



A new species of *Aeschynanthus* Jack (Gesneriaceae) from North East India

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ABSTRACT: A new species *Aeschynanthus clarkei* sp. nov. is described and illustrated from the Nagaland state of Northeast India. Morphologically, this species closely resembles to *Aeschynanthus lineatus* Craib in having sessile inflorescences, but differs in leaves elliptic-lanceolate vs narrowly to broadly elliptic or lanceolate to obovate; calyx lobes linear vs lanceolate-linear to linear-oblancoelate. It also appears to be morphologically similar to *Aeschynanthus angustiblongus* W.T. Wang in leaves shape but differs in having leaves margin prominently dentate vs margin entire and flowers in pair vs flower solitary. This species is narrowly confined to Kiphire district of Nagaland, in a small population comprising about 35 matured individuals in two localities. The threat status of this new species is provisionally assessed here as “Critically Endangered CRB₂ab(III); D)” following the IUCN Red List Categories and Criteria version 16 (2024).

KEY WORDS: *Aeschynanthus angustiblongus*, *Aeschynanthus lineatus*, Endangered, Indo-Burma hotspot, Nagaland.

INTRODUCTION

The genus *Aeschynanthus* Jack is represented by 185 species in the world, distributed from S. China to Tropical Asia (POWO, 2024). In India the genus is represented by ca. 26 taxa, mainly distributed in North East India, Peninsular India and Andaman, and Nicobar Islands (Sinha and Datta, 2016; Krishna *et al.*, 2020; Lalhlupuii *et al.*, 2023; Debta, 2024). During the Floristic study of Nagaland-Myanmar border, second author (SD) in the year 2022 and 2023, collected an interesting *Aeschynanthus* sp., having prominently dentate leaves margins and axillary cymes inflorescences in upper portion of branches with flowers in pair. On perusals of relevant literature (Clarke 1874, 1883, 1884; Wang 1975, 1981, 1984; Wang *et al.*, 1998; Mendum, 1998, 1999, 2001; Mendum *et al.*, 2001, 2006; Christie and Mendum, 2002; Middleton, 2007, 2009, 2016; Bhattacharyya and Goel, 2015; Sinha and Datta, 2016; Olimpos and Mansibang, 2021), including types and protologue of morphologically most similar species available in various herbaria (ARUN, ASSAM, BSHC, BM, CAL); and by examining the virtual herbarium specimens available at E, K, NY, P, PE, the existing recorded species were assessed, and the novelty of the species was confirmed.

TAXONOMIC TREATMENT

Aeschynanthus clarkei Moaakum, S. Dey, Barbhuiya & G. Krishna, *sp. nov.* **Fig. 1 & 2.**

Diagnosis: Morphologically, this species closely

resembles to *Aeschynanthus lineatus* Craib in having sessile inflorescences, and similar in corolla tube structure, but differs by its, leaves shape elliptic-lanceolate vs narrowly to broadly elliptic or lanceolate to obovate; calyx lobes linear, obtuse at apex, glabrous vs calyx lobes lanceolate-linear to linear-oblancoelate, outside glabrous to rust-brown pubescent. It also appears to be morphologically similar to *Aeschynanthus angustiblongus* W.T. Wang in leaves shape but differ in having leaf margin prominently dentate vs leaves margin entire; flowers in pair vs flower solitary; style glandular pubescent vs style sparsely hairy/pubescent.

Type: India, Nagaland, Kiphire district, Fakim community conservation forest, 25°49' 4.44" N, 94° 58' 58.76" E, 2058 m, 23 August 2022, *S. Dey 1853* (Holo: CAL!; Iso: CAL!); India, Nagaland, Kiphire district, 2058 m, 20 August 2023, *S. Dey 2001* (Para: CAL!).

