

## Two additions to the family Convolvulaceae for the Flora of Telangana, India

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### Abstract

*Merremia vitifolia* (Burm. f.) Hallier f. and *Merremia umbellata* (L.) Hallier f. belonging to the family Convolvulaceae are reported here as additions to the flora of Telangana state from Katkur reserve forest, Bhadradi Kothagudem district. Brief descriptions, colour photo plates are provided for easy identification and future reference.

### INTRODUCTION

The morning-glory family Convolvulaceae Juss. comprises herbs, shrubs and climbers with approximately 1900 species which are distributed in 59 genera (Simões and Staples, 2017). The tribe *Merremieae* comprises nine genera viz. *Davenportia* R.W.Johnson, *Decalobanthus* Ooststr., *Hewittia* Wight & Arn., *Hyalocystis* Hallier f., *Merremia* Dennst. ex Endl., *Operculina* Silva Manso, *Remirema* Kerr, *Xenostegia* D.F.Austin & Staples and *Jacquemontia* Choisy p.p. (Staples and Brummitt, 2007).

The genus *Merremia* Dennst. ex Endl., is represented by c. 100 species, and distributed in the tropical regions of the world (Mabberley, 2017). In India, the genus *Merremia* Dennst. ex Endl., is represented by 15 species (Santapau & Henry, 1973), 18 taxa (17 species, 1 infraspecific, BSI, 2020). In Telangana, the genus *Merremia* Dennst. ex Endl., is represented by 06 species (Reddy & Reddy, 2016, Pullaiah 2015). Since then, one species *Merremia dissecta* (Jacq.) Hallier f. was

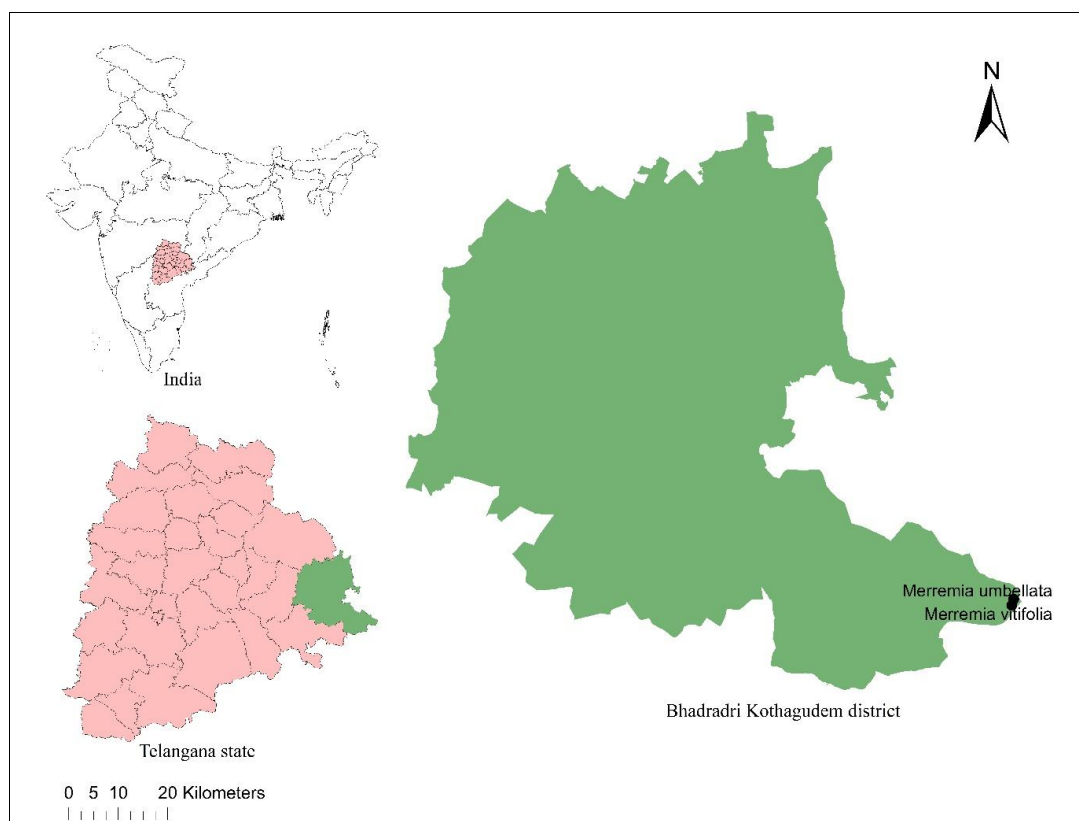
added to the Flora of Telangana by (Swamy and Venkatesham, 2017). The present study results, two species viz., *Merremia vitifolia* (Burm. f.) Hallier f. and *Merremia umbellata* (L.) Hallier f., were added to the Flora of Telangana state from Bhadradi Kothagudem district. Therefore, as of now, there are 09 species of *Merremia* represented in Telangana state.

