

Notes on the genus *Pseudoperistylus* (Orchidaceae, Roeperocharidinae), with the description of a new species from Ethiopia

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Pseudoperistylus aethiopicus Szlach. & Olsz. *sp. nova* (Orchidaceae, Roeperocharidinae) is described, illustrated and its taxonomic position is briefly discussed. Two new combinations within the genus are proposed: *P. lefebureanus* (A. Rich.) Szlach. & Olsz. and *P. montolivaea* (Kraenzl. ex Engl.) Szlach. & Olsz.

Key words: nomenclature, Orchidaceae, *Pseudoperistylus*, Roeperocharidinae, taxonomy

The genus *Pseudoperistylus* (P. F. Hunt) Szlach. & Olsz., formerly recognized as a section of *Habenaria* Willd., was proposed by Szlachetko and Olszewski (1998) based on the unique gynostemium structure. As the genus is rather poorly known we present here a description and illustration of its most important taxonomic character, the gynostemium.

Pseudoperistylus (P. F. Hunt) Szlach. & Olsz.

Fl. Camer. 34(1): 210. 1998.

Plants are usually terrestrial, rarely epiphytic. Few tubers are ovoid to ellipsoid. The stem is erect and leafy throughout its length. The leaves are

ovate to linear-lanceolate, acute, sessile, spreading to erect, decreasing in size upwards along the stem. The inflorescence is multi-flowered, long, lax to dense, spirally arranged. The flowers are small, inconspicuous, resupinate, green or greenish-white. The tepals are dissimilar, with lateral sepals spreading. The lip is distinctly three-lobed above the undivided, unauricled basal part; its lobes are pendent to divergent. The spur is of variable length, usually filiform, often very short, reduced (Szlachetko & Olszewski 1998). The gynostemium is very short, massive, and erect. The anther base is placed above the rostellum and the stigma apex. The anther is broadly obovoid to transversely ellipsoid, firmly joined with the gynostemium, slightly bent back and 2-cham-

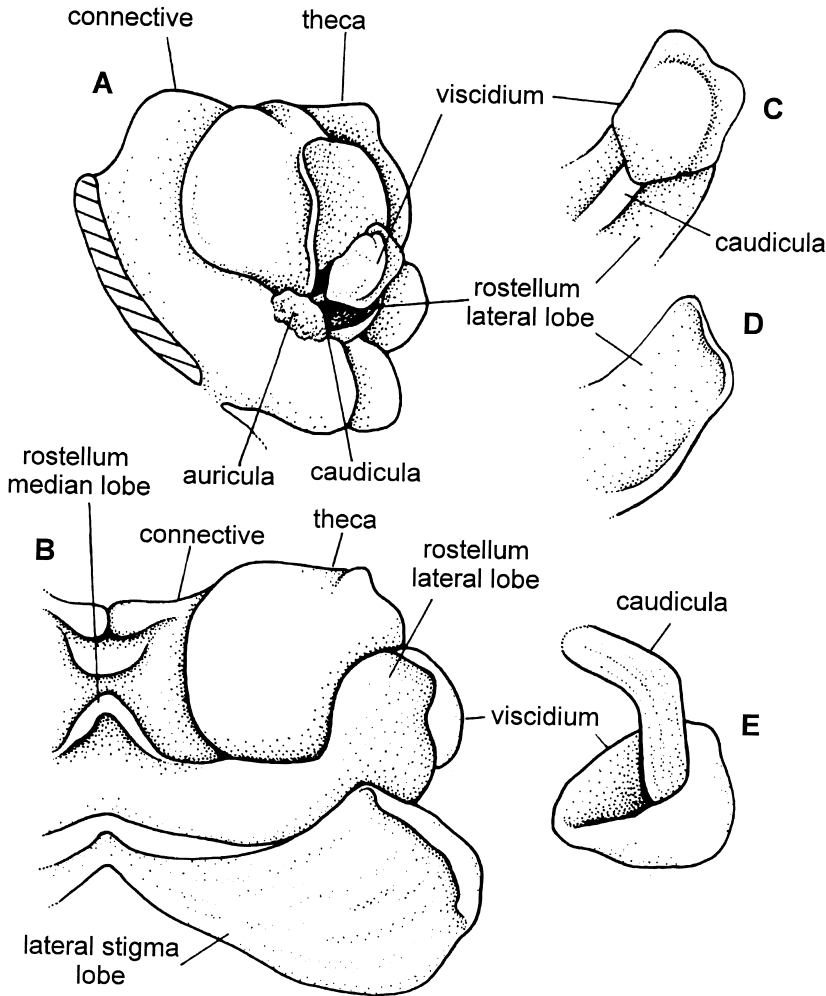


Fig. 1. *Pseudoperistylus clarencensis* (Rolfe) Szlach. & Olsz. (according to Szlachetko & Rutkowski 2000). — A: Gynostemium, side view. — B: Gynostemium spread, front view. — C: Rostellum arm with viscidium and caudicula. — D: Rostellum remnant. — E: Viscidium and caudicula.

