

First record of *Taeniophyllum* (Orchidaceae) in Myanmar

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ABSTRACT. *Taeniophyllum* Blume was recently discovered in northern Myanmar, a new generic record for the country. The Myanmar specimens are referred to the widespread species *T. glandulosum* Blume, characterised by terete roots, warty inflorescence axes, distichous bracts, sepals and petals basally fused into a tube about as long as their ovate-lanceolate free parts, and an ovate-lanceolate lip with a globose spur.

Keywords. Myanmar, *Taeniophyllum*

Introduction

While undertaking fieldwork near Lake Inndawgyi in Kachin State, Myanmar, the authors of this article came across a leafless epiphytic orchid and recognised it as member of the genus *Taeniophyllum* Blume. Subsequent studies revealed that this genus has not yet been recorded in Myanmar (Govaerts et al. 2011, Kress et al. 2003, P. Ormerod pers. comm.). The genus *Taeniophyllum* comprises about 120 species, which are distributed from Sri Lanka and India throughout tropical and subtropical Asia eastwards as far as Japan, Australia and several Pacific islands, with a single species found in tropical Africa. Given the fact that *Taeniophyllum* occurs in all surrounding countries, its newly discovered occurrence in Myanmar is not surprising.

Using recent orchid flora treatments (particularly Jayaweera 1981; Seidenfaden 1988, 1992; Seidenfaden & Wood 1992; Pearce & Cribb 2002; Chen & Wood 2009), the plants could be positively identified as *T. glandulosum* Blume. This species belongs to a taxonomically difficult complex of several closely related species, and several botanists have recently pointed out the need for further studies. The complex is most diverse in the Malay Islands.

Taeniophyllum glandulosum Blume

Bijdr. (1825) 356; Seidenf., Opera Bot. 95 (1988) 23; Comber, Orch. Java (1990) 363; Seidenf. & Wood, Orch. Pen. Malays. Singap. (1992) 575; Chen & Wood in Fl. China 25 (2009) 444. SYNTYPES: Indonesia, Java, Mount Gede and Pangurangu, *Blume* s.n. (repositories not known). Fig. 1 & 2.

Epiphytic herbs, entirely glabrous, leafless in the flowering stage. **Roots** creeping directly on the tree bark or in moss growing on it, whitish-green in the dry state, smooth, terete or semi-terete and hardly flattened, about 2–5(–10) cm long, 0.7–1 mm in diameter. **Inflorescences** solitary, erect or spreading at the base and arching



Fig. 1. *Taeniophyllum glandulosum* Blume. **A.** Whole plant. **B.** Flower. Kurzweil & Lwin 2790. Photo credits: Dr. E. Frei.

above, 7–10 mm long; peduncle and rachis brownish green, 0.2–0.4 mm in diameter, warty; rachis 3–7-flowered with one flower open at a time; floral bracts distichous, ovate-lanceolate, thickly textured, $0.9\text{--}1.2 \times 0.7\text{--}0.9$ mm when spread out, warts as on the rachis though somewhat denser. **Flowers** yellowish green. Pedicel and ovary indistinguishable, 1.5–2 mm long. Sepals and petals fused in their lower half forming a tube c. 1.5 mm long, free portions somewhat recurved, dorsally slightly carinate, apices subacute; free parts of median sepal lorate, 1.25×0.4 mm, free parts of lateral sepals ovate-lanceolate, c. 1.5×0.7 mm; free parts of petals broadly ovate-lanceolate, 1.3×0.5 mm; lip ovate-lanceolate, navicular with incurved margin, spurred, base with a septum at the spur entrance, c. 2.2×0.75 mm, apex acuminate, with a reflexed elongate appendage c. 0.5 mm long; spur a globose pouch, c. 1×0.95 mm, glabrous on the outside, distal part with a minute thickened gland on the inside. Gynostemium c. 0.5 long, with prominent stielidia. Capsule not seen.

Illustrations. Seidenf., Opera Bot. 95 (1988) 23, Fig. 9a–c; Comber, Orch. Java (1990) 363, photo; Seidenf. & Wood, Orch. Pen. Malays. Singap. (1992) 575, Fig. 259 l–n; Chen et al. in Fl. China 25, Illustrations (2010) 589, Fig. 589.1–14 & 591, Fig. 591.2–4.

Specimens examined: MYANMAR. **Kachin State:** Inndawgyi Wildlife Sanctuary about 115 km SW of Myitkyina, western shore of Lake Inndawgyi, N $25^{\circ} 10.329'$, E $96^{\circ} 16.815'$, 5 May 2010, Kurzweil & Lwin 2790 (SING spirit).

Habitat, abundance and flowering time. The Myanmar specimens were growing as epiphytes in degraded forest and were locally common on tall trees of *Terminalia bellirica* (Gaertn.) Roxb. (Combretaceae). Plants were growing on twigs about 1 cm thick. Flowering specimens were found in the beginning of May and the presence of several plants in the bud stage suggests that flowering would still continue for many