### MATERIAL AND METHODS

While exploring the plant wealth of Katkur Reserve Forest, Aswaraopet range, Bhadradi Kothagudem district of Telangana state (**Fig-1**). The authors came across and collected some interesting plant specimens of Convolvulaceae. After a critical study, the specimens were identified as *Merremia vitifolia* (Burm. f.) Hallier f. and *Merremia umbellata* (L.) Hallier f., based on the current Floras (Flora of the Presidency of Madras, Gamble, 1915-1936, The Flora of Central and North Tamil Nadu, S. John Britto, 2019).

The scrutiny of the literature revealed that these two species have not been listed in the Flora of Telangana (Pullaiah, 2015; Reddy & Reddy, 2016) and the recent Floral checklist by (CS Reddy, 2018). Hence, these two species are reported here as new addition to the Flora of Telangana state. Detailed descriptions, photographs and occurrence

map were provided to facilitate identification. The voucher herbarium sheets were prepared by standard herbarium methods (Jain and Rao 1977), voucher specimens are deposited to the Botanical Survey of India, Deccan Regional Centre (BSID), Hyderabad, Telangana.



**Fig 1.** Location of *Merremia vitifolia* and *Merremia umbellata* in Bhadradi Kothagudem district of Telangana state, India.

## Results

### Taxonomic treatment

*Merremia vitifolia* (Burm. f.) Hallier f. in Engl., Bot. Jahrb. Syst. 16:552.1893. *Convolvulus vitifolius* Burm. f., Fl. Ind. 45. t. 18. f. 1. 1768. *Ipomoea vitifolia* (Burm.f) Blume, Bijdr. Fl. Ned. Ind. 13: 289.1826.

### Description:

Twiner; Stem brownish-black, stout, much-branched, the young ones clothed with long spreading hairs, old stems woody. Leaves 4 - 4.5 x 7.7- 9 cm long; young once bronze coloured, base cordate, margin dentate-serrate, acute to acuminate at the apex of lobation, sparsely fulvous hairy on both sides, basally 7-ribbed, veins prominent; petiole 3–8 cm long, patently hairy. Inflorescence axillary; 1– 3 flowered in pedunculate cymes;

peduncles 6-12 cm long; patently hairy; buds pointed; bracts linear, caducous. Calyx 1– 1.5 cm long, more or less densely clothed outside with long spreading hairs, ovate-lanceolate, mucronate, outer hirsute, inner glabrescent. Corolla 3.5 – 5 cm long, 4-6 cm across long, yellow, sub campanulate, bands distinct, membranous, strongly lineate. Stamens 5, included, filaments filiform, hairy at base, anthers yellow, sagittate, twisted, subequal. Ovary 2-celled, glabrous, ovules 2 in each cell; Capsule straw colored, globose, 1.2 cm, papery. Seeds 4, glabrous, black. (Fig 2.) **Global distribution:** Sri Lanka, India, Nepal, Indo- China and Malesia.

**Local distribution:** Maharashtra, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh and the present reports from Telangana state: Bhadradi Kothagudem district.



**Fig 2.** *Merremia vitifolia* (Burm. f.) Hallier f., A. Habit; B. Stem portion; C, D and E. Side and Upper views of inflorescence; F. Infructescence; G. Dehisced capsule; H. Seeds.

**Habitat and ecology:** Rare in deep forest areas and also in the plains. In association with *Xylia xylocarpa* (Roxb.) W.Theob., *Wrightia arborea* (Dennst.) Mabb., *Ziziphus rugosa* Lam. and *Bamboo* sp.

**Flowering & fruiting:** December-March

**Specimen examined:** Telangana, Bhadradi Kothagudem district, Katkur Reserve Forest, Near Gubbala Mangamma temple, 17.354958°N, 81.307223°E, 348 m, 19<sup>th</sup> March 2022, G. Ravi, 725 (BSID).