bered; the chambers are thin-walled, apically parallel or divergent, rounded at both ends or with shortly elongate basal projections, but antherophores are lacking. The connective is narrow to extremely wide, thin to very massive. The pollinia are two, sectile, globose to ellipsoid. The caudiculae are also two, interocular, filiform, shorter than pollen mass. The auriculae are inconspicuous, fleshy, sculptured. The stigma is bi-lobed, with lobes confluent basally, pendent just above, parallel, concave, sometimes pocket-like with the outer surface densely ciliate. The rostellum is 3-lobed; middle lobe is more or less triangular, pleated, adnate to the connective, sometimes quite thick, side lobes are widely spreading, narrow to rather wide, both terminated with a viscidium. The two viscidia are detachable, cellular, convex or

concave, relatively large (Szlachetko & Rutkowski 2000; Fig. 1).

While examining herbarium materials from Ethiopia and Eritrea, deposited in Museum National d'Histoire Naturelle in Paris, the senior author found specimens which did not match with any hitherto known species. Thus, we here describe a new species.

Pseudoperistylus aethiopicus Szlach. & Olsz., *sp. nova* (Fig. 2)

Planta a habitu Pseudoperistylulo bracteoso et P. petitiano propinqua, sed floribus facillime dignoscenda. Species haec etiam P. lefeburiano similis, sed differt floribus duplo majoribus et

