

Materials towards a revision of the genus *Pseudoliparis* (Orchidaceae, Malaxidinae), 1

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Received 29 Jan. 2002, revised version received 29 Mar. 2002, accepted 15 Apr. 2002

Margońska, H. B. 2003: Materials towards a revision of the genus *Pseudoliparis* (Orchidaceae, Malaxidinae), 1. — *Ann. Bot. Fennici* 40: 63–66.

One new combination at the section level and nine combinations at the species level are proposed in the genus *Pseudoliparis* (Orchidaceae, Malaxidinae).

Keywords: Malaxidinae, nomenclature, Orchidaceae, *Pseudoliparis*, taxonomy

In the course of a taxonomic revision of the genus *Pseudoliparis* (Orchidaceae, Malaxidinae) I studied herbarium specimens and spirit collections kept at AMES, B, C, BM, HBG, K, L, US, and W. Among the collections from Asia I found nine species, which clearly belong in *Pseudoliparis* but have previously not been placed in it. The necessary new combinations are proposed here.

Pseudoliparis atrobachiata (Ridl.) Marg., *comb. nova*

Basionym: *Microstylis atrobachiata* Ridl., Trans. Linn. Soc., Bot. 9: 160. 1916.

Pseudoliparis bataanensis (Ames) Marg., *comb. nova*

Basionym: *Malaxis bataanensis* Ames, Philip. J. Sc., Bot. 6: 46. 1911.

Pseudoliparis heliophoba (J.J. Sm.) Marg., *comb. nova*

Basionym: *Microstylis heliophoba* J.J. Sm., Repert. Spec. Nov. Reg. Veg. 11: 556. 1913.

Pseudoliparis inexpectata (J.J. Sm.) Marg., *comb. nova*

Basionym: *Microstylis inexpectata* J.J. Sm., Bull. Jard. Bot. Buitenz. Ser. 3, 10: 33. 1928.

Pseudoliparis moluccana (J.J. Sm.) Marg., *comb. nova*

Basionym: *Microstylis moluccana* J.J. Sm., Bull. Inst. Bot. Buitenz. 7: 2. 1900.

Pseudoliparis multiflora (Ames & C. Schweinf.) Marg., *comb. nova*

Basionym: *Malaxis multiflora* Ames & C. Schweinf., Orchidaceae 6: 75. 1920.

***Pseudoliparis uncata* (Ames) Marg.,
comb. nova**

Basionym: *Malaxis uncata* Ames, Philip. J. Sc., Bot. 6: 46. 1911.

***Pseudoliparis wapeana* (J.J. Sm.) Marg.,
comb. nova**

Basionym: *Microstylis wapeana* J.J. Sm., Meded. Herb. Leid. 23: 3. 1915.

***Pseudoliparis zippeli* (J.J. Sm.) Marg.,
comb. nova**

Basionym: *Microstylis zippeli* J.J. Sm., Bull. Dep. Agric. Indes Neerl. 39: 17. 1910.

The genus *Pseudoliparis* was recently reinstated by Szlachetko and Margońska (1999). The species previously placed into it can be found in that paper and those by Margońska and Szlachetko (2000, 2001). *Pseudoliparis* currently contains 39 species distributed in SE Asia.