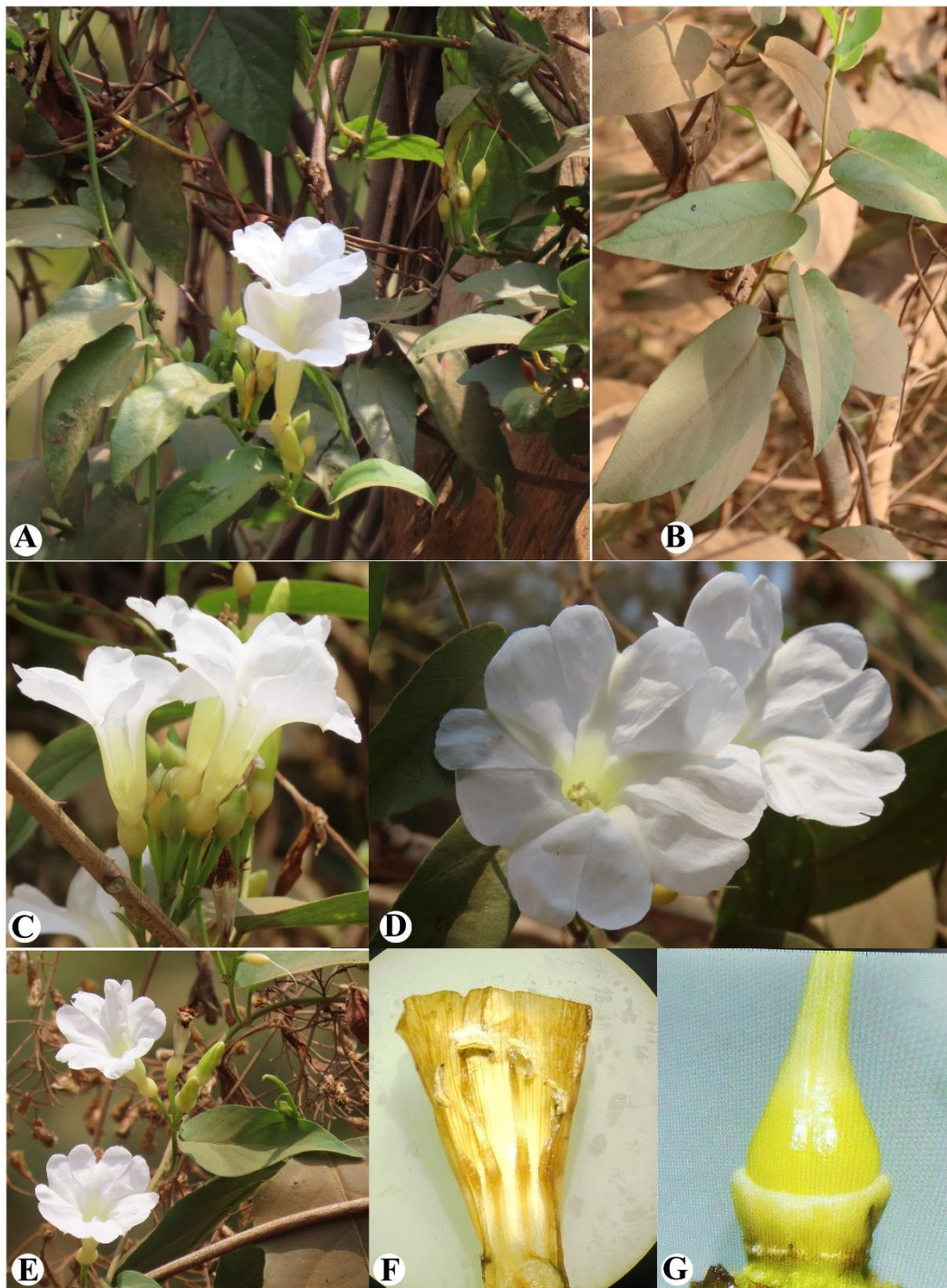
*Merremia umbellata* (L.) Hallier f. in Engl., Bot. Jahrb. Syst.16:552.1893. *Convolvulus umbellatus*

L., Sp.Pl. 1: 155. 1753. *Ipomoea cymose* Roem. & Schult., Syst. Veg. 4:241.1819.

**Description:**

Twiner, stems with white latex and becoming woody, branched, clothed with long spreading hairs, Leaves simple, elliptic to obovate, glabrous throughout; 2.2 – 3.7 x 3.5 – 8.5 cm long, sub coriaceous, penninerved, nerves prominent, base truncate to subcordate, margin entire, apex shortly acuminate; petiole; pubescent to 1.6 cm long. Inflorescence axillary umbelliform cymes; peduncle 1–3 cm long; pedicels 7–10 mm long.





**Fig 3. *Merremia umbellata* (L.) Hallier f.**, A. Habit; B. Leaves; C, D and E. Side and Upper views of inflorescence; F. Corolla split open; G. Ovary.

Sepals 6–8 mm long, ovate-lanceolate, apiculate, scarious on margins. Petals white, campanulate; tube 2–3cm long, pubescent without; Stamens 5, unequal; anthers twisted. Ovary 2-celled, ovules 2 in each cell; stigma capitate. Capsule 8–10 x 5–6

mm, ovoid. Seeds 4, long hairy, dark brown. **(Fig 3.)**

**Global distribution:** Pantropical

**Local distribution:** Maharashtra, Karnataka, Kerala, Tamil Nadu and the present reports from Telangana state: Bhadradi Kothagudem district.

**Habitat and ecology:** Occasional in forest edges and road sides, in association with *Urena lobata* L., *Chromolaena odorata* (L.) R.M.King & H.Rob. and *Cocculus hirsutus* (L.) W.Theob.

**Flowering & Fruiting:** January-April

**Specimen examined:** Telangana, Bhadradi Kothagudem district, Katkur Reserve Forest, Near Gubbala Mangamma temple, 17.346185°N 81.304808°E, 242 m, 19<sup>th</sup> March 2022, G. Ravi, 726 (BSID).

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