Description: Epiphytic or lithophytic shrub. **Stems** pendent, woody, whitish, terete, glabrous, 2–3 mm in diameter; bark peeling off, chartaceous, transparent; internodes 2–8 cm long, swollen at nodes. **Leaves** opposite, elliptic-lanceolate, 4.5–8.5 × 1–1.6 cm, acuminate at apex, distantly dentate at margins, narrowed at base, fleshy, coriaceous, green on both surfaces, turning brownish after drying, glabrous on both surfaces, midvein channeled on upper surface, prominent beneath; petioles ca. 1 mm long, glabrous. **Inflorescences** axillary cymes, in upper portion of branches, flowers in pair; bracts linear, ca. 1 mm long, glabrous; pedicels ca. 1.2 cm long, glabrous. **Calyx** free to base, 5-lobed; lobes linear, ca. 5 × 1 mm, obtuse at apex, glabrous. **Corolla** 2–2.5 cm long, slightly curved in upper

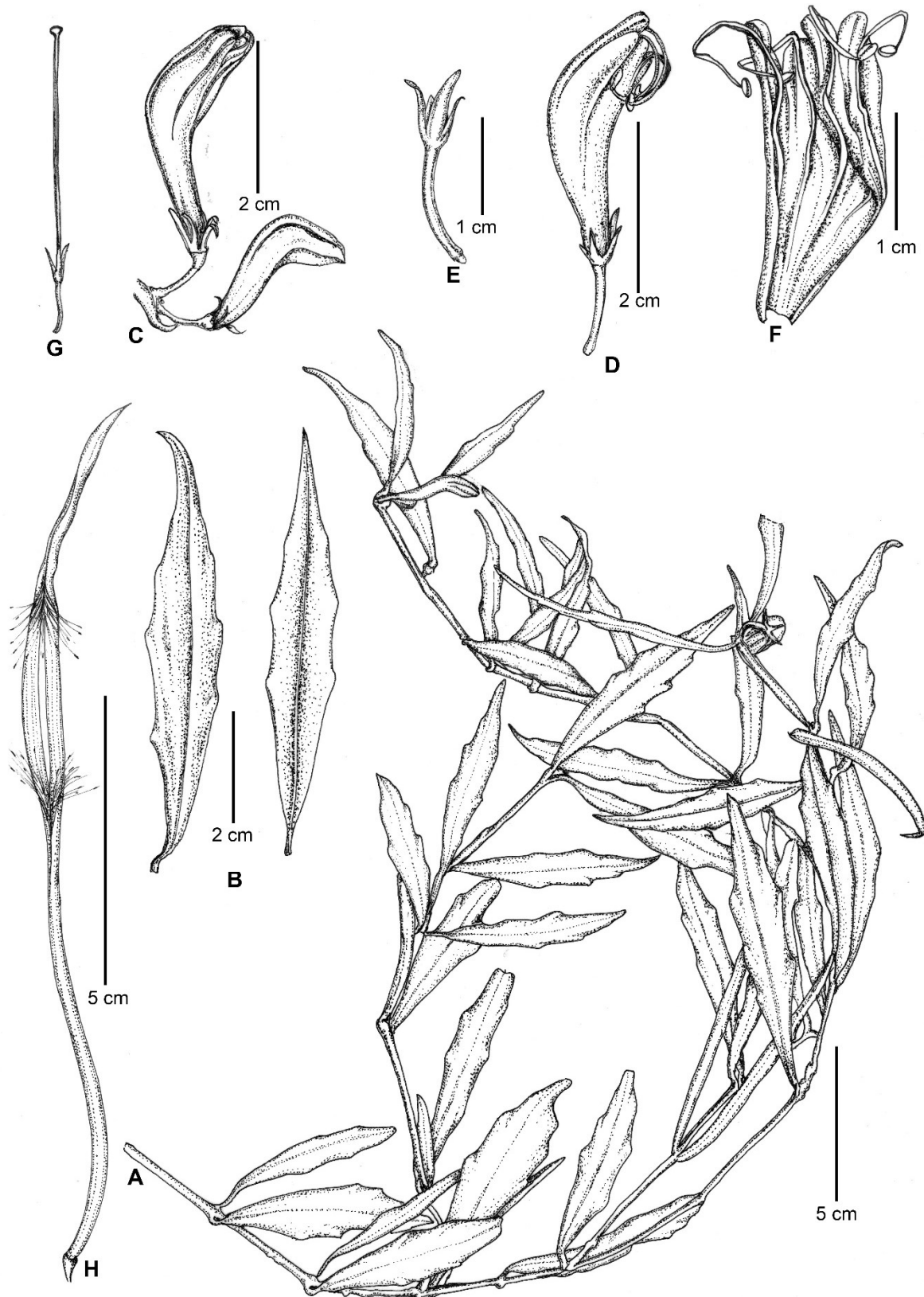


Fig. 1. *Aeschynanthus clarkei* sp. nov.: **A.** Habit; **B.** leaves dorsal and ventral surfaces; **C.** Inflorescences; **D.** A flower; **E.** Calyx (corolla removed); **F.** Corolla split open; **G.** Pistil with calyx; **H.** Capsule (dehiscent).

