

***Bulbophyllum seidenfadenii* (Orchidaceae), a new record for Thailand**

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ABSTRACT

Bulbophyllum seidenfadenii, a new record from Phitsanulok Province, northern Thailand, is described and illustrated. The species is characterised by having 1-leaved, compressed-subglobose pseudobulbs, a few flowered sub-umbellate inflorescence, and small pale yellow flowers with dark reddish-purple pustulate sepals and petals, and a yellow projection on the column below the stigmatic cavity.

KEYWORDS: Orchid, section *Brachyantha*, South-East Asia, taxonomy.

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INTRODUCTION

Bulbophyllum Thouars is the largest genus in the orchid family, consisting of ca 2,200 species mainly distributed in tropical regions worldwide (Gravendeel *et al.*, 2014); in Thailand, 157 species have been recorded (Chayamarit *et al.*, 2014). Since 2014, only a single new species, *B. physometrum* J.J.Verm., Suksathan & Watthana, has come to light in Thailand (Vermeulen *et al.*, 2017).

In February 2016, the second author had the opportunity to visit Bam Romklao Botanic Garden (BRBG), a sister garden of Queen Sirikit Botanic Garden (QSBG) in Phitsanulok province, and noticed a small *Bulbophyllum* flowering in the collection. The plant was originally collected by the third author from Phu Soi Dao, Chattrakan District, ca 1,600 m alt., about 10 km north of BRBG. A specimen was brought back to QSBG for closer study and was identified as the little-known *Bulbophyllum seidenfadenii* A.D.Kerr, which was not previously known from Thailand but only from north and central Laos and southern China (Seidenfaden, 1973; Hu *et al.*, 2017; Kumar *et al.*, 2018). In China, this same species was previously known as *B. jingdongense* A.Q.Hu., D.P.Ye & Jian W.Li which was subsequently placed as a synonym of *B. seidenfadenii* by Kumar *et al.* (2018). This new discovery in Thailand has extended its occurrence area of this rare species. A description,

illustration, and current distribution map are presented here.

DESCRIPTION

Bulbophyllum seidenfadenii A.D.Kerr in Seidenf., Dansk Bot. Ark. 29(1): 174. 1973; Amer. Orchid Soc. Bull. 42: 411. 1973; Kumar, P., Gale, W., Pedersen, Æ H., Phaxaysombath, T., Bouamanivong, S. & Fischer, G.A., Taiwania 63(1): 71. 2018. Type: Laos, mountain range north of Vientiane, Ritaville, 750 m, 12 Jan. 1969, *A.D. Kerr 2826* (holotype C photo seen).

— *Bulbophyllum jingdongense* A.Q.Hu, D.P.Ye & Jian W.Li, Phytotaxa 307(3): 200. 2017. Type: China, Yunnan Province, Jingdong County, Pu'er, 1,550 m, 17 Jan. 2016, *A.Q. Hu et al. 803* (holotype NOCC photo seen). Figs. 1 & 2.

Small epiphyte with creeping rhizome. *Pseudobulbs* 1.5–5 mm apart along the rhizome, 3–7 mm tall, 4–9 mm in diam., compressed-subglobose, reddish-purple to dark green, 1-leaved. *Leaf* persistent; petiole very short or indistinct, up to 1 mm long; lamina bluish-green above, reddish-purple below, ovate to elliptic, 7.5–12.5 mm wide, 11–14.7 mm long, thick, leathery, base rounded, apex emarginate. *Inflorescence* emerging from the base of pseudobulb, sub-umbellate, 4-flowered; peduncle ca 3 mm long,

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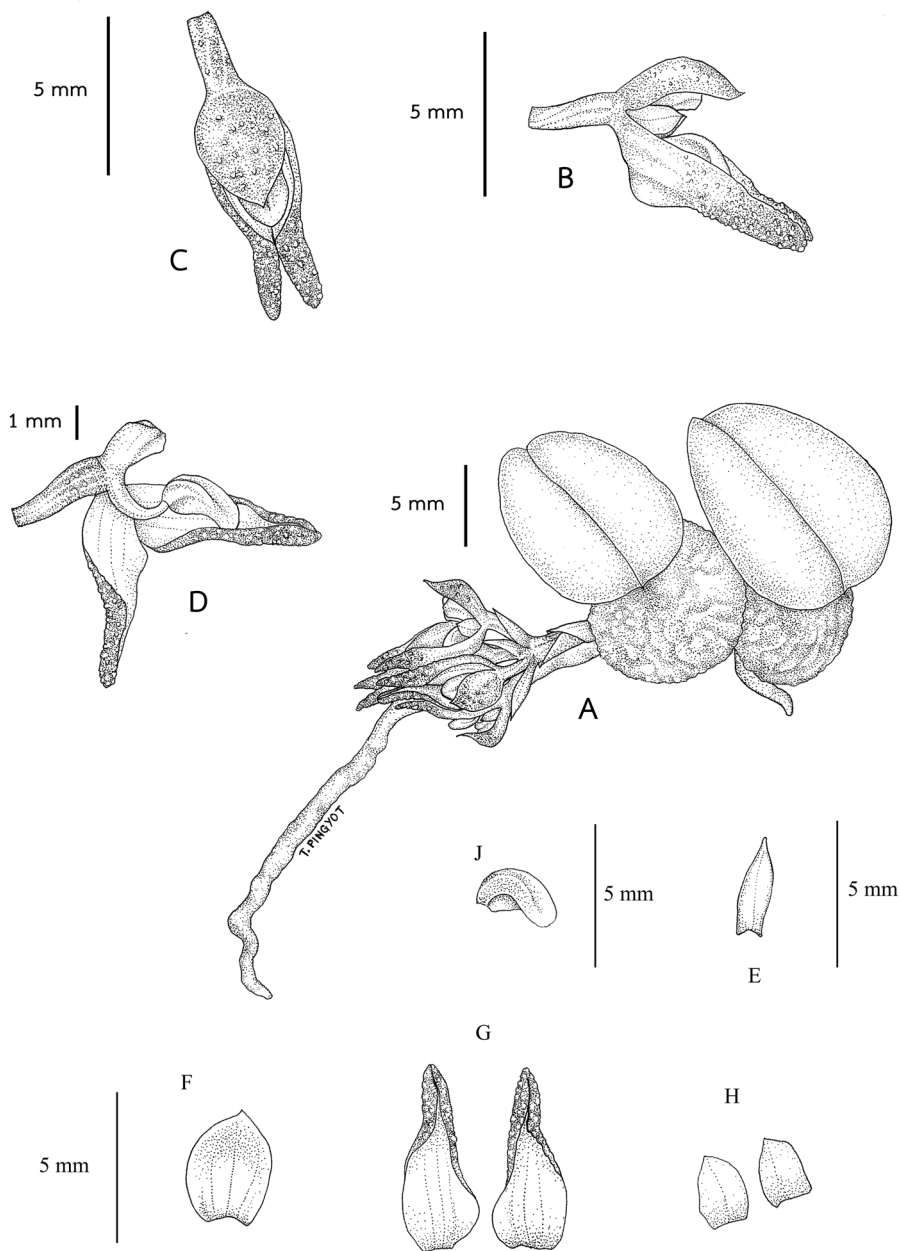


Figure 1. *Bulbophyllum seidenfadenii* A.D.Kerr: A. Plant habit; B. Flower, side view; C. Flower from above; D. Flower, without dorsal sepal and petals; E. Floral bract; F. Dorsal sepal; G. Lateral sepals; H. Petals; J. Labellum. (from *Intakul N248-50*). Drawn by T. Pingyot.

with 2–3 membranous, tubular sheaths; floral bracts minute, lanceolate, up to 1 mm wide, 3–4 mm long, apex acuminate. *Flowers* pale yellow, sepals and petals covered with sparse to dense reddish-purple pustules, 9–10 mm long; pedicellate ovary 3–3.5 mm long. *Dorsal sepal* ovate-triangular, 2 mm wide, 1.5–1.7 mm long, 3-veined, margin entire, apex acute. *Lateral sepals* lanceolate, 2–2.5 mm wide, 7–7.5 mm long, 3-veined, 2/3 of basal part adnate to the column-foot, lower edges basally connate, upper edges incurved-twisted, with middle parts converging and touching each other, distal parts separate, each with involute margins, forming a conical shaped structure. *Petals* oblong, 2 mm wide, 1.5–1.7 mm long, ca 1.5 mm thick, broadly V-shaped in cross-section, margin entire, apex acute. *Labellum* simple, ligulate, reddish-purple, 2–2.5 mm long, 1.5–2 mm wide, apex sub-rounded and slightly decurved. *Column* subcylindrical, 2–2.5 mm long, pale yellow, apex pale pink, with a tiny bright yellow spherical projection just below the stigmatic cavity (described as a ‘gland’ by Hu *et al.*, 2017, but there is no evidence as yet that it secretes anything); rostellum present; column-foot incurved, 1.2–1.5 mm long; stelia short, 0.3 mm long, apex sub-truncate to broadly acute, margin slightly erose; anther cap pinkish white to yellow, ca 1 mm wide, glabrous.

Thailand.— NORTHERN: Phitsanulok [Ban Romklao Botanic Garden nursery, 17 Feb. 2009 (cultivated, originally collected by Inthakul from Phu Soi Dao, Chattrakan District, ca 1,600 m alt.), *Suksathan* 4612 (QBG-37043); *ibid.*, 3 Feb. 2016, *Inthakul* N248-50 (BKF, QBG)].

