

RESEARCH ARTICLE

Extended distribution of lesser known species *Murdannia striatipetala*: an addition to the flora of Telangana state, India

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Abstract *Murdannia striatipetala* Faden (Commelinaceae), a Monocot species with its native range from northern Sri Lanka to southeastern India, is recorded for the first time from Telangana state. It is an extension of its ecological range from the sea coast to the interior lands. The species is briefly described with plant images and relevant notes.

Key Words: Addition, Extended Distribution, Flora, Telangana, India

Introduction

Murdannia Royle is one of the largest genera of the family Commelinaceae, comprising about 60 species (Govaerts and Faden 2016, Pellegrini *et al.* 2016). The genus is represented by 29 species in India, which constitutes 52% of its global diversity (Naik and Rao 2017). Four species, one subspecies and one variety of *Murdannia* are endemic to Peninsular India, or largely restricted to southern peninsular India (Ahmedulla and Nayar 1987). The genus is represented by six species in Telangana state (Pullaiah 2015).

While documenting the biodiversity of proposed urban parks in Telangana state – a project funded by Telangana State Forest Department, the authors collected interesting specimens of Commelinaceae in flower and fruit at Chittapur (17.176268°N, 78.764908°E), Rangareddy district, in December 2020. After a critical study and based on available literature (Faden 2001), the specimens were identified as *Murdannia striatipetala* Faden. The plant habitat, geographical coordinates, elevation, soil type and associated species were noted. Nikon camera was used to snap pictures of the plant (Figure 1) and Labomed microscope aided

in closer observations. The voucher specimens were preserved in the Herbarium of All-India Network Project on Vertebrate Pest Management (AINPVPM), Professor Jayashankar Telangana State Agricultural University, Rajendranagar, Hyderabad, India.

Habitat

The Chittapur Urban Conservation Block is located in Amangal Division, Ibrahimpatnam Forest Range, Rangareddy district, Telangana state. It has an area of 374 ha, covered by Dry deciduous forest and Scrub. It has small streams and wetland patches. The dominant tree species present are *Strychnos nux-vomica* L., *Gyrocarpus americanus* Jacq., *Albizia amara* (Roxb.) Boivin, *Diospyros chloroxylon* Roxb. and *Holoptelea integrifolia* (Roxb.) Planch. and the climbers include *Asparagus racemosus* Willd. and *Cocculus hirsutus* (L.) W.Theob. The shrubs are *Grewia flavescens* Juss., *Helicteres isora* L. and *Ixora pavetta*. The dominant herbs *Vicoa indica* (L.) DC., and *Blepharis maderaspatensis* (L.) B.Heyne ex Roth are intermixed with grasses such as *Chrysopogon fulvus* (Spreng.) Chiov., *Eragrostiella bifaria* (Vahl) Bor, *Eragrostis viscosa* (Retz.) Trin. and *Perotis indica* (L.) Kuntze. The species associates of *Murdannia striatipetala* are: *Cyanotis axillaris* (L.) D.Don ex Sweet, *Cyperus scariosus* R.Br., *Eragrostis unioides* (Retz.) Nees

