

Lecanorchis seidenfadeni (Orchidaceae, Vanilloideae), a new orchid species from Malaya

Dariusz L. Szlachetko & Joanna Mytnik

Szlachetko, D. L. & Mytnik J., Department of Plant Taxonomy and Nature Conservation, Gdańsk University, PL-80-441 Gdańsk, Al. Legionów 9, Poland

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Lecanorchis seidenfadeni Szlach. & Myt. *sp. nova* (Orchidaceae, Vanilloideae) from Malaya is described, illustrated in line drawings and compared with two allied species, *L. malaccensis* Ridl. and *L. multiflora* J. J. Sm.

Key words: *Lecanorchis*, Orchidaceae, taxonomy, Vanilloideae

The genus *Lecanorchis* Blume (Orchidaceae, Vanilloideae) embraces about five species distributed across a large area between Burma, Indonesia, New Guinea, the Pacific islands, Philippines, Taiwan, and Japan (Seidenfaden 1978, Seidenfaden & Wood 1992). The species are saprophytes, producing numerous clustered, tuberous roots and an erect, branched or unbranched stem. A very characteristic feature of *Lecanorchis* is the presence of a calyculus, a cup-like structure between perianth base and ovary apex. The flowers are usually campanulate-opened. The morphology of the gynostemium is unique. It is erect, rather slender and elongate. The column part is prominent, connate with the lip margins just below the stigma. The anther base is situated above the rostellum and the stigma. The anther is motile, erect to subincumbent, ellipsoid-ovoid, with two parallel chambers. The filament is connate with staminodes, or sometimes free at the apex only. The

connective is very thick but rather narrow, sometimes protruding apically and forming a kind of crest at the back of the anther. It may be covered with glandular hairs. There are four oblong, slightly falcate and powdery pollinia. The pollen grains occur as monads. The staminodes are wing-like, fused with the filament and usually forming a spacious apical clinandrium, which is sometimes more or less lobed, hiding the basal half of the anther. The stigma is ventral, confluent, and slit-like. Probably only the lateral stigma lobes are fertile. They are erect, adnate to the middle lobe, and their outer surface is covered by fleshy papillae. The rostellum is erect, ligulate, truncate, and does not produce a viscidium of any kind (Szlachetko & Rutkowski 2000; Fig. 1).

In 1993 the senior author had the opportunity to examine the alcohol-preserved flowers of Orchidaceae kept in Dr. Seidenfaden's collection in Borholmgaard. During this study an unusual

