

NEW SPECIES AND COMBINATIONS IN THE GENUS *BULBOPHYLLUM*
THOUARS (ORCHIDACEAE)

J. J. Vermeulen*

The following observations can be made on species of the genus *Bulbophyllum* Thouars, section *Epicriantes* (Blume) Hook. f. and four new species can be described.

***Bulbophyllum* (sect. *Epicriantes*) *cimicinum* J. J. Vermeulen, spec. nov.**

Affinis *B. heterorhopalo* Schltr., in distributione appendicum petalorum similis, sed sepalis latioribus, appendicibus petalorum longiter pilosis, appendicibus labelli bacilliformibus differt. Type: *Jongejan 100*, (L). See figure 1.

Roots thin, white. Rhizome 4 mm thick, pendulous, branched, covered with coarsely ribbed, white bracts. Pseudobulbs 1.5-2 cm apart, ovoid, bluntly quadrangular in cross-section, up to 12 mm long, light green, slightly suffused with red. Leaves almost sessile, ovate, acute, strongly convex, up to 33 mm long, 17 mm wide, the surface smooth, darker green than the pseudobulbs, not shiny. Inflorescence very short, one-flowered. Pedicel and ovary together 8 mm long, the bract shorter. Flowers wide open. Sepals equal, ovate, acuminate, 7 mm long, 5 mm wide, fleshy, whitish along the margins with some red spots. Petals very short, triangular, 0.5 mm long, somewhat thickened at the top, white; at the base of the upper margin a 1 mm long, club-shaped appendage covered with papillae; at the top four leaflike, linear appendages up to 3 mm long, violet, entirely covered with white hairs. Lip ovate-oblong, 2.8 mm long, fleshy, top rounded, centrally fimbriate with a longitudinal slit which opens towards both ends laterally with about ten stick-shaped dark red papillae of 0.5 mm long on both sides. Color of the lip brownish red, margins green. Column 1 mm long, stelia reduced to small points. Stigma elongate.

Distribution: Papua New Guinea: New Ireland *Jongejan 100* (L!); Koitaki, on trees, 600 m *Carr 10144* (L!); Sogeri Highlands *Jongejan 333*, *Jongejan!*

The description is based on living material. The species is closely related to *B. heterorhopalon* Schltr. and to *B. phymatum* J. J. Verm. in the shape of the petals, especially in the presence of the small, papillose appendage at its upper margin, and in the shape of the lip. It differs, however, from the former in the wider sepals, the differently shaped, longer-haired appendages of the petals and the different distribution of papillae on the lip; from the latter it differs in the absence of a second group of appendages at the upper margin of the petals and the differently shaped papillae of the lip. The species is somewhat variable in the size of the flowers and the size of the papillae on the lip. On another specimen (*Jongejan 333*) they are only 0.15 mm long.

Bulbophyllum (sect. *Epicriantes*) *epicriantes* Hook. f. var. *sumatranum* (J. J. Smith) J. J. Vermeulen, comb. nov.

Basionym: *Bulbophyllum javanicum* J. J. Smith var. *sumatranum*, J. J. Smith, in *Bull. Jard. Bot. Buitenz.* 3 series II (1920): 51.

Distribution: Sumatra (Jacobson s.n., HLB 920, 342-83 (L!); Padangse Bovenlanden, Boekit Batoe Balak (Jacobson 1250, (L!) type; J. J. Smith s.n., HLB 923, 157-936, (L!); J. J. Smith s.n., HLB 923, 157-979, (L!).

Having seen the type specimens and additional material of both the species and its variety, it does not seem to be justified to unite them. The

