TWO NEW SPECIES OF BULBOPHYLLUM (ORCHIDACEAE) FROM THAILAND

JAAP J. VERMEULEN1,5, SANTI WATTANA2 & HENRIK Ė. PEDERSEN3,4

1Jk.art and science, Lauwerbes 8, 2318 AT Leiden, The Netherlands.
2School of Biology, Institute of Science, Suranaree University of Technology, 111 University Avenue, Suranaree, Muang, Nakhon Ratchsima, 30000, Thailand
3Natural History Museum of Denmark, University of Copenhagen, Gothersgade 130, DK-1123 Copenhagen, Denmark
4Herbarium, Science, Royal Botanic Gardens, Kew, Richmond, Surrey, England TW9 3AE, United Kingdom
5Author for correspondence: jk.artandscience@gmail.com

Abstract. Two new species of Bulbophyllum (Orchidaceae) are described: B. sphenoglossum (sect. Lemniscata) and B. trigonanthum (sect. Reptantia). Both species occur in Thailand.

Key words/Palabras clave: Bulbophyllum sect. Lemniscata, Bulbophyllum sect. Reptantia, orquídeas, orchids, Tailandia, Thailand

Introduction. During revision of Bulbophyllum for the Flora of Thailand, we found two undescribed species in the collection of spirit samples brought together by Gunnar Seidenfaden and stored in C. Both species are only known from rather fragmentary samples and the limited information with these samples. Nevertheless, the material is sufficient to establish their identity and describe their morphology in detail, even though the paragraphs on flower color and habitat preferences are somewhat stark and incomplete. The plant habits in figures 1 and 2 are drawn from assembled parts of the plants in the samples.

Taxonomic treatment

Bulbophyllum sphenoglossum J.J.Verm., Watthana & H.A.Pedersen, sp. nov. (Fig. 1).


Not Bulbophyllum wallichii Rchb.f. (1861): 259.


Diagnosis: A species of sect. Lemniscata Pfitz. (Pfitzer 1889 [1888–1889]: 179; see also Vermeulen et al. 2014: 31), characterized by 2-leaved pseudobulbs and deciduous leaves around anthesis. Resembles B. wallichii Rchb.f. because the two share the following set of character states: lowermost floral bract (ovate-)triangular; median sepal (long-)acuminate, margins distinctly erose-fimbriate; lateral sepals adnate along their lower margin; lip approximately glabrous adaxially, hirsute abaxially. Differs from B. wallichii by the lip, which is 3.4–5.5 mm long (vs. 2.2–2.7 mm), and which distally is only slightly convex on the adaxial side (vs. distinctly convex and with a callus).

Plant rather small, a clustered epiphyte, roots spreading. Rhizome 2.0–3.8 mm diam., sections between pseudobulbs 0.8–1.5 cm long. Pseudobulbs 2-leaved, depressed ovoid to depressed conical, apex often drawn-out, 1.5–3.3 × 1.6–2.8 cm. Leaves deciduous at anthesis, not seen. Inflorescences racemose, 8–28 cm long, 5–16-flowered; peduncle 6–22 cm long, not thickened, rachis 1.4–6.0 cm long, floral bracts (ovate-)triangular, 3.6–7.0 × 2.2–3.0 mm, acuminate; 3-veined. Pedicel and ovary 2.5–3.2 mm long. Dor sal sepal porrect, triangular, 6.4–8.0 × 1.8–2.9 mm, ratio length/width 3.2–3.6; (long-)acuminate, margins distinctly erose-fimbriate, adaxially hirsute distally, 3-veined. Later al sepals similar but lower margins
Vermeulen et al. — Two new Bulbophyllum from Thailand

adnate except near base; oblique, ovate-oblong, 38–46 × 2.5–4.0 mm, ratio length/width 12.0–15.2; acute, margins entire; glabrous, 5-veined. Petals recurved, obliquely triangular, 2.8–3.8 × 1.9–2.0 mm, ratio length/width 1.4–2.0; acuminate, margins fimbriate; adaxially papillose to hirsute distally, 1-veined. Lip recurved, obliquely triangular, 2.8–3.8 × 1.9–2.0 mm, ratio length/width 1.4–2.0; acuminate, margins fimbriate; adaxially papillose to hirsute distally, 1-veined. Column including stelidia 2.5–3.5 mm long; foot stipitate before widened apex. Stelidia downwards falcate, triangular, 1.0–1.3 mm long, acute; upper margin proximally with small tooth or erose, lower with slight, rounded to subacute wing proximally.

**COLOURS:** Unknown.

**HABITAT AND ECOSOY:** Unknown; elevation 1800 m.

**MATERIAL EXAMINED:** Thailand. Chiang Mai Prov.: Doi Pha Hom Pok (‘Doi Phaphompak’, ‘Doi Pahompok’), Seidenfaden & Smitinand GT 9534 (C), GT 9542 (C). Phitsanulok Prov.: Phu Soi Dao (‘Phu Mieng’), Seidenfaden & Smitinand GT 5488 (C).

**ETYMOLOGY:** The name is derived from Ancient Greek ‘σφήν’, wedge, and ‘γλῶσσα’ tongue, referring to the distally thinning lip.

Note: One sample found in the lot identified as B. wallichii in Seidenfaden (1979), and two more samples collected after this date.

**Bulbophyllum trigonanthum** J.J.Verm., Watthana & H.A.Pedersen, sp. nov. (Fig. 2)

**Bulbophyllum luanii** auct. Seidenfaden (1979): 109, fig. 69.

Not **Bulbophyllum luanii** Tixier in Guillaumin (1964): 396.

**TYPE:** Thailand. Loei Prov.: Phu Luang, Lon Tae, Seidenfaden & Smitinand GT 8927 (holotype: C).

**DIAGNOSIS:** A species of sect. Reptantia J.J.Verm. (in Pearce et al. 2001: 121; see also Vermeulen et al. 2014: 36), characterized by the racemose, synanthous inflorescences developing at the base of young shoots. Identified among species of this section (including **B. luanii** Tixier from the same section) by the adaxially sharply keeled sepals, which give the buds and hardly opened flowers a triangular appearance when observed frontally.

**Plant** rather small, a long-creeping epiphyte, roots spreading. **Rhizome** 1.6–3.6 mm diam., sections between pseudobulbs 3.4–6.0 cm long. **Pseudobulbs** ovoid to lenticular, 1.1–2.3 × 0.6–1.2 cm. **Leaves** persistent, blade elliptic-oblong, 5.2–12.4 × 0.5–1.1 cm, ratio length/width 8.4–15.2; obtuse; petiole 0.6–1.8 cm long. **Inflorescence** (rather) lax-racemose, 6.6–19.3 cm long, 3–12-flowered; peduncle 5.5–13.5 cm long; racis 1.1–7.5 cm long, floral bracts 4.0–8.0 mm long. **Pedice** plus ovary 9.0–12.0 mm long. **Dorsal sepal** porrect, triangular, 7.6–10.7 × 3.0–4.1 mm, ratio length/width 2.5–2.9; acute, margins entire; glabrous, 3–5-veined, midvein abaxially prominent as a sharp keel. **Lateral sepals** similar but distally recurved, 9.0–11.6 × 3.0–4.1 mm, ratio length/width 2.3–2.5; 4–5-veined. **Petals** porrect, oblong, 2.9–3.5 × 1.6–1.9 mm, ratio length/width 1.8–2.0; subtruncate to rounded, margins entire; glabrous, 3-veined. **Lip** recurved, (ovate-)oblong, 2.6–4.3 × 1.0–1.4 mm, ratio length/width 2.6–2.8 (without spreading); obtuse to subacute, margins entire; glabrous; adaxially concave in the basal half, with two high ridges close to the edge, apical half slightly convex. **Column** including stelidia 2.5–3.5 mm long. **Stelidia** triangular with (short-)subulate apex, 1.0–1.3 mm long, acute; upper margin proximally with small tooth or erose, lower with slight, rounded to subacute wing proximally.

**COLOURS:** Tepals yellow, stained red and with red veins; labellum yellow, stained red.

**HABITAT AND ECOSOY:** Unknown. Elevation 1200–1300 m.

**MATERIAL EXAMINED:** Thailand. Loei Prov.: Phu Kra-dueng (‘Phu Krading’), Seidenfaden & Smitinand GT 3061 (C), GT 3077 (C), GT 7943 (C); Phu Luang, Lon Tae, Seidenfaden & Smitinand GT 8927 (C).

**ETYMOLOGY:** The name is derived from Ancient Greek ‘τρίγωνος’, triangular, and ‘ἄνθος’, flower.

Note: Misidentified in Seidenfaden (l.c.) as **B. luanii** Tixier; the differences between the two species are given in the diagnosis.
LITERATURE CITED