Distribution.— S China (Jingdong, Yunnan) and N & C Laos (Vientiane & Nakai). Fig. 3.

Vernacular.— Singto Seidenfaden (สิงโตไช้เดน ฟาเดน).

Ecology.— This small epiphytic orchid was found growing on a fallen pine tree in open pine forest at ca 1,600 m alt. Flowering in Feb.

Notes.— Following Vermeulen’s (2014) classification, *Bulbophyllum seidenfadenii* is a member of section *Brachyantha* Rchb.f. From information given by the third author, at Phu Soi Dao, this species is rare and difficult to observe since it usually grows on high branches of pine trees, 15–20 m above the ground. An IUCN 2014 assessment for this species published by Hu *et al.* (2017) suggested its conservation status (as *B. jingdongense*) to be VU (B1 & 2ab (ii,iii,iv,v), D), but this did not take into account the type record of *B. seidenfadenii* from Central Laos. It remains to be seen if our new record

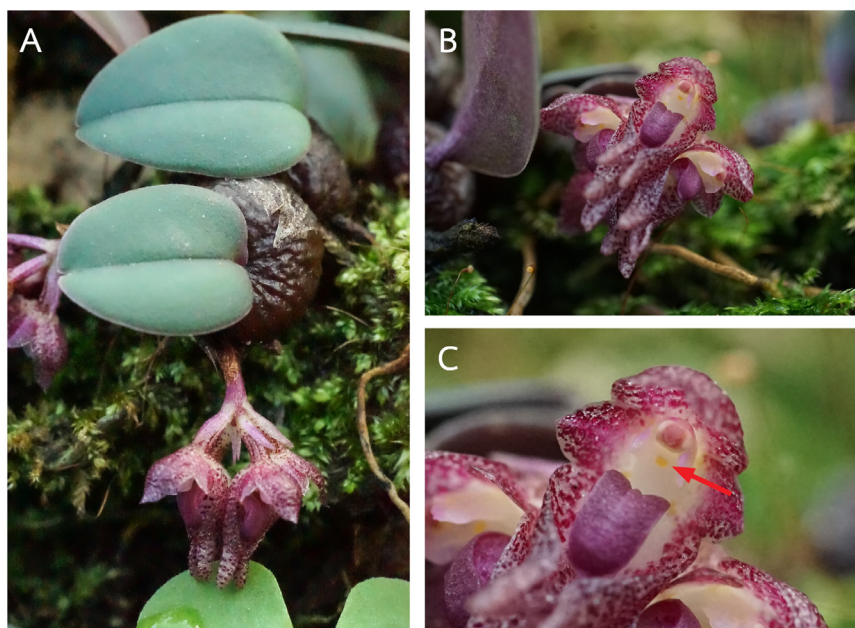


Figure 2. *Bulbophyllum seidenfadenii* A.D.Kerr. A. Plant habit; B. Inflorescence; C. Close-up of flower showing a yellow projection below the stigma (red arrow). Photographed by P. Suksathan.

would change the assessment, as it would increase the area of occupancy and the extent of occurrence still more. We would like to point out, however, that even though this additional Thai population is in a protected area, the large pine trees on Phu Soi Dao that are its host are decreasing in number, as they suffer from strong storm winds, perhaps caused by climate change. But appropriate data on abundances of Thailand's and Laos's populations are still lacking and more observation in the fields are needed, and *B. seidenfadenii* still remains best placed within the DD category (IUCN, 2019).

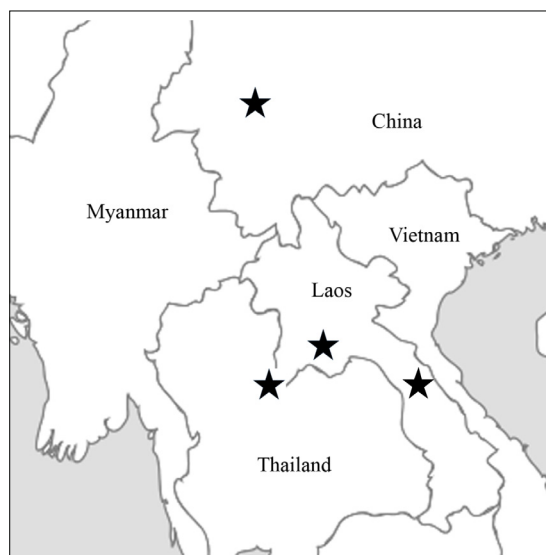


Figure 3. Distribution of *Bulbophyllum seidenfadenii* A.D.Kerr (★).

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