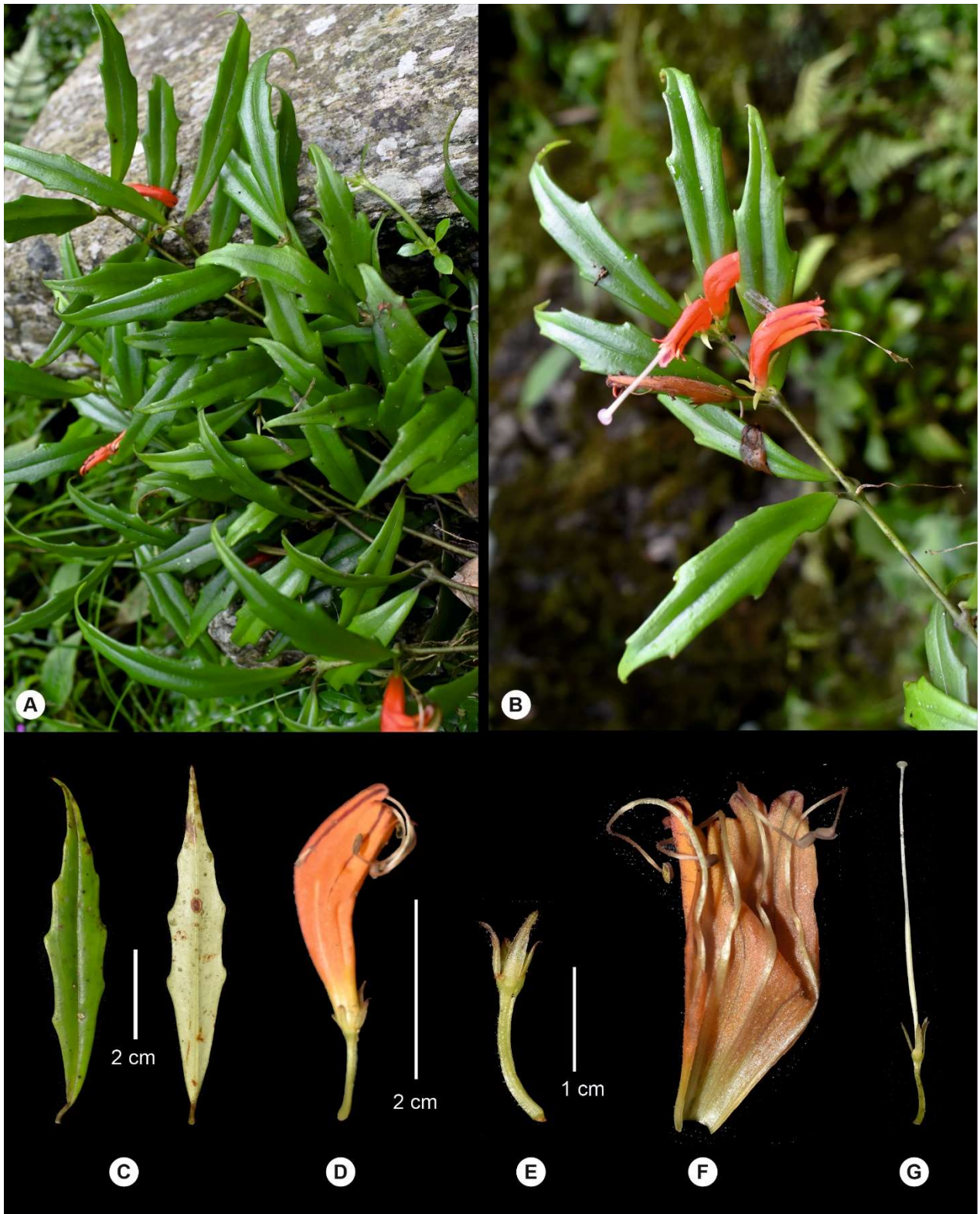


Fig. 2. *Aeschynanthus clarkei* sp. nov.: **A.** Habit; **B.** Flowering twig showing inflorescence; **C.** Leaves dorsal and ventral surfaces **D.** A flower; **E.** calyx (corolla removed); **F.** Corolla split open showing stamens; **G.** Pistil with calyx.

