A New Species of *Brachystelma* R.Br. (Apocynaceae: Asclepiadoideae – Ceropegieae) from India

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ABSTRACT: *Brachystelma pullaiahi* Ravi Prasad Rao, Prasad, Sadasivaiah, Suresh Babu and Prasanna, a new species of *Brachystelma* R. Br. (Apocynaceae: Asclepiadoideae - Ceropegieae) is described and illustrated. This species located in the hills of Eastern Ghats of Southern Andhra Pradesh is similar to *B. maculatum* Hook. f. but differs in having long stems, solitary flowers, ash-coloured corolla base, very long and non-keeled, pale yellow corolla lobes with white hairs and biseriate yellow corona.

KEY WORDS: Apocynaceae, *Brachystelma pullaiahi*, Andhra Pradesh, India, new species.

INTRODUCTION

The genus *Brachystelma* R. Br. (Apocynaceae: Asclepiadoideae - Ceropegieae) is represented by ca. 100-120 species (Dyer, 1980; Meve, 2002; Mabberley, 2008; Bruyns, 2009) in the world, chiefly distributed in South Africa, South-East Asia and Australasia (Forster, 1996). In India, 17 species are known to occur (Karthikeyan *et al*., 2009), of which nine are endemic to India.

During the floristic explorations in the Eastern Ghats of Southern Andhra Pradesh, authors have collected curious specimens of *Brachystelma* from Nallamalais in Prakasam and Kurnool districts and Lankamalleswaram hills in Kadapa district that could not be identified with any other known *Brachystelma* species. After critical study, it is concluded that the species deserves to be described as a novelty.

TAXONOMIC TREATMENTS

Brachystelma pullaiahi Ravi Prasad Rao**,** Prasad, Sadasivaiah, Khadar Basha, Suresh Babu and Prasanna, *sp. nov.* Figs. 1 & 2

Type: India, Andhra Pradesh, Kurnool district, Nallamalais, Sikaram hills, 78º55'N, 16º01'E, alt. 602 m, 31 July, 2010, *Rao & Prasad* 34664 (holotype: BSID; isotypes: SKU & CAL; paratype: Velagalapaya, Prakasam district, *Rao, Sadasivaiah & Basha* 30670 SKU).

Brachystelma pullaiahi Ravi Prasad Rao, Prasad, Sadasivaiah, Khadar Basha, Suresh Babu *et* Prasanna *sp. nov. similis B. maculatum* Hook. f. *sed differt caule longo, sessilibus foliis, flores solitarii, corolla cineraceus basi, corollae tubi altitudinem, longissima et non carinata, lobi pallide flava, pilis albidis, corona biseriatis et flava.*

Perennial herb, up to 1.6 m high. Tubers to 8 × 4 cm, fusiform or globose, brownish. Stem erect, solitary, terete, unbranched-sparsely branched, filled with watery sap, glabrous, green, white glaucous downwards; nodes purple-tinged; internodes to 15 cm long. Leaves to 12 × 0.2 cm, linear or filiform, simple, opposite, decussate, fleshy, sessile, acute at apex, entire, glabrous. Inflorescence axillary, sessile or shortly pedicellate, usually with erect, solitary flower or 2-flowered, very rarely 3-flowered. Flowers with 1.5 cm long pedicels, terete, glabrous; bracts and bracteoles linear, acute, glabrous, pinkish-green; bracts to 2 × 0.4 mm; bracteoles 1 or 2 per flower, to 1 × 0.2 mm. Calyx 5-lobed; lobes to 5 × 1 mm, linear, acute or acuminate, 5-veined, glabrous, pinkish-green. Corolla 5-lobed, rotate, star-shaped, ash-grey up to basal attenuated portions of lobes, striations white, appearing like a ring surrounding the corona; corolla tube shallow; corolla lobes to 3.6 × 0.2 cm, 5-veined, linear portion pale yellow, acute, occasionally obtuse due to inturned apex, margins folded back along the middle, prominently hairy throughout, occasionally puberulous or glabrous near base; corolla lobes hairs to 3mm long, white. Corona *ca* 3 mm across, biseriate, glabrous, yellow; inter staminal corona

