

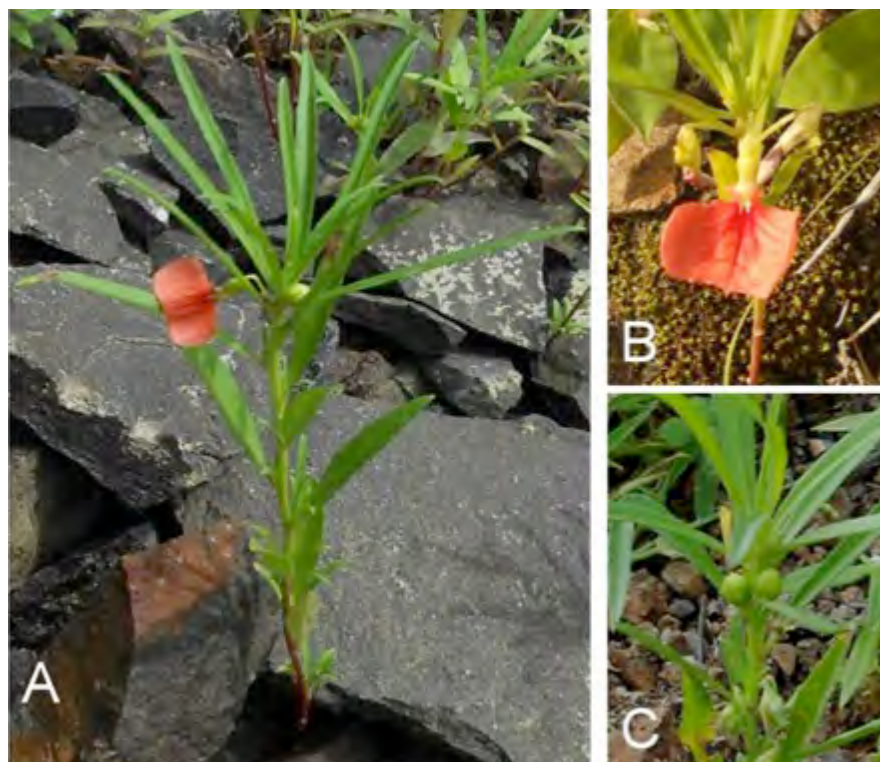
# *Hybanthus stellarioides* (Domin) P.I. Forst. (Violaceae), a new distributional record for Maharashtra

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## Introduction

The Western Ghats have a rich diversity of herbaceous plants. