate anther is movable and easily falling off. Rostellum is truncate.

Pseudoliparis is characterised by subsimilar tepals with petals more or less similar in size and form to lateral sepals, often differing in the number of veins only. The lips is flat, i.e., there is neither cavity nor fovea at the base of the lip. The gynostemium is elongate, dorsiventrally flattened and slightly arched, but unlikely *Crepidium*, is ornamented by dorsal horn or ridge. The erect anther is linear or narrowly ovate and stiffly fused with the column apex. In result it never falls off of the gynostemium. Very characteristic feature of *Pseudoliparis* is elongate, usually narrowly triangular acute rostellum. It is noteworthy that its apical part adnate to the apex of anther.

Based on the above mentioned differences between *Crepidium* and *Pseudoliparis* we propose to keep both genera separate.

PSEUDOLIPARIS Finet

Bull. Soc. Bot. France 54: 536 (1907).

Pseudobulbs slender, fusiform. Leaves petiolate, thin-textured, plicate. Inflorescence elongate, densely multi-flowered. Flowers small, non-resupinate. Sepals and petals subsimilar, thin, delicate. Lip unlobed or obscurely 3-lobed, flat, with no basal cavity, auriculate, ecallose or with obscure appendages. Gynostemium slender or relatively massive, dorsiventrally flattened, arched, widened at base, with dorsal horn or ridge along the column. Anther erect, stiffly fused with the column apex, usually linear, 4-chambered, connective thickened basally. Pollinia four, linear to narrowly clavate, with tiny, apical caudicles. Staminodes large, ribbon-, horn- or wing-like, curved forward. Stigma small, oval, deeply concave. Rostellum narrowly triangular, acute, adnate apically to the anther apex. No viscidium was seen.

TYPE.—*Pseudoliparis epiphytica* Finet.

The genus includes over 20 species known mostly from New Guinea. The new combinations are validated below:

***Pseudoliparis brachycaulos* (Schltr.) Szlach. & Marg., comb. nov.**

Microstylis brachycaulos Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 117 (1914).

***Pseudoliparis breviscapa* (Schltr.) Szlach. & Marg., comb. nov.**

Microstylis breviscapa Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 116 (1914).

***Pseudoliparis curvatula* (Schltr.) Szlach. & Marg., comb. nov.**

Microstylis curvatula Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 117-118 (1914).

***Pseudoliparis diploceras* (Schltr.) Szlach. & Marg., comb. nov.**

Microstylis diploceras Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 118-119 (1914).

Pseudoliparis graminifolia (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis graminifolia Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 121 (1914).

Pseudoliparis incurva (J.J. Sm.) Szlach. & Marg., **comb. nov.**

Microstylis incurva J.J. Sm., Bull. Dep. Agr. Ind. Neerl. 19: 29 (1908).

Pseudoliparis laevis (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis laevis Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 112 (1914).

Pseudoliparis maboroensis (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis maboroensis Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 113-114 (1914).

Pseudoliparis macrotis (Kraenzl.) Szlach. & Marg., **comb. nov.**

Liparis macrotis Kraenzl. in Schuman & Lauterbach, Nachtr. Fl. Deutsch. Schutzgeb.: 104 (1905).

Pseudoliparis microhybos (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis microhybos Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 115-116 (1914).

Pseudoliparis rhinoceros (J.J. Sm.) Szlach. & Marg., **comb. nov.**

Microstylis rhinoceros J.J. Sm., Bull. Dep. Agr. Ind. Neerl. 22: 21 (1909).

Pseudoliparis schumanniana (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis schumanniana Schltr., Nachtr. Fl. Deutsch. Schutzgeb.: 101 (1905).

Pseudoliparis seleniglossa (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis seleniglossa Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 115 (1914).

Pseudoliparis stenophylla (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis stenophylla Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 119 (1914).

Pseudoliparis stenophylla var. crispatula (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis stenophylla Schltr. var. *crispatula* Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 119 (1914).

Pseudoliparis torricellensis (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis torricellensis Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 114-115 (1914).

Pseudoliparis tubulosa (J.J. Sm.) Szlach. & Marg., **comb. nov.**

Microstylis tubulosa J.J. Sm., Bull. Dep. Agr. Buitenzorg 5: 1 (1907).