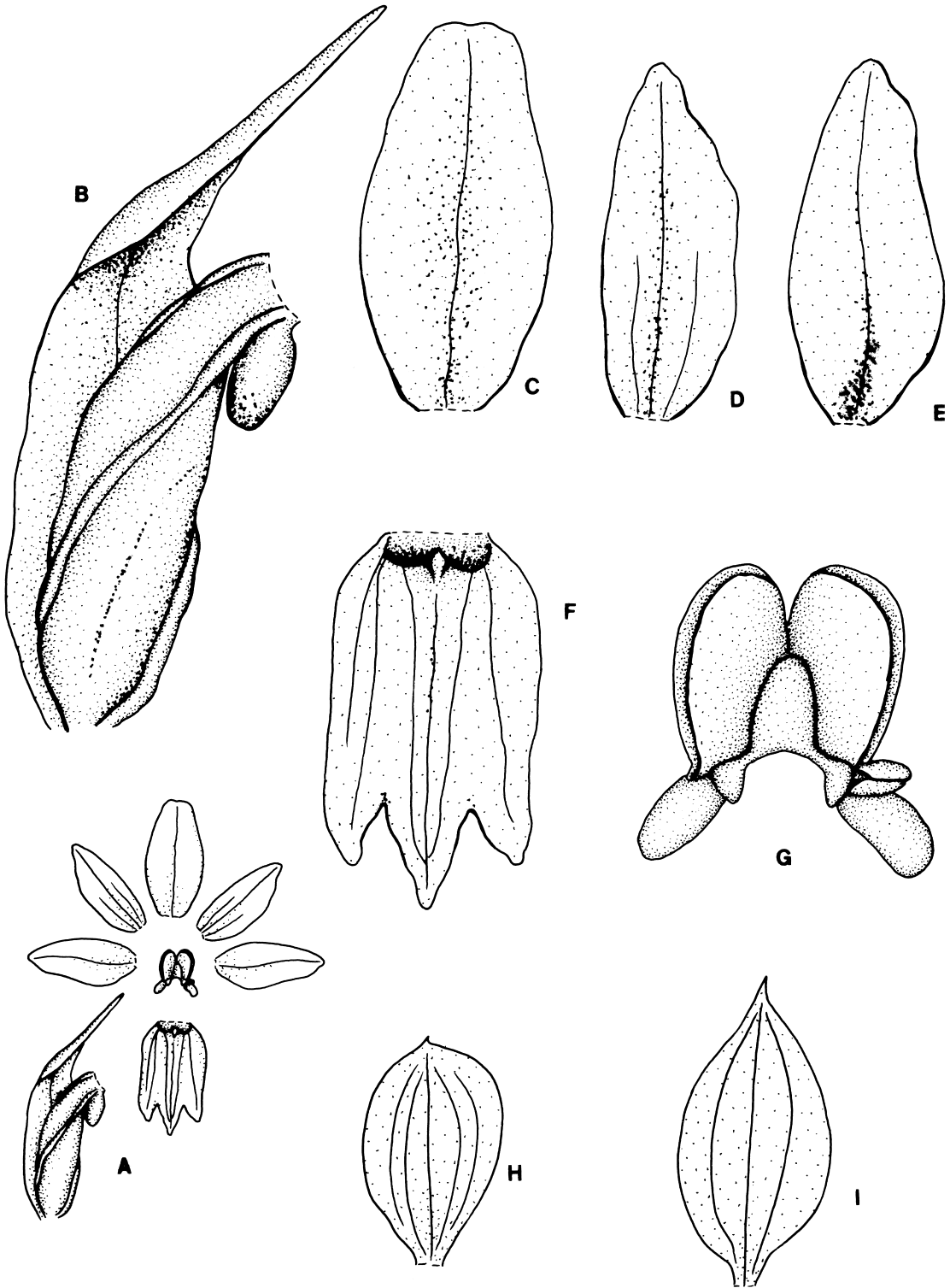


Fig. 2. *Pseudoperistylus aethiopicus* Szlach. & Olsz. (drawn from holotype). — A: Flower parts. — B: Floral bract, ovary and spur. — C: Dorsal sepal. — D: Petal. — E: lateral sepal. — F: Lip. — G: gynostemium. — H, I: Leaves.

labello rostelloque dissimilibus.

HOLOTYPE: Ethiopia. Soana, 5.IV.1852, *Schimper* 635 (P).

Plants terrestrial. Root-stem tuberosids 1.7 cm long, 0.8 cm in diameter, ovoid to ellipsoid. Stem 15–30 cm tall, erect, glabrous. Leaves 4–6, distributed along whole stem, to 4.5 cm long and 2.3 cm wide, erect, the lower one obovate and obtuse, the upper ones broadly ovate to ovate-lanceolate, apiculate, decreasing in size up the stem. 2–3 cauline bracts present above the leaves. Inflorescence 3–5 cm long, cylindrical to ovoid, multiflowered, very dense. Flowers resupinate, rather small. Floral bracts to 10 mm long, ovate-lanceolate, apiculate, glabrous, single-nerved. Ovary to 7 mm long, cylindrical, sessile, twisted in the upper half. Dorsal sepal 5–5.5 mm long, 2 mm wide, elliptic-ovate, obtuse, single-nerved. Petals 4.5–5 mm long, 2 mm wide, obliquely oblong-ovate, obtuse, obscurely 3-nerved. Lateral sepals 5 mm long, 2 mm wide, obliquely oblong-ovate, obtuse, single-nerved. Lip 5 mm long, 3.5 mm wide, oblong-elliptic in general outline, with a small knob-like appendage in the spur mouth, distinctly 3-lobed in the apical fourth; middle lobe to 1.8 mm long, 1.3 mm wide, triangular, subacute; side lobes to 0.8 mm long, 1 mm wide, obliquely triangular, subobtuse. Spur 1.5 mm long, ovoid to sac-like. Gynostemium to 2 mm long, typical for the genus.

ETYMOLOGY: In reference to the country of origin.

DISTRIBUTION: Ethiopia; known so far from this collection only.

This species has a similar habit to *Pseudoperistylus bracteosus* (A. Rich.) Szlach. & Olsz. and *P. petitianus* (A. Rich.) Szlach., though the morphology of its lower parts differs. Another species of *Pseudoperistylus*, somewhat similar to *P. aethiopicus*, is *P. lefebureanus* (A. Rich.) Szlach. & Olsz., but its flowers are nearly half as large as in the new species. Additionally, the lip of *P. lefebureanus* is 3-lobed at apex, but all lobes are rounded, and the middle lobe is distinctly thickened. The two species differ also in proportions and size of the other perianth segments and the gynostemium morphology. The middle lobe of rostellum is oblong and measures nearly half length of the anther in *P. aethiopicus*, whereas in *P. lefebureanus* it is massive, broadly elliptic and as long as the anther.

Based on the gynostemial features mentioned

above it became obvious to us that two other species of *Habenaria* Willd. should be transferred to *Pseudoperistylus*.

Pseudoperistylus lefebureanus (A. Rich.) Szlach. & Olsz., *comb. nova*

BASEONYM: *Peristylus lefebureanus* A. Rich., Ann. Sci. Nat., sér. 2, 14: 266. 1840.

DISTRIBUTION: Ethiopia and Yemen (Cufodontis 1972, Cribb 1979, Cribb & Thomas 1997).

Pseudoperistylus montolivaea (Kraenzl. ex Engl.) Szlach. & Olsz., *comb. nova*

BASEONYM: *Habenaria montolivaea* Kraenzl. ex Engl., Abh. Preuss. Akad. Wiss. 2: 183. 1892 & Bot. Jahrb. Syst. 16: 172. 1893.

DISTRIBUTION: Ethiopia (Cufodontis 1972, Cribb & Thomas 1997).

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