**Key to *Pseudoliparis* and closely related
Asiatic genera of subtribe Malaxidinae**

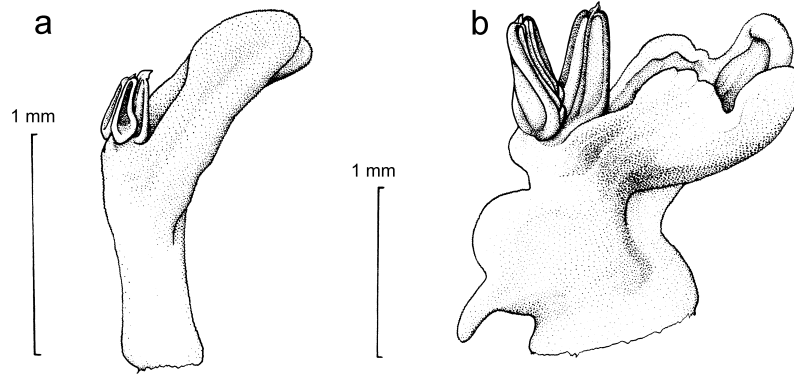
1. Plants saprophytic or semisaprophytic *Risleya*
1. Plants autotrophic 2
2. Column of gynostemium massive, at most slightly longer than staminodes; anther relatively small, distinctly broader than long, its locules opening apically or ventrally *Malaxis*
2. Column of gynostemium slender, at least twice as long as staminodes; anther large, at most slightly broader than long, its locules opening always ventrally 3
3. Lip simple, lateral lobes not auricled 4
3. Lip 3-lobed, lateral lobes auricled 5
4. Lip lingulate to ovate, its apical margins always entire ..
..... *Glossochilopsis*
4. Lip spatulate to flabellate, with apical margins usually dentate *Seidenfia*
5. Apical margins of lip always entire, lip flat (without basal cavity), ornamented at central portion only by parallel lamellae or obscurely convex; gynostemium elongate, sometimes with appendages along dorsal part of column; staminodes large, ribbon-, horn-, or wing-like, folding back from anther *Pseudoliparis*
5. Apical margins of lip usually dentate, lip with a distinct central cavity; column relatively short, flat along the dorsal part; staminodes as long as or shorter than anther, finger-like, erect 6

6. Central cavity of lip relatively small, surrounded by a prominent ring-like callus, positioned along two external nerves, cavity usually with a roof above *Crepidium*
6. Central cavity of lip large, embracing most of middle part of lip, surrounded only by convexity of two, external nerves, without roof above *Dienia*

Based on the original description and examination of type collections of species of *Pseudoliparis*, representatives of this genus are characterised by (1) delicate, more or less subequal tepals, (2) unlobed or only obscurely 3-lobed lip, always with entire margins, auriculate, flat (without basal cavity), ornamented at central portion by parallel calli, lamellae or only obscure convexity, (3) elongate, dorsiventrally flattened, slightly arched gynostemium, (4) erect, linear to ovate anther, firmly fused with the column apex, with a basally thickened connective, (5) four narrowly to broadly clavate pollinia, with tiny, apical caudicles, (6) distinct, ribbon-, horn-, or wing-like staminodes, often with minutely papillose surface, usually dark-coloured and distinctly folded back from the anther, (7) erect, narrowly triangular to triangular rostellum, acute to apiculate at apex and adnate apically to the anther apex, and (8) small, ovate, deeply concave stigma.

According to the original description, the genus is also easily distinguished by horn-like appendages or distinct convexity along the dorsal part of column (Fig. 1B). However, some species are characterized by a slightly different form of this portion of gynostemium. This feature seems to be characteristic of section *Oistochilus* Schlecht. (= genus *Microstylis*). Schlechter (1914) affirmed the absence of a horn or tubercular excrescence on the dorsal part of column (Fig. 1A). Kores (1989) transferred section *Oistochilus* to *Malaxis*. Based on only such features as a small, flat, entire, auriculate lip and a simple column of gynostemium he included *Malaxis latisegmenta* C. Schweinf. and *M. platychlila* (Rehb. f.) Kuntze in this section. At present the former is recognized as *Crepidium latisegmentum* (C. Schweinf.) Clem. & Jones and the latter is probably just its cleistogamous form. Both these species are easily distinguished by a distinctly developed central lip cavity surrounded by a prominent ring-like callus, and the shape of gynostemium, typical of the genus *Cre-*

Fig. 1. Gynostemium in the genus *Pseudoliparis*. — **a:** Section *Oistochilus*, gynostemium of *P. graminifolia* (Schlecht.) Szlach. & Marg., lateral view. — **b:** Section *Pseudoliparis*, gynostemium of *P. epiphytica* Finet, lateral view.



pidium. Schlechter (1914), characterizing section *Oistochilus*, emphasized its similarity to section *Pseudo-Liparis* Schlecht. by such features as form of gynostemium, absence of lip cavity, and lip disc provided only with two lateral lamellae at most.

I propose to divide *Pseudoliparis* into the sections *Pseudoliparis* and *Oistochilus* (Schlecht.) Marg.