Pseudoliparis umbonata (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis umbonata Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 113 (1914).

Pseudoliparis undulata (Schltr.) Szlach. & Marg., **comb. nov.**

Microstylis undulata Schltr., Repert. Spec. Nov. Regni. Veg., Beih. 1: 120 (1914).

While examining herbarium materials belonging to the subtribe Malaxidinae from Australasia we found some collections which in our opinion could be easily separated as new species. We describe them as follow:

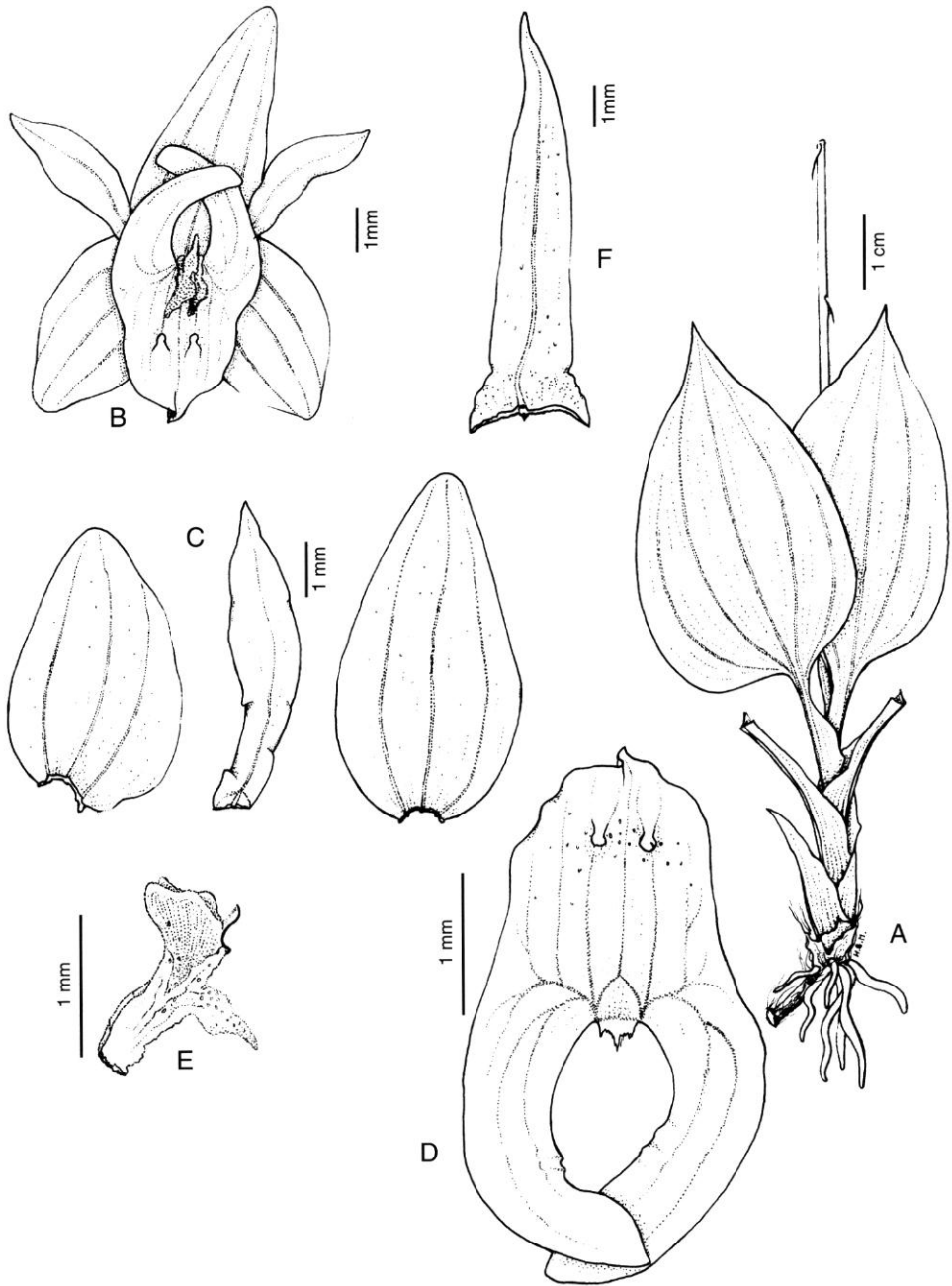


Fig. 1.—*Pseudoliparis curviauriculata* Szlach. & Marg.: A, habit; B, flower; C, tepals; D, lip; E, gynostemium, side view; F, floral bract. (van Royen & Sleumer 6916, L).

