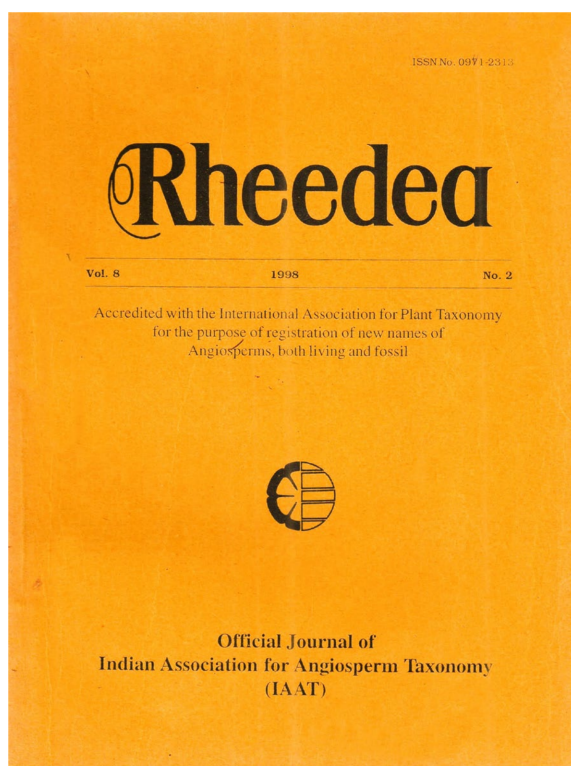




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Notes on the genus *Taeniophyllum* (Orchidaceae) in Arunachal Pradesh with two new records to India

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Abstract

Three species of *Taeniophyllum* found in Arunachal Pradesh are enumerated with brief description and distribution details besides an identification key. Two species viz., *T. companulatum* Carr. and *T. stella* Carr. are reported for the first time as new records to India.

INTRODUCTION

The genus *Taeniophyllum* was established by Blume (1825) who characterised it by the absence of green leaves, highly condensed central stem with many long green roots and very small flowers which are short living for a day or two. The plants of this genus are quite often overlooked by the field collectors due to their diminutive habit.

The genus *Taeniophyllum* comprises of about 120 species distributed from tropical Africa, Sri Lanka, India, China and South Japan to New Guinea, Australia and the Pacific Islands (Seidenfaden & Wood, 1992). A review of literature (see Literature cited) reveals that the genus is represented in India by 8 species viz., *T. alwisii* Lindl. and *T. scaberulum* J.D. Hook. from Peninsular India; *T. retrospiculatum* (King & Pantl.) King & Pantl. and *T. crepidiforme* King & Pantl. from Sikkim Himalayas; *T. khasianum* Jos. & Yog. (synonymised with *T. glandulosum* Bl.) from Meghalaya; *T. arunachalense* A.N. Rao & J. Lal from Arunachal Pradesh and *T. andamanicum* Balak. & Bharg. and *T. filiforme* J.J. Sm. from Andaman and Nicobar Islands (Sathish & Manilal, 1994).

During a recent collection trip in West Kameng district of Arunachal Pradesh for the revisionary study of monopodial orchids of the state, two species of *Taeniophyllum* have been collected. Based on a critical and comparative study of the type descriptions and drawings provided by C.E. Carr (1932) in his monographic work on the genus *Taeniophyllum* in the Malay Peninsula, the species collected afresh from Arunachal Pradesh could be identified as *T. companulatum* Carr and *T. stella* Carr which are known so far only from Malaya. Hence, the

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present report of their occurrence from Arunachal Pradesh forms a new distributional record to India thereby making the total number of *Taeniophyllum* species in India upto 9 and in Arunachal Pradesh upto 3.

Hegde (1984) mentioned the occurrence of *T. crepidiforme* in Arunachal Pradesh without any authentic live material or Herbarium specimens. Hence, I prefer not to include this species from Arunachal Pradesh till fresh collections are made in confirmation.