Pseudoliparis* section *Pseudoliparis

Microstylis (Nutt.) Eaton section *Pseudo-Liparis* Schlecht., Repert. Spec. Nov. Regni Veg., Beih. 1: 112. [1911] 1914. — *Malaxis* Sol. ex Sw. section *Pseudoliparis* (Finet) Seidenf., Bot. Tidskr., 73: 102. 1978. — *Crepidium* Bl. emend. Szlach. subgenus *Pseudoliparis* (Finet) Szlach., Fragm. Flor. Geobot., Suppl. 3: 123. 1995. — Type: *Pseudoliparis epiphytica* Finet.

Pseudoliparis arietina (Ames) Marg. & Szlach.
Pseudoliparis balabacensis (Ames) Marg. & Szlach.
Pseudoliparis bataanensis (Ames) Marg.
Pseudoliparis brachycaulos (Schlecht.) Szlach. & Marg.
Pseudoliparis breviscapa (Schlecht.) Szlach. & Marg.
Pseudoliparis cruciatis Marg. & Szlach.
Pseudoliparis curvatula (Schlecht.) Szlach. & Marg.
Pseudoliparis curviauriculata Szlach. & Marg.
Pseudoliparis diploceras (Schlecht.) Szlach. & Marg.
Pseudoliparis epiphytica Finet

Pseudoliparis gregorii Marg. & Szlach.
Pseudoliparis heliophoba (J.J. Sm.) Marg.
Pseudoliparis incurva (J.J. Sm.) Szlach. & Marg.
Pseudoliparis inexpectata (J.J. Sm.) Marg.
Pseudoliparis laevis (Schlecht.) Szlach. & Marg.
Pseudoliparis latipetala (J.J. Sm.) Marg. & Szlach.
Pseudoliparis maboroensis (Schlecht.) Szlach. & Marg.
Pseudoliparis macrotis (Kraenzl.) Szlach. & Marg.
Pseudoliparis magnicallosa Marg. & Szlach.
Pseudoliparis microhybos (Schlecht.) Szlach. & Marg.
Pseudoliparis multiflora (Ames & C. Schweinf.) Marg.
Pseudoliparis orbicularis Marg. & Szlach.
Pseudoliparis ramosii (Ames) Marg. & Szlach.
Pseudoliparis rhinoceros (J.J. Sm.) Szlach. & Marg.
Pseudoliparis schumanniana (Schlecht.) Szlach. & Marg.
Pseudoliparis seleniglossa (Schlecht.) Szlach. & Marg.
Pseudoliparis stenophylla (Schlecht.) Szlach. & Marg.
Pseudoliparis toricellensis (Schlecht.) Szlach. & Marg.
Pseudoliparis tubulasa (J.J. Sm.) Szlach. & Marg.
Pseudoliparis umbonata (Schlecht.) Szlach. & Marg.
Pseudoliparis uncata (Ames) Marg.
Pseudoliparis undulata (Schlecht.) Szlach. & Marg.

Pseudoliparis* section *Oistochilus
(Schlecht.) Marg., *comb. nova*

Microstylis (Nutt.) Eaton section *Oistochilus* Schlecht., *Repert. Spec. Nov. Regni Veg., Beih.* 1: 120. [1911] 1914. — *Malaxis* Sol. ex Sw. section *Oistochilus* (Schlecht.) Kores, *Allertonia* 5(1): 46. 1989. — Type: *Pseudoliparis graminifolia* (Schlecht.) Szlach. & Marg.

Pseudoliparis atrobachiata (Ridl.) Marg.

Pseudoliparis graminifolia (Schlecht.) Szlach. & Marg.

Pseudoliparis moluccana (J.J. Sm.) Marg.

Pseudoliparis raciborskii Szlach. & Marg.

Pseudoliparis wapeana (J.J. Sm.) Marg.

Pseudoliparis van-royenii Szlach. & Marg.

Pseudoliparis zippeli (J.J. Sm.) Marg.

Acknowledgments

I am grateful to the Curators of AMES, B, C, BM, HBG, K, L, US, and W for the loans of herbarium specimens and/or their hospitality during my personal visits. This study was financed by KBN (Polish Committee for Scientific Research) grant No. 6P04C-055-16.

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