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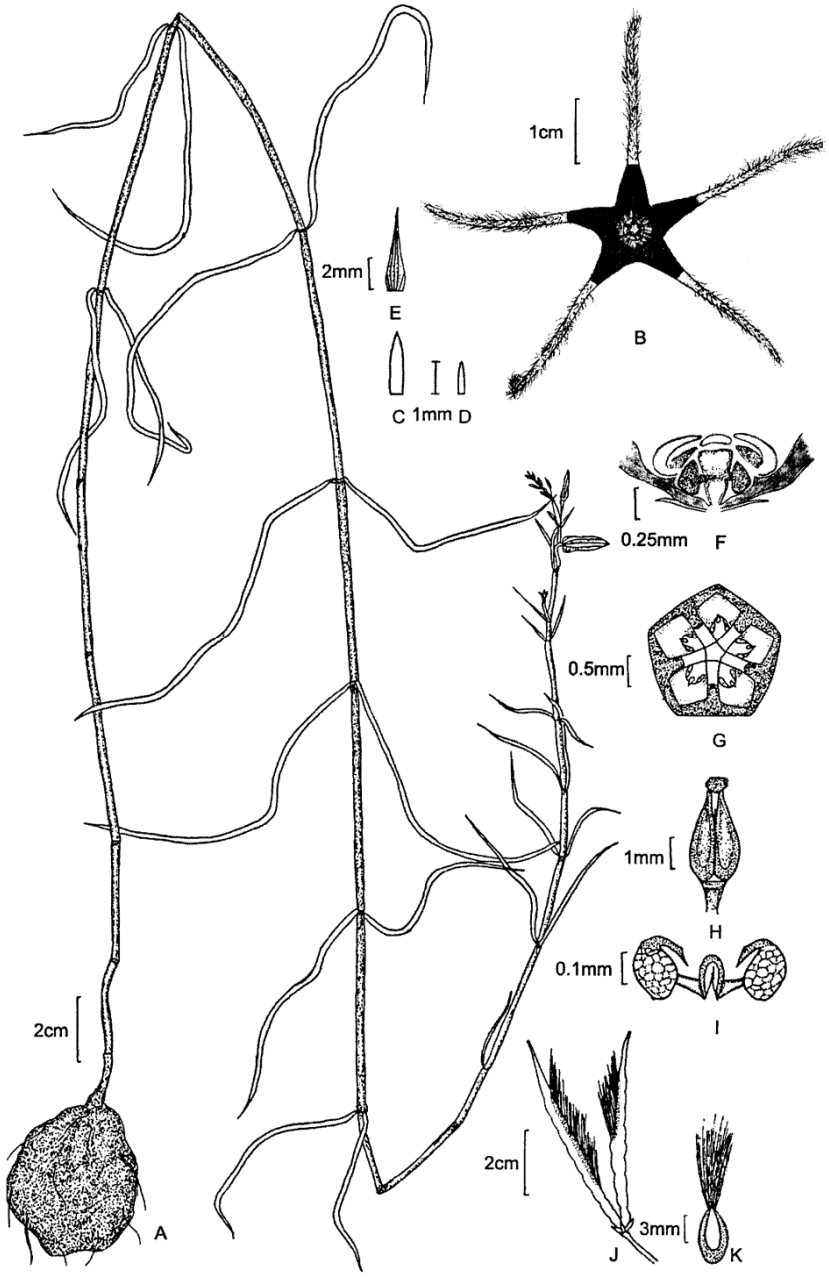


Fig. 1. *Brachystelma pullaiahi* Rao *et al*. A: Habit. B: Flower. C: Bract. D: Bracteole. E: Sepal. F: Flower L.S. G: Corona top view. H: Gynostegium. I: Pollinia. J: Fruit. K: Seed.

5-lobed, cupular, forming a continuous ring around the gynostegium; staminal corona 5-lobed, lobes adpressed to back of the anther, incurved, linear, acute, as long as or slightly exceeding and hooded on the style apex. Pollinia *ca* 0.2 mm long, yellow, waxy, globose-ellipsoid, margin pellucid at apex; attached by light-brown tubular caudicles to a red-coloured corpuscle. Stigma pentangular. Follicles *ca* 10 cm long, paired, erect, divergent, dehiscent. Seeds 18-25, to 8 × 4 mm, with central dark embryonic region; outer margins hyaline, rounded at base, comose; coma silky white, *ca* 2.5 cm long.

Flowering and fruiting: June-December.

Distribution: Eastern Ghats, Southern Andhra Pradesh, India.

Habitat: Found in dry deciduous forests and grows on black and red soils mixed with slate rock on open hill