The three species which are known so far from Arunachal Pradesh may be differentiated by the following key.

Key to the species

1. Flowers less than 5 mm long; connate portion of sepals longer than the free lobes
..... **T. companulatum**
1. Flowers 5-10 mm long; connate portion of sepals much shorter than the free lobes.
 2. Lip with a spicule at apex; capsule 5 mm long **T. arunachalense**
 2. Lip without any spicule; capsule 10 mm long **T. stella**

- 1. *Taeniophyllum companulatum*** Carr in Gard. Bull. S.S. 7: 68, Pl. 8, fig. A. 1932; Holttum, Fl. Malaya 1: 590. 1953.

Small plants found growing on slender twigs of small trees in moist deciduous tropical forest at an altitude of 200 m. Roots small, flattened, green above and grey beneath. Spikes about 1 cm long with 2 sterile bracts in basal half. Flowers upto 3 or 4, pale green or white, upto 4.5 mm long. Sepals and petals connate into a tube which is longer than free lobes; free lobes about 1 mm long, ovate, acute, fleshy. Lip with a short erect tooth at apex and a small globular spur at base. Flowering in August.

Distribution: India (Arunachal Pradesh) and Malaya.

Specimen examined: W. Kameng district, Doimarah R.F., Tipi Nallah (200 m), A.N. Rao 30322 (Orchid Herbarium, Tipi).

Note: This species is very much close to the Malayan species *T. pahangense* Carr but differs in having flat roots instead of trigonal roots and lip not ventricose at base.

Notes on the genus *Taeniophyllum* (Orchidaceae)2. *Taeniophyllum arunachalense* Nageswara Rao et J. Lal in Bioved 2(2): 225, fig. 1. 1991.

Tiny epiphyte found growing on slender twigs of large trees in moist deciduous tropical forest at an altitude of 100 m. Roots long, flattened, undulate at margins. Spikes many, upto 2.5 cm long with 3-5 flowers. Bracts half of the length of the ovary. Flowers upto 8 mm long, pale yellow, opening one at a time. Sepals and petals connate at base upto 1 mm long; free lobes lanceolate, acute, 3 or 4 times longer than connate portion. Lip upto 4 mm long, with a needle like appendage (spicule) subterminally. Spur globular. Flowering in August.

Distribution: Endemic to Doimukh forest of Papampare district.

Specimen examined: Papampare Dist., Doimukh forest (100 m), J. Lal 437 (ARUN).

Note: *T. arunachalense* is closely allied to *T. glandulosum* Bl. but differs in longer free lobes of sepals and petals and spur without any gland inside. Similarly, it differs from other closely related species *T. retrospiculatum* in having pubescent scape with 2 sterile bracts, longer flowers and bract which is half of the length of pedicellate ovary.

3. *Taeniophyllum stella* Carr in Gard. Bull. S.S. 7: 69, Pl. 8, fig. B. 1932; Holttum, Fl. Malaya 1: 590. 1953; Seidenfaden, Nord. J. Bot. 6(2): 174, 1986.

Small plants found growing on the branches of small trees in moist deciduous tropical rain forest at an altitude of 200 m. Roots long, flattened, undulate, dark green above and paler beneath. Spikes many, dark green, shortly muriculate, with sterile bracts in lower half, 5-6 flowered opening one at a time in evening time and lasting for 1 night. Flowers about 1 cm long, star-like when widely opened, pale yellow. Sepals and petals connate at base for about 1 mm length; free lobes without any tooth or spine. Spur small, semispherical. Flowering in August.

Distribution: India (Arunachal Pradesh) and Malaya.

Specimen examined: W. Kameng district, Doimarah R.F., Tipi Nallah (200 m), A.N. Rao 30304, 30324 (Orchid Herbarium, Tipi).

Note: This species is very much close to *T. arunachalense* but differs from it in having a lip without any tooth-like appendage and in longer capsules (1.5 cm long) instead of lip with tooth-like appendage at apex and shorter capsules (0.5 cm long).

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