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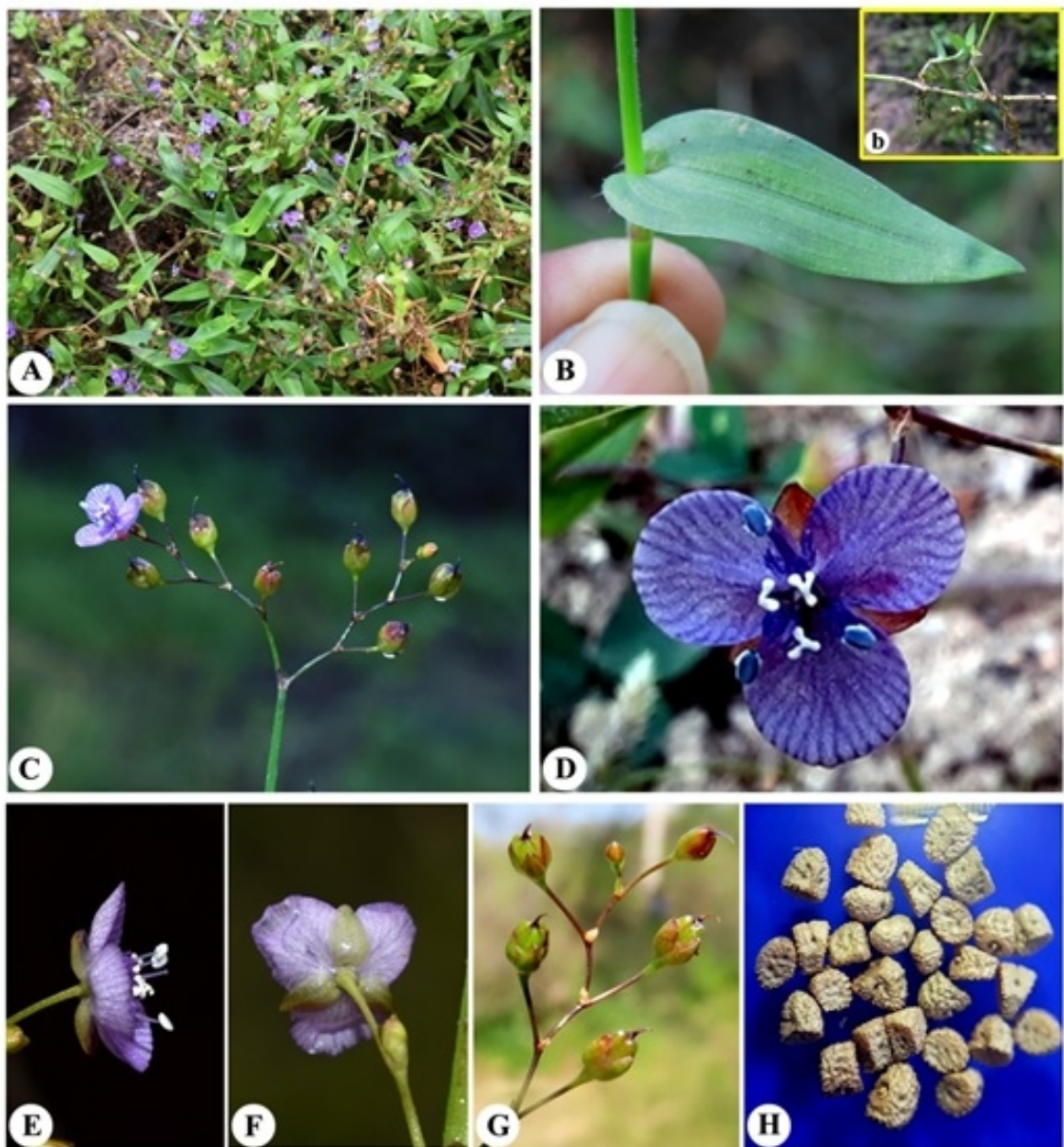


Figure 1. *Murdannia striatipetala*: A- Habitat; B-Stem with leaf, b- Roots at nodes; C- Inflorescence; D- Flower dorsal view; E- Lateral view; F-Ventral view; G- Fruits; H-Seeds

ex Steud., *Lobelia alsinoides* Lam., *Ludwigia perennis* L. and, *Spermacoce ocymoides* Burm.f., mingled with the invasive *Alternanthera ficoidea* (L.) P.Beauv. and *Tridax procumbens* L.