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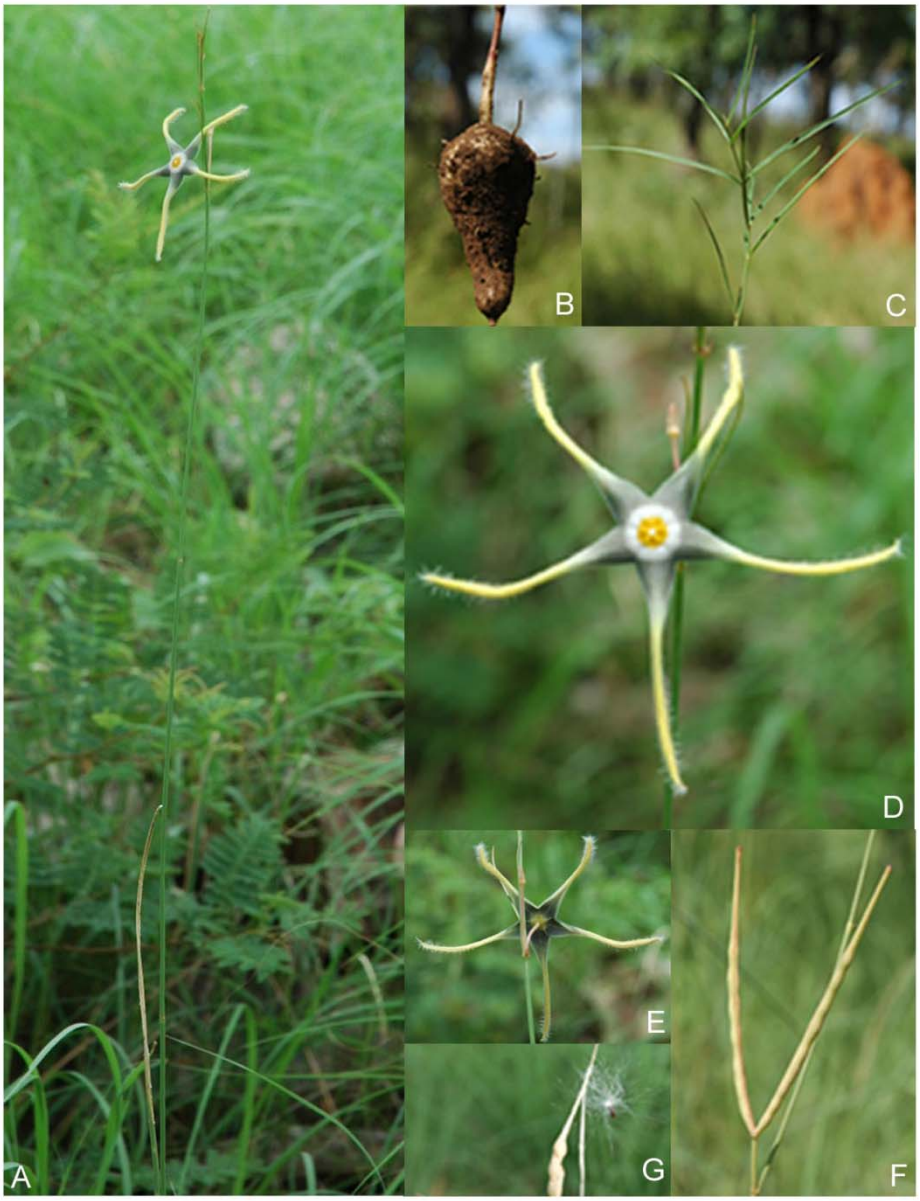


Fig. 2. *Brachystelma pullaiahi* Rao *et al*. A. Plant in type location. B: Tuber. C: Leaves on a branch. D: Top view of flower. E: Abaxial side of the flower.

slopes among grasses at an altitude range of 400-600m.

Note: *Brachystelma pullaiahi* Ravi Prasad Rao, Prasad, Sadasivaiah, Khadar Basha, Suresh Babu *et* Prasanna *sp. nov*. is similar to *B. maculatum* Hook. f. but differs in its long stems, sessile leaves, solitary flowers, ash-coloured corolla base, shallow corolla tube, very long and non-keeled, pale yellow corolla lobes with white hairs, corona, biseriate and yellow.

Etymology: The new species named in honour of Dr. T. Pullaiah, Professor of Botany at Sri Krishnadevaraya University, Anantapur for his contributions to the floristics of Andhra Pradesh, India.

Vernacular names: Nakshtralamokka, Nemithi-gadda.

Conservation status: The species has restricted distribution in Nallamalais and Lankamalleswaram hills and the habitat is prone to forest fires and grazing. It can be categorized as critically endangered (CR) as per IUCN 3.1 version (IUCN, 2001).

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印度夾竹桃科蘿藦亞科吊燈花族潤肺草屬（*Brachystelma*）一新種

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摘要：本文記述並描繪夾竹桃科蘿藦亞科吊燈花族潤肺草屬之一新種 – 普萊亞氏潤肺草（*Brachystelma pullaiahi* Ravi Prasad Rao**,** Prasad, Sadasivaiah, Khadar Basha, Suresh Babu and Prasanna）。本植物產於印度安得拉邦南部的東高止山，與 *B. maculatum* Hook. f.近似，不同處在於本種具有較長的莖、單生花、花冠基部灰色、細長無稜淡黃色的花冠裂片具有白毛以及兩列的黃色副花冠。

關鍵詞：夾竹桃科、普萊亞氏潤肺草、印度安得拉邦、新種。

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