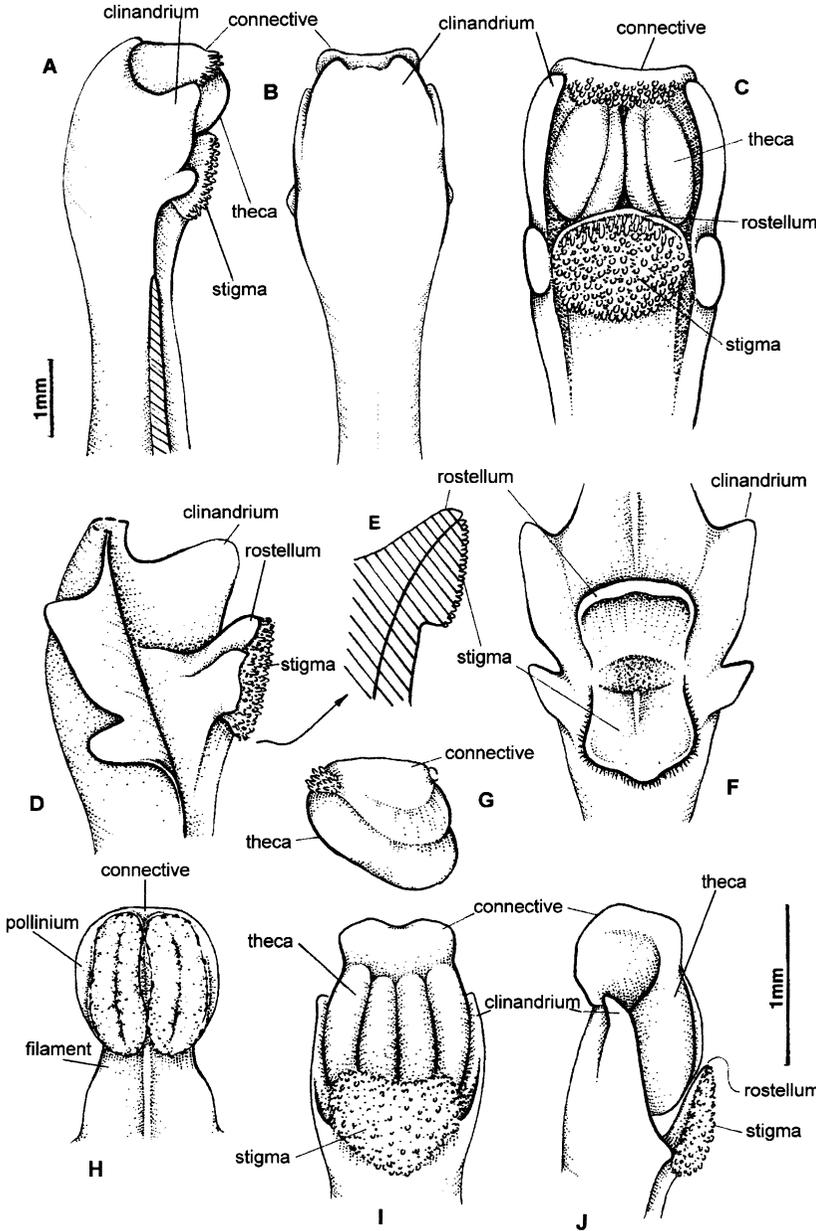


Fig. 1. — A–H: *Lecanorchis multiflora* J. J. Smith (from Burns-Balogh s.n., DLSz). — A: Gynostemium, side view. — B: Gynostemium, back view. — C: Upper part of gynostemium, bottom view. — D: Upper part of the gynostemium, anther removed, side view. — E: Longitudinal section of rostellum and receptive surface. — F: Upper part of gynostemium, anther removed, lateral stigma lobes bent down, bottom view. — G: Anther, side view. — H: Anther and filament, view from below. — I, J: *L. seidenfadeni* Szlach. & Myt. (from Vaughan 13, GT). — I: Upper part of gynostemium, bottom view. — J: Upper part of gynostemium, side view.

specimen of *Lecanorchis* was found. In our opinion it represents a new species.

Lecanorchis seidenfadeni Szlach. & Myt., sp. nova (Fig. 2)

Nostra species nova L. multiflorae et L. malacensi affinis, sed ab illa floribus duplo majoribus

et bracteis multo longioribus distincta est; prior species a nostra labello non plicato in parte basali, altera lobo mediano majori bene distinguitur.

HOLOTYPE: Malaya. Cameron Track 3, Vaughan 13 (preserved in alcohol, deposited in Dr. Seidenfaden's collection, GT).

Plant small, delicate. Stem to 7 cm long, 1.5 mm in diameter, glabrous, succulent, leafless.