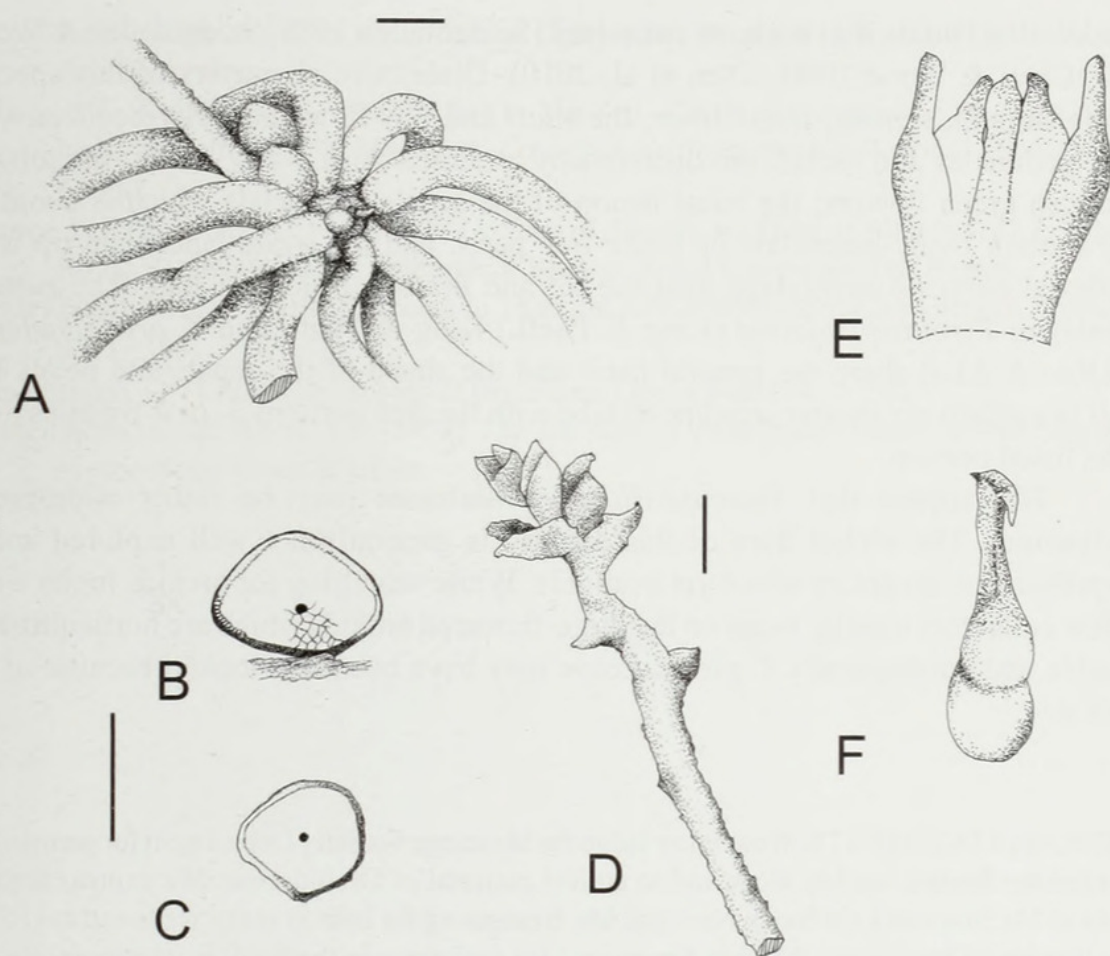


Fig. 2. *Taeniophyllum glandulosum* Blume. **A.** Roots and base of inflorescence. **B, C.** Cross-sections of roots. **D.** Inflorescence apex. **E.** Sepals and petals flattened out, showing the length of the floral tube. **F.** Lip. Scale bars: 1 mm. *Kurzweil & Lwin 2790*. Drawn from spirit material by Evonne Tay.

weeks. This corresponds well with a previous report from China where flowering was reported as occurring between April and August (Chen & Wood 2009). In other parts of the distribution area, *Taeniophyllum glandulosum* is generally reported as occurring in forest, and in Vietnam the species is common in primary mountain forest (Averyanov et al. 2003). Elevations differ significantly in this and previous reports. While the Myanmar plants were collected in a lowland forest about 185 m above sea level, altitudes were given as 400–1100 m in China (Chen & Wood 2009) and 1000–2500 m in Vietnam (Averyanov et al. 2003). In Java, this species is found in high-altitude forest at c. 2280–2700 m, and is sometimes also found growing on rocks (Comber 1990).

Distribution. India (Assam), Myanmar, Thailand, Vietnam, central and SW China (N Fujian, Guangdong, Hainan, Hunan, NE Sichuan, S Yunnan), Taiwan, Japan, Korea, Peninsular Malaysia, Java, Sulawesi, New Guinea.

Notes. Our specimens clearly match the descriptions and illustrations of *Taeniophyllum*

glandulosum Blume that we have consulted (Seidenfaden 1988, Seidenfaden & Wood 1992, Chen & Wood 2009, Chen et al. 2010). Distinctive characters of this species are the smooth, slender, terete roots; the short and few-flowered inflorescences with warty peduncles and rachis; the distichously arranged thick warty bracts; the minute yellowish green flowers; the basal fusion of the sepals and petals which is about as long as their ovate-lanceolate or lorate free parts; and the ovate-lanceolate lip with a reflexed elongate appendage near the tip and the basal globose spur. The eastern Himalayan *T. retrospiculatum* (King & Pantl.) King & Pantl. and *T. arunachalense* A.N.Rao & J.Lal share the general habit and the shape of the sepals and petals but differ in a relatively shorter sepal/petal tube with the free portions 3- or 4-times as long as the fused portion.

We suspect that *Taeniophyllum glandulosum* may be rather widespread in Myanmar. The orchid flora of this country is generally not well explored and a comprehensive inventory is not yet available. While searching for orchids in the wild, the few collectors usually focus on the large-flowered orchids which are horticulturally valuable and consequently *T. glandulosum* may have been overlooked because of its small size.

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