**Table 1.** Detailed comparison of *Aeschynanthus clarkei* sp. nov. and its allied *A. angustoblomus* W.T.Wang and *A. lineatus* Craib

	<i>Aeschynanthus clarkei</i>	<i>Aeschynanthus angustoblomus</i>	<i>Aeschynanthus lineatus</i>
Leaves	Leaves elliptic-lanceolate, 4.5–8.5 cm long, narrowed at base, distantly dentate at margins, acuminate at apex, long, coriaceous; petioles ca. 1 mm long.	Leaves narrowly oblong to lanceolate or narrowly elliptic, 3–5.4 cm long, attenuate at apex, chartaceous; margin, petioles 2–5 mm long	Leaves narrowly to broadly elliptic or lanceolate to obovate, 5–12 cm long, entire at margin, leathery to thin leathery, cuneate at apex; petioles 6–21 mm long
Inflorescences	Cymes 2-flowered; bracts linear, ca. 1 mm long, glabrous; pedicels ca. 1.2 cm long, glabrous.	Cymes 1-flowered; bracts deciduous; pedicels 1–2.2 cm, glabrous.	Cymes 1–4-flowered; bracts linear to lanceolate, ca. 6 mm long; pedicels 3–20 mm, puberulent to glabrous.
Calyx	Calyx free to base; lobes linear, ca. 5 mm long, obtuse at apex, glabrous.	Calyx free to base; lobes lanceolate, 9–11 mm long, acute at apex, glabrous.	Calyx free to base; lobes linear-lanceolate to linear-oblong, 4–7 mm long, acute at apex, outside glabrous to rust brown pubescent.
Corolla	Corolla red, 2–2.5 cm long, outside sparsely eglandular pubescent, inside glabrous; lobes ciliate at margins, hairs multicellular, hyaline.	Corolla red, ca. 2.8 cm, outside pubescent, inside glabrous; lobes not ciliate at margins	Corolla red to yellow, 1.9–3 cm long, outside sparsely puberulent, inside glabrous; lobes not ciliate at margins
Stamens	Filaments ca. 1 cm long, sparsely glandular pubescent	Filaments ca. 1.2 cm long, glabrous	Filaments 1.8–2 cm long, glabrous
Pistil	Ovary glabrous; style ca. 2.3 cm long, glandular pubescent.	Ovary glabrous; style less than 16 mm, with a few short hairs.	Ovary with small glands; style ca. 8 mm, puberulent.

portion, sparsely eglandular pubescent, longitudinal dark red lines externally, inside glabrous; 5-lobed, lobes broadly ovate, ca. 2 × 2 mm, obtuse at apex, ciliate at margins, hairs multicellular, hyaline. **Stamens** 4, epipetalous, exerted; filaments ca. 1 cm long, sparsely glandular pubescent; anthers light pinkish. **Pistil** stipe ca. 6 mm long, glabrous; ovary linear, ca. 1.7 × 1.5 mm; style ca. 2.3 cm long, glandular pubescent; stigma capitate, pink or purple. **Capsules** 20–30 cm long; seeds with 2 hairlike appendages at hilar end, appendages 0.8–1.2 cm long, opposite end with 1 hair like appendage 1.5–2 cm long.

Flowering & Fruiting: July to August & November to January.

Etymology:

This species is named after Charles Baron Clarke (1832–1906), a British Botanist, who contributed significantly for the family Gesneriaceae in Flora of British India.

Conservation status: The proposed new species grows as epiphyte and lithophyte in two different localities and both sub-populations are severely affected by Jhum cultivation and land slide prone areas. These sites are considered as single threat, can affect the both localities, therefore following the guideline IUCN 2024, will be considered as a single location. At the time of collection ca. 35 mature individuals were observed in two different locations. On estimation the area of occupancy (AOO) is about 8 KM² and following the IUCN guidelines (2012, 2024), this taxon is provisionally assessed here as Critically Endangered CRB2ab(iii);D]. For correct assessment further population study needed in future.

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