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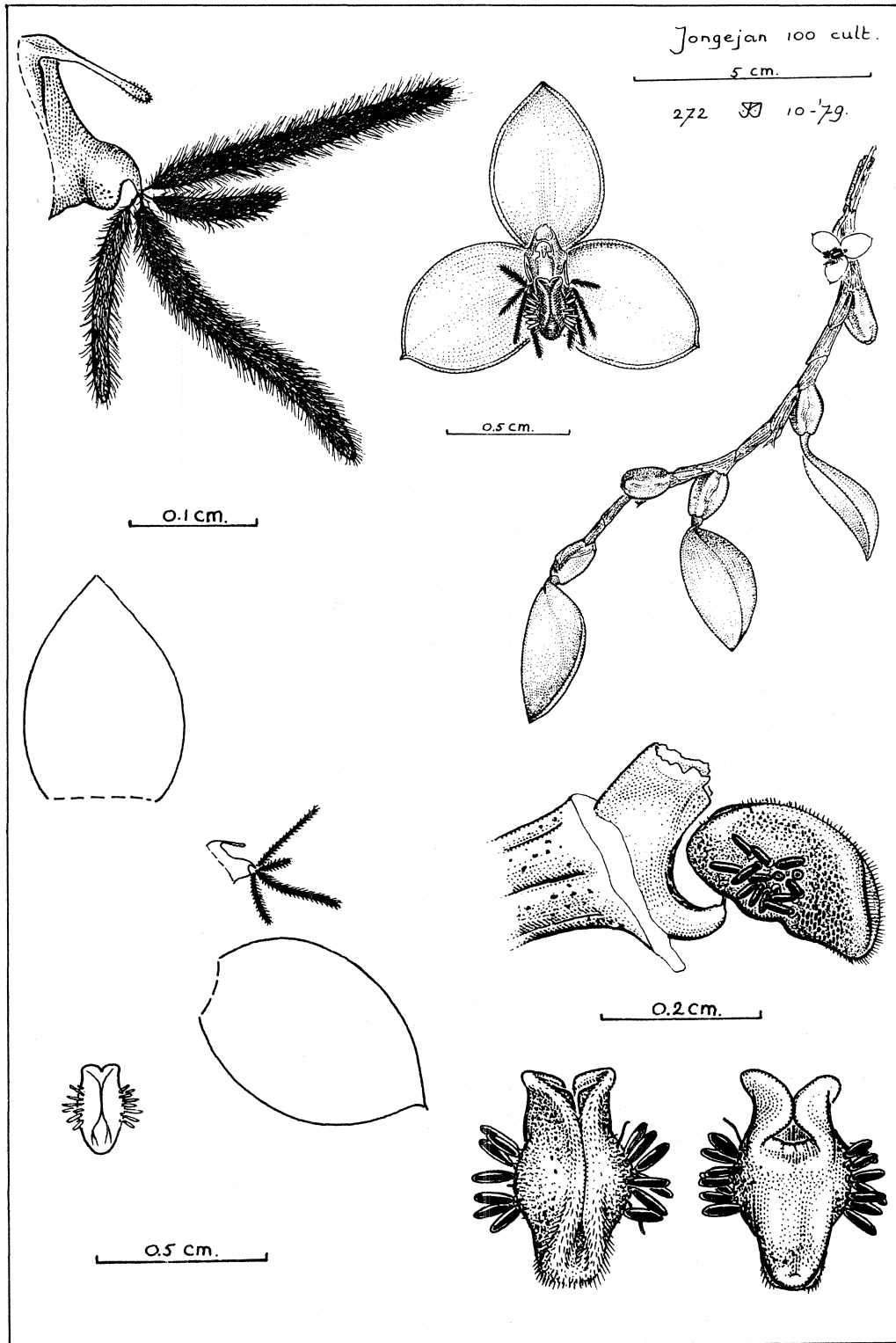


Fig. 1. *Bulbophyllum cimicinum* J. J. Verm.

Sumatra variety differs considerably from the species in the narrower sepals and the narrower lip.

Bulbophyllum (sect. *Epicriantes*) *hexarhopalos* Schltr. in *Engl. Bot. Jahrb.* 39 (1906): 83; Hallé in *Bull. Mus. Hist. Nat. Paris*, 3 series (1973): 21; id. in *Flora de Nueva Caledonia* 8 (1977): 166.

Distribution: New Caledonia. Papua New Guinea: New Ireland *Jongejan 101* (L!).

The specimen from New Guinea differs in several aspects from those from New Caledonia, e.g., in the red spotted sepals (New Caledonian specimens have white sepals), the smaller number of appendages at the petals (4 or 5 large and 2 small ones) and the somewhat different shape of the lip. Perhaps a variety could be described from New Guinea when more material is available. The plant from New Guinea agrees well with the description of *B. stenorhopalos* Schltr. (in *Fedde Rep.* 17 (1921): 380) but, since the type specimen of that species was probably lost in Berlin during the war, a comparison cannot be made.

***Bulbophyllum* (sect. *Epicriantes*) *johannulii* J. J. Vermeulen, spec. nov.**

A omnibus speciebus sectionis *Epicriantis* praecipue in appendicibus petalorum filiformibus basi haud constrictis differt. Type: *Jongejan 102*, (L). See figure 2.