Pseudoliparis curviauriculata Szlach. & Marg.,
sp. nov.

A habitu P. diploceratidi affinis, sed auriculis falcatis in parte apicali imbricatis, labello nodulos parvos duos habenti et sepalis trinervis basi latissimis recedit.

TYPUS.—*van Royen & Sleumer 6916*, Irian Jaya, Vogelkop Peninsula, Aifat River Valley, path Sururem-Timtum, 21 Oct. 1961 (holo-, L).

Terrestrials. Pseudobulbs 2.2-2.7 cm long, 0.25-0.3 cm in diameter, fusiform, erect. Leaves 2-5, petiole 0.8-1.5 cm long, canaliculate, widening towards the base into the sheath; blade 2.5-7 cm long, 1-3.7 cm wide, broadly ovate to ovate-subcordate, apiculate, yellowish-green. Inflorescence up to 22 cm long, erect; spike 7.7-8.2 cm long, ca. 60-flowered, dense to very dense at apex. Flowers small, non-resupinate, sordidly yellow. Floral bracts 4-8 mm long, linear-lanceolate to linear-triangular, acute to acuminate. Pedicel and ovary 1-1.1 mm long, slender. Dorsal sepal 6 mm long, 2-2.2 mm wide, ovate to lanceolate-ovate, subobtusate, 3-nerved. Petals 5 mm long, up to 1 mm wide, narrowly oblanceolate, falcate, acute, single-nerved. Lateral sepals 4 mm long, 2.3-2.5 mm wide, obliquely ovate, obtuse, 3-nerved. Lip up to 5 mm long and 3-3.3 mm wide, with two knob-like appendages near its apex, semi-elliptic, subacute to shortly apiculate, with no cavity at the base; auricles 2.5 mm long, 0.9-1.2 mm wide, falcately oblong-lanceolate, subacute, crossing together at apices. Gynostemium with large horn-like structure on the dorsal surface.—Fig. 1.

ETYMOLOGY.—In reference to the form of the lip auricles.

DISTRIBUTION.—Known so far from the type collections. Collected in *Castanopsis acuminatissima* forest.

NOTES.—This species is habitually similar to *P. diploceras* (Schltr.) Szlach. & Marg., but sepals are 3-nerved, widest below the middle, the lip is ornamented by two subapical, knob-like appendages and the lip auricles are longer, falcately curved, crossing together near apices.

Pseudoliparis raciborskii Szlach. & Marg., sp.
nov.

Planta aspectus P. graminifoliae, sed recedit labello incrassationibus nullis, apicibus sepalorum acutis, sepalis latissimis in parte inferiore et petalis uninervis.

TYPUS.—*van Royen & Sleumer 7306*, Irian Jaya, Vogelkop Peninsula, W Kebar Valley, near Senop village, 10 Nov. 1961 (holo-, L).

PARATYPE.—*Brass 25567*, Papua New Guinea, Normanby Island, mountains behind Waikaiuna Bay, 23 Apr. 1956 (L).