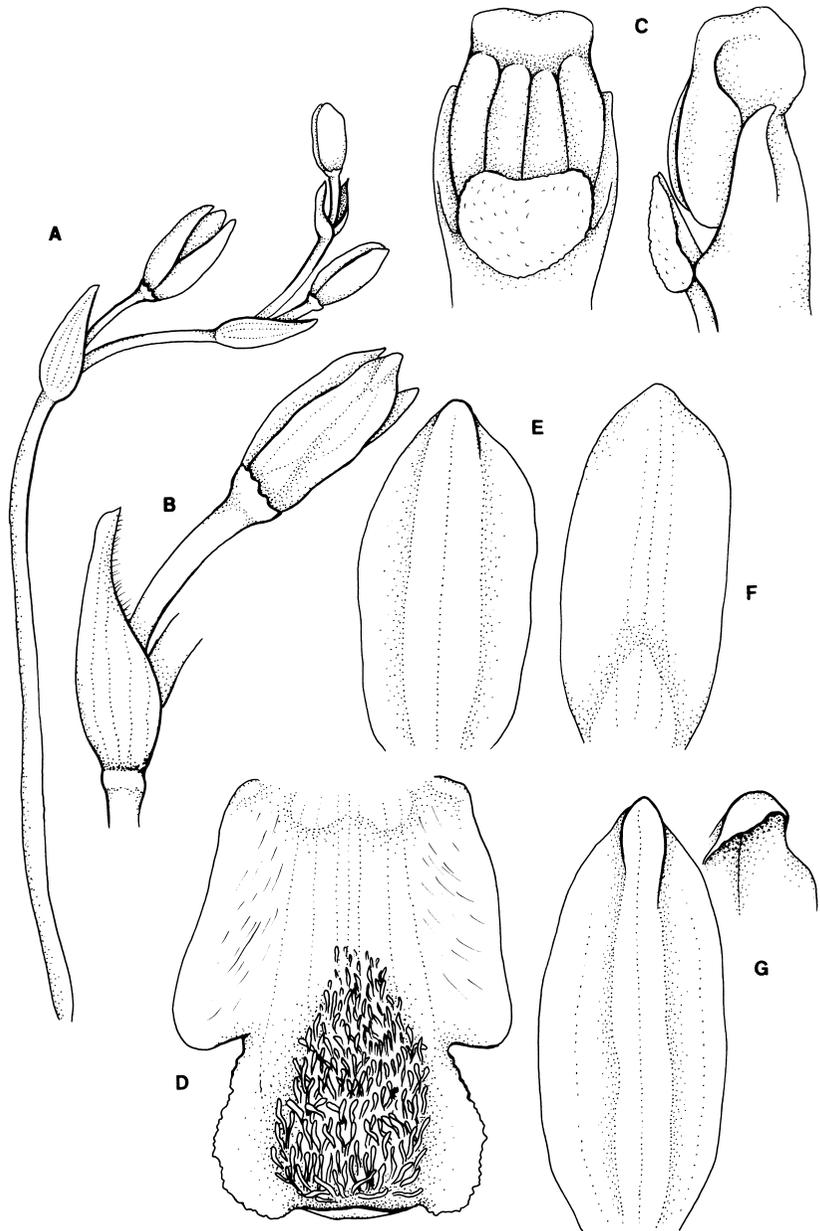


Fig. 2. *Lecanorchis seidenfadeni* Szlach. & Myt. (from Vaughan 13, GT). — A: Plant. — B: Flower. — C: Gynostemium, bottom and side views. — D: Lip. — E: Dorsal sepal. — F: Petal. — G: Lateral sepal.

Inflorescence 2.5 cm long, 3-flowered, lax. Floral bracts 6 mm long, ovate-lanceolate, acute, herbaceous, shorter than pedicel and ovary, lowermost bract ciliate along margins, upper bracts glabrous. Pedicel and ovary to 8 mm long, glabrous. Perianth segments glabrous, succulent, thickened along mid-nerve, obtuse, obscurely 3-nerved. Dorsal sepal 5 mm long, 1.9 mm wide, semi-cucullate. Petals 4.2 mm long, 1.9 mm wide. Lateral sepals

4.5 mm long, 1.9 mm wide. Lip 4 mm long, 3 mm wide, canaliculate, constricted into hypochile and epichile, hypochile subrectangular, thickened at base, with rounded lateral lobes; epichile transversely elliptic, truncate, semi-cucullate at apex, center densely covered by fleshy hairs. Gynostemium similar to that of *L. multiflora* J. J. Smith, but clinandrium distinctly shorter, not reaching the anther tip.

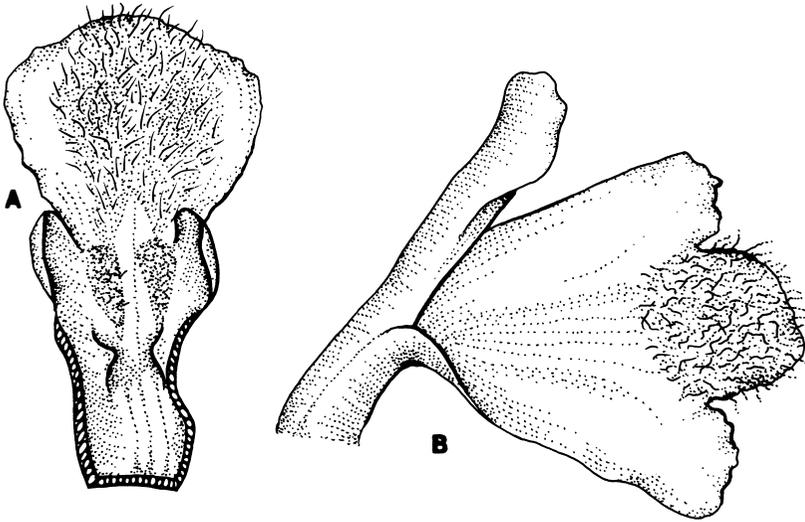


Fig. 3. Lip morphology of *Lecanorchis multiflora* J. J. Sm. (A) and *L. malaccensis* Ridl. (B). Both redrawn from Seidenfaden (1978).

ETYMOLOGY: Dedicated to Dr. Gunnar Seidenfaden, an eminent orchidologist.

DISTRIBUTION: Known only from type collection.

An uncertain taxonomic status of the above-cited specimen was noted by Seidenfaden (1986) and repeated later by Seidenfaden and Wood (1992). *Lecanorchis seidenfadenii* appears to be related to *L. multiflora* J. J. Sm. and *L. malaccensis* Ridl. Both of those species have flowers at least twice as large as in *L. seidenfadenii* and rudimentary floral bracts, which in our species are nearly as long as the pedicel and ovary. The lip of *L. multiflora* is distinctly 3-lobed near the middle and possesses two hairy keels in the upper half, which are lacking in *L. seidenfadenii*. *Lecanorchis malaccensis* has a differently shaped lip, i.e. 3-lobed near the apex only (Fig. 3).

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