Roots thin, white. Rhizome 3 mm thick, pendulous, branched, with white, coarsely ribbed bracts. Pseudobulbs 1.8 cm apart, up to 16 mm long, ovoid, sharply quadrangular, light green suffused with red. Leaves almost sessile, lanceolate, top acuminate, up to 42 mm long, 28 mm wide, flat, the margins somewhat recurved, smooth, darker green than the pseudobulbs, not shiny. Inflorescence very short, one-flowered. Bracts short, 3 mm long. Pedicel and ovary together 11 mm long, with some red spots. Sepals equal, narrowly triangular, acute 8 mm long, 3 mm wide, yellowish with red spots. Petals reduced to a 0.4 mm wide strip at each side of the column, with a 2 mm long point at both ends, the upper point covered with 6 filiform, 5 mm long papillae, the lower with 4, green or brownish colored appendages, between the points two more appendages of the same type. Lip spatulate, 3 mm long, 1.5 mm wide, ventrally with a longitudinal slit which opens towards both ends and which is less deep towards the top, the top obtuse and warty, laterally with somewhat oval, dark red papillae. Lip of reddish color. Column 2 mm long, with hardly developed stolidia. Stigma drop-shaped with the rounded end towards the top of the column.

Distribution: Papua New Guinea: New Ireland *Jongejan 102* (L!).

The description is based on living material. The species is different from all the other species of the section in the filiform appendages of the petals, which are not at all constricted at their base. The species has been named after its discoverer, Mr. P. Jongejan, an amateur orchid enthusiast and a specialist in the cultivation of *Bulbophyllum* species.

***Bulbophyllum* (sect. *Epicriantes*) *phymatum* J. J. Vermeulen, spec. nov.**

Affinis *B. heterorhopalo* Schltr., in petalis fascibus duobus appendicum pilosarum, appendice clavata inter illis excepto, labello sine pariete papillarum tenuium cylindricarum differt. Type: *Clemens 1587* (L). See figure 3.

Roots thin, white. Rhizome pendulous, 2.5 mm thick, covered with coarsely ribbed grayish bracts. Pseudobulbs 20 mm apart, ovoid, sharply

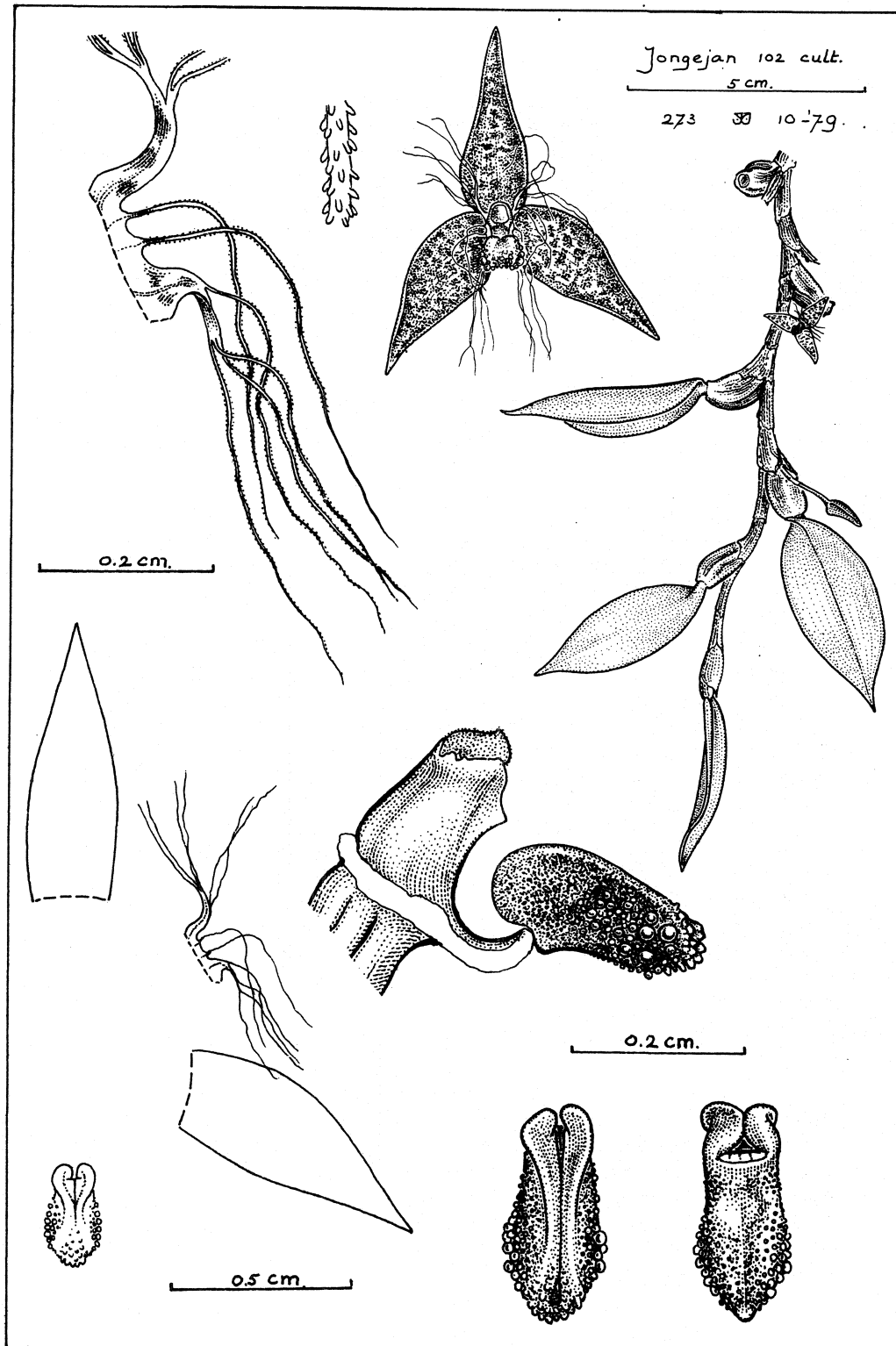


Figure 2. *Bulbophyllum johannulii* J. J. Verm.

quadrangular in cross-section, up to 10 mm long. Leaves almost sessile, oblong, acute, up to 33 mm long, 15 mm wide. Inflorescence very short, one-flowered. Pedicel and ovary 7 mm long, the bract of equal length. Sepals elliptic-oblong, acuminate, rather fleshy, dorsally somewhat warty; the dorsal 5.5 mm long, 2.5 mm wide, the laterals 4.6 mm long, 2 mm wide. Petals reduced to a very narrow strip at each side of the column with a point 0.5 mm long at each end. At each point 5 long-haired, lanceolate, obtuse appendages 0.4 mm long, between the two points another 0.3 mm long, ventrally with a longitudinal slit with fimbriate margins which opens towards both ends, with laterally and dorsally minute, globose papillae. Column 1 mm long, ventrally with two triangular wings and hardly developed stelidia, which have at their base a minute point downward directed.

Distribution: Papua New Guinea: Morobe District, Wareo, 700 m, *Clemens 1587* (L!).

Description based on herbarium material. Related to *B. heterorhpalon* Schltr. and *B. cimicinum* J. J. Verm., but distinguished from both by a second group of appendages at the upper margin of the petals. Besides that, it is noteworthy for its small petals.

Bulbophyllum (sect. *Epicriantes*) *hirudiniferum* J. J. Vermeulen, spec. nov.

Superficie *B. phymato* J. J. Verm. in appendice centrali petalorum lateralibus inaequali similis, affinis *B. hexarhopalo* Schltr. in textura appendicum lateralium sed in forma appendicum labelli differt. Type: *Lae Ngf 44589* (*Streiman & Kairo*) (L). See figure 4.

Roots thin. Rhizome pendulous, not much branched, 2 mm thick, covered with light grayish-brown, coarsely ribbed bracts. Pseudobulbs up to 30 mm apart, ovoid, sharply quadrangular in cross-section, up to 12 mm long. Leaves almost sessile, oblong, acute, up to 50 mm long, 17 mm wide. Inflorescence short, one-flowered. Pedicel and ovary not seen. Sepals oblong, acuminate, rather fleshy, nearly equal, the dorsal sepal 6 mm long, 2.6 mm wide, the lateral sepals 7 mm long, 2.1 mm wide. Petals reduced to a narrow strip at each side of the column, with a point at each end; the upper point with a rounded lobe at its base and, at its top, four somewhat inflated, short hairy, stalked, linear appendages with a rounded top; the lower point with five such appendages; between the two points another club-shaped, somewhat flattened and papillose appendage. Lip oblong, 2.3 mm long, fleshy, top rounded; ventrally, a very faint longitudinal slit with hairy margins which opens towards the base; laterally, some 12 stick-shaped papillae. Column with very short stelidia.

Distribution: Papua New Guinea: Morobe District, Bangalum, 1000 m, *Lae Ngf 44589* (*Streiman & Kairo*) (L!).

The description is based on herbarium material. The available specimen of this species was in very bad state and had only one flower left. The general structure of the lip and of the appendages of the petals show that it is related to *B. hexarhopalos* Schltr. The club-shaped appendage between the two points of the petals of this species is reminiscent of *B. heterorhpalon* Schltr., *B. cimicinum* J. J. Verm., and *B. phymatum* J. J. Verm.

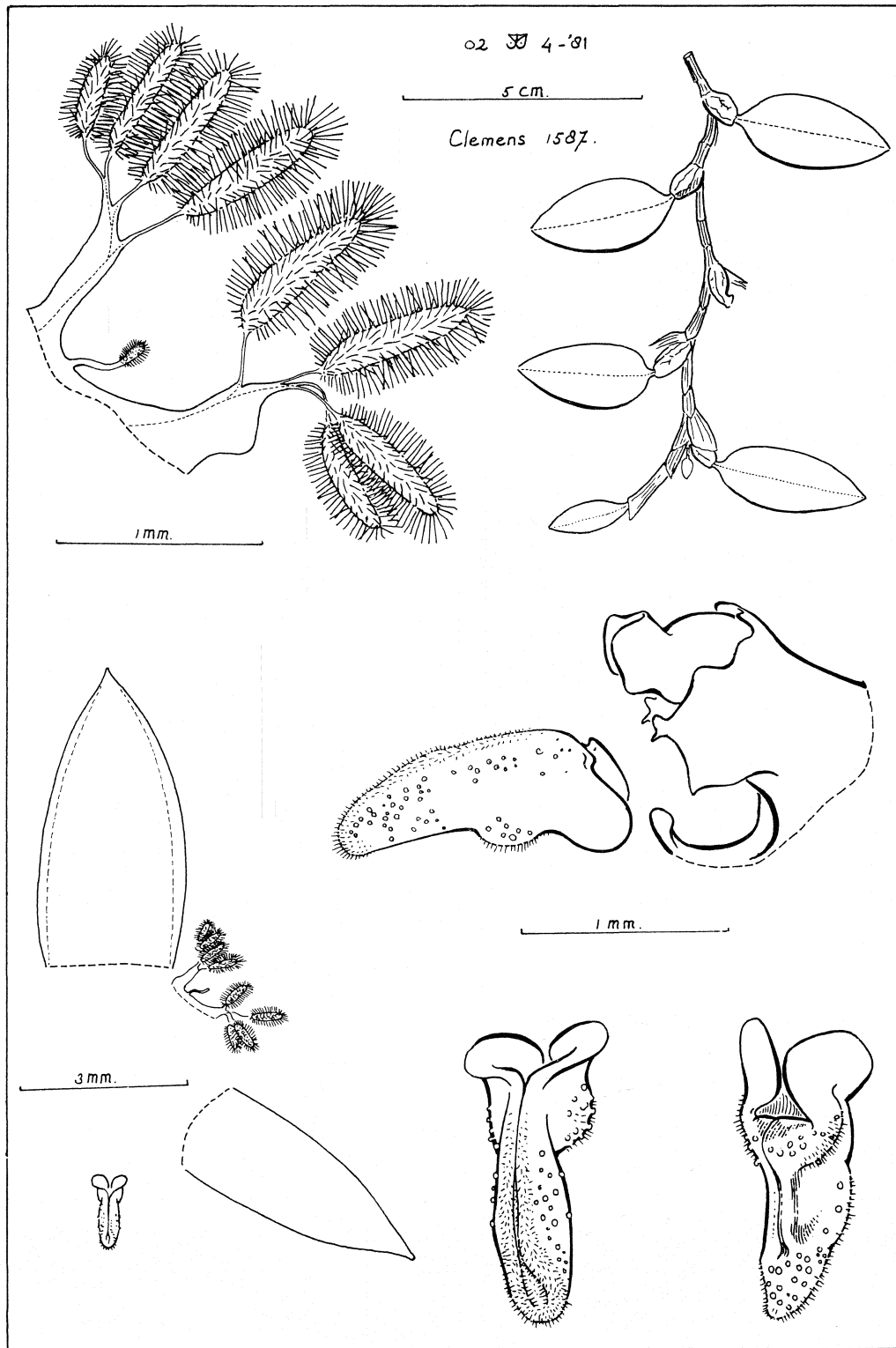


Fig. 3. *Bulbophyllum phymatum* J. J. Verm.