Results

A perusal of literature on the flora of Telangana (Pullaiah, 2015; Reddy and Reddy, 2016) and current publications, *Murdannia striatipetala*

Faden was found not been reported from Telangana state, India, a species is known to be native to Sri Lanka and Southern India (hitherto to Nellore in Andhra Pradesh and coastal Tamil Nadu including Pondicherry) (Nandikar *et al.*, 2011; Dhaarani *et al.*, 2017). Therefore, it is reported for the first time from Rangareddy district of Telangana state, an extended distribution from the east coast to the interior lands.

Taxonomic treatment

Murdannia striatipetala Faden in Novon 11(1): 26.2001.

TYPE: Sri Lanka. Jaffna: Jaffna-Pooneryn ferry road, mile post 7/4, Arukuveli, ca. 9037'N, 80010'E, just above sea level, 22 Jan. 1977, *R.B. Faden & A.J. Faden* 77/202 (holotype, US 2890333; isotypes, E, F, K, L, PDA), n.v.

Tufted to unbranched annual herb 20–30 cm tall with definite base; shoots erect to decumbent and rooting at lower nodes; roots fibrous. Leaf sheaths 0.4–1 × 0.4–0.8 cm, ciliate. Lamina lanceolate to oblong lanceolate, 2–3.8 × 0.8–1.2 cm, base amplexicaul, hairy, acute apex, both surfaces glabrous, margins scabrous. Inflorescence axillary or terminal; peduncle 0.8–1.5 cm long; bracteoles 2–5 mm, amplexicaul; flowers hermaphroditic or staminate, 6.5–12 mm wide; pedicle erect, glabrous, 2.2–6.5 mm; sepals ovate to elliptic 2.4–3.8 × 1.2–2 mm, green, entire; petals ovate-orbicular, 3.5–5 × 3–4.8 mm, pale lavender to dark purple, contrasting veins, crenulate. Stamens 3, filaments 2.5–4.3 mm long, densely appressed hair in the lower half, anthers oblong elliptic, 0.9–1.2 × 0.4–0.8 mm; staminodes 3, filament 1.2–1.7 mm long, antherodes 3-lobed, 0.3–0.7 × 0.4–0.8 mm, creamy white. Ovary ellipsoid, trigonous, 1.1 × 0.7 mm, green; style 1.3 mm long, stigma capitate, white. Capsules oblong-ellipsoid, 2.5–4.5 × 1.2–2 mm, brown. Seeds greyish brown, 5–7 per locule, trapezoidal to rectangular in outline, 0.7–1 × 0.8–0.9 mm. (Fig.1)

Distribution: GLOBAL: Southern India and Northern Sri Lanka. INDIA: Andhra Pradesh, Pondicherry Tamil Nadu and Telangana.

Flowering and Fruiting: October–January.

Illustration: Faden in Novon 11(1): 23, Fig. 1 H–M. 2001.

Specimen examined: INDIA, Telangana State, Rangareddy distr., Chittapur Urban Conservation Block: 10.12.2020, *P. Bharath Simha Yadav* 255 (BSID, AINPVPM).

Notes: – (i) Faden (2000) first described *Murdannia striatipetala* from Sri Lanka without

Latin description, and validated it later (Faden 2001). The species was reported to be native of coastal habitats in southeastern peninsular India and Jaffna peninsula of Sri Lanka (Faden 2001). Presently, it was collected from the sandy soils of a stream at about 450 km way from east coast and at 570 m AMSL (against the earlier record of 28 m AMSL – Nandikar 2011:68; just above sea level – Faden 2000); (ii) The report of *Murdannia striatipetala* from India by Nandikar *et al.* (2011) was not a rediscovery of the species but just a recollection from the region of the paratypes locality (i.e. the former Madras Presidency) after 11 years since the new species was described in 2001; (iii) *Murdannia striatipetala* is related to *M. dimorphoides* Faden on one hand and *M. spirata* (L.) G.Brückner, on the other (Faden, 2001). But, *M. striatipetala* can be identified even in the field by its definite leaf base, narrow leaves, dark-veined petals and staminal filaments bearing short-appressed hairs (Faden 2001: 27).

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