Terrestrials. Pseudobulbs 2.4-4.8 cm long, up to 0.1 cm in diameter, fusiform, erect or ascending. Leaves 4-7, petiole up to 1.2 cm long, canaliculate, sheath-like; blade 2.1-9.4 cm long, 0.45-1.1 cm wide, lanceolate to linear-lanceolate, acute to shortly apiculate, green. Inflorescence 7.3-28.5 cm long, erect; spike 3.3-19 cm long, ca. 60-100-flowered, dense. Flowers small, non-resupinate, yellowish to brownish yellow, fleshy. Floral bracts 2-10 mm long, linear-lanceolate to narrowly triangular, apiculate, auriculate basally or not. Pedicel and ovary 2-2.3 mm long, slender. Dorsal sepal 3-3.4 mm long, 1.6-2.1 mm wide, oblong-ovate to elliptic-ovate, subacute, slightly cochleate, subcucullate, 3-nerved. Petals 2.9-3.2 mm long, 1.5-2 mm wide, ovate-lanceolate to oblong-ovate, acute, single-nerved. Lateral sepals 3-3.4 mm long, 1.8-2.5 mm wide, obliquely ovate, acute to subacute, slightly cochleate, subcucullate, 3-nerved. Lip 3-3.8 mm long, 2.3-2.8 mm wide, ecallose, semi-ovate, subobtusate, shortly auriculate; auricles up to 0.5 mm long, falcately ovate, obtuse. Gynostemium up to 2 mm long, with prominent ridge on the dorsal surface of the column.—Fig. 2.

ETYMOLOGY.—Named in honour of Polish botanist Prof. Marian RACIBORSKI (1863-1917).

DISTRIBUTION.—Known so far from the above localities. Collected in primary and rain forest, 100-600 m a.s.l.

NOTES.—*Pseudoliparis raciborskii* appears to be related to *P. graminifolia* (Schltr.) Szlach. & Marg. The new species is easily distinguishable from this species in having lip lacking any thickenings and appendages, acute or subacute

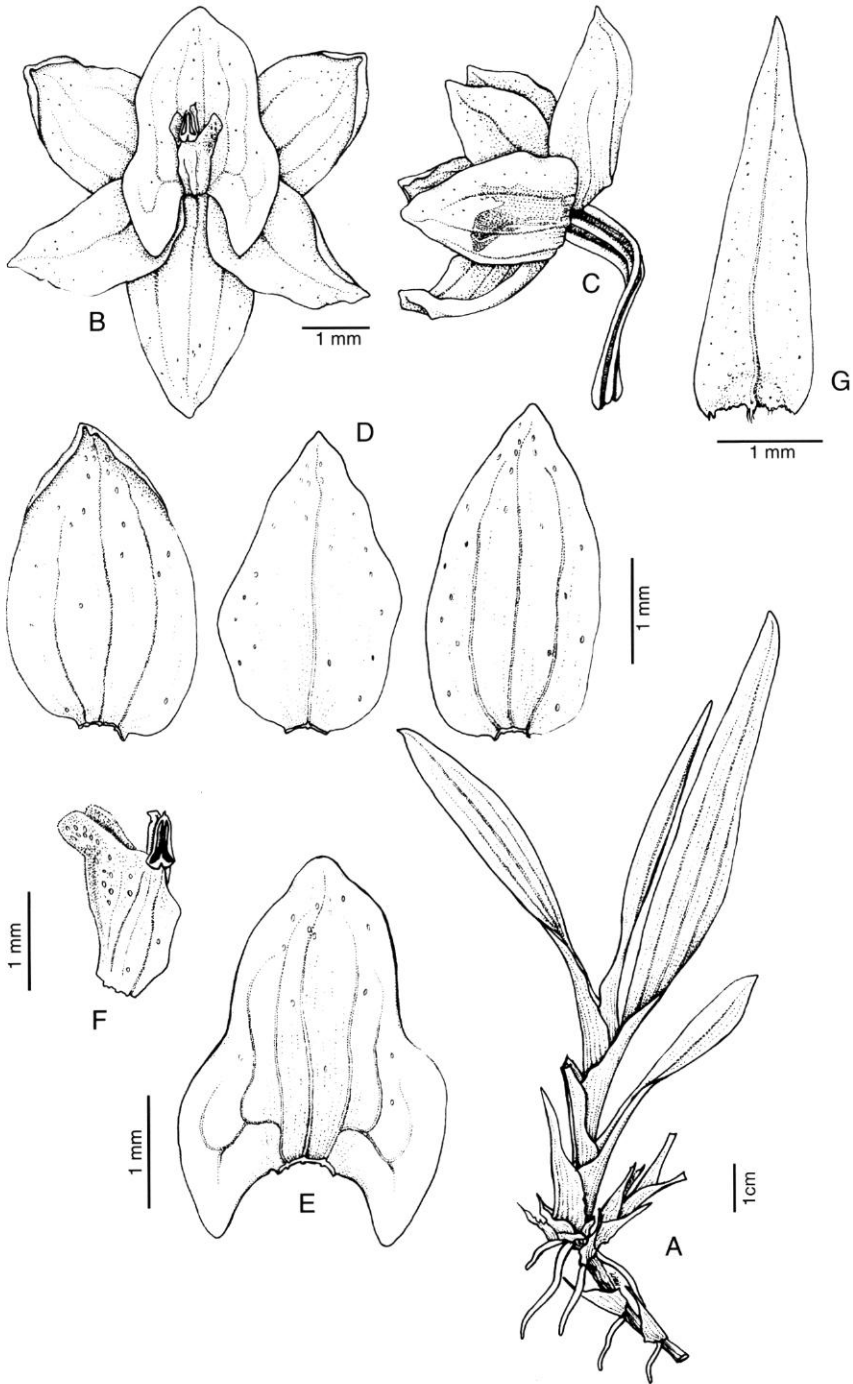


Fig. 2.—*Pseudoliparis raciborskii* Szlach. & Marg.: A, habit; B, flower, front view; C, flower, side view; D, tepals; E, lip; F, gynostemium; G, floral bract. (van Royen & Sleumer 7306, L).

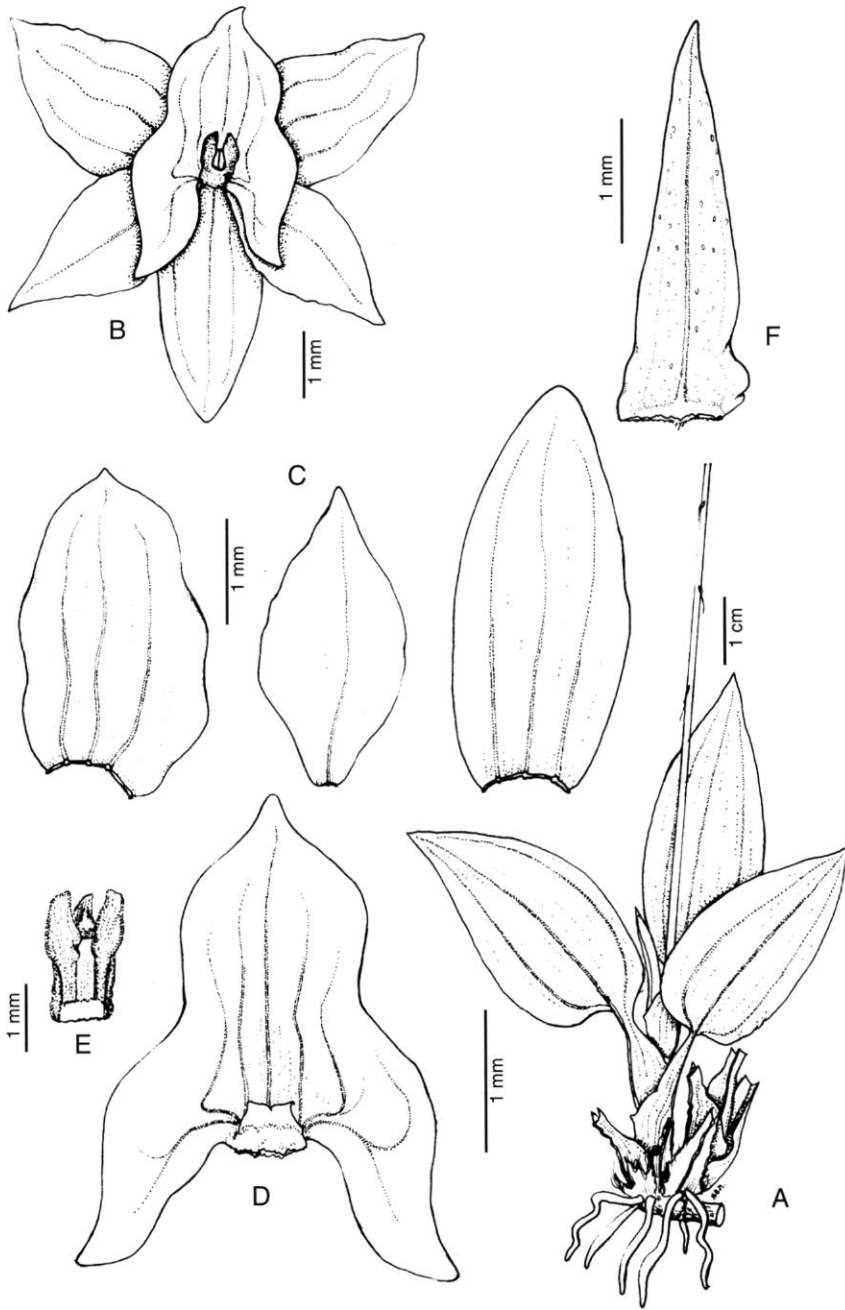


Fig. 3.—*Pseudoliparis van-royenii* Szlach. & Marg.: **A**, habit; **B**, flower; **C**, tepals; **D**, lip; **E**, gynostemium; **F**, floral bract. (van Royen & Sleumer 7505, L).

tepals, which additionally are widest in their lower parts and single-nerved petals.

***Pseudoliparis van-royenii* Szlach. & Marg., sp. nov.**

A P. stenophyllae labello panduriformi, auriculis lyratis brevioribusque, apice labelli apiculato et concrasatione centrali labelli nullo jam dignoscenda.

TYPUS.—*van Royen & Sleumer 7505*, Irian Jaya, Vogelkop Peninsula, Aifat River Valley, path from Surum to Son village, 26 Oct. 1961 (holo-, L).

Terrestrials. Pseudobulbs 1-3.6 cm long, up to 0.3 cm in diameter, erect, slender, fusiform. Leaves 3-5, petiole 0.2-0.8 cm long, canaliculate, sheath-like at base; blade 2.7-4.8 cm long, 1.5-2.4 cm wide, ovate-lanceolate, acute, greyish-green. Inflorescence up to 25.6 cm long, erect; spike 14.2 cm long, ca. 40-flowered, dense. Flowers small, non-resupinate, creamy, lip yellow, gynostemium green. Floral bracts 3-7 mm long, narrowly triangular to linear-lanceolate, acute to shortly apiculate, obscurely auriculate basally. Pedicel and ovary up to 3 mm long, slender. Dorsal sepal 4 mm long, 1.8 mm wide, oblong-ovate, obtuse, with revolute apical margins, 3-nerved. Petals 3 mm long, 1.4 mm wide,

broadly lanceolate, acute, single-nerved. Lateral sepals 3.5 mm long, 2 mm wide, obliquely ovate, shortly apiculate, 3-nerved. Lip 3-3.3 mm long, 2.5 mm wide, pandurate in outline, shortly apiculate, auriculate; auricles 1.2 mm long, lyre-like, subacute, widely divergent. Gynostemium 2 mm long, with ridge along the dorsal surface of the column.—Fig. 3.

ETYMOLOGY.—Dedicated to the collector of the species, Dr. Peter VAN ROYEN.

DISTRIBUTION.—Known from the type locality only. Collected in oak-forest, 720 m a.s.l.

NOTES.—Unlike *P. stenophylla* (Schltr.) Szlach. & Marg., *P. van-royenii* has no fovea near the lip base, lip auricles are lyre-like, widely divergent, and the lip is apiculate.

Acknowledgments

We are grateful to the Curators of BM, HBG, K, P and W for their hospitality during our personal visits, to the Curator of L for the loan of the herbarium materials and to Prof. Dr. Ryszard OCHYRA for the latinization of the diagnoses.

REFERENCES

SZLACHETKO D.L. 1995.—*Systema Orchidaliium*. Fragm. Florist. Geobot., Suppl. 3: 1-152.

*Manuscript received 8 December 1997;
revised version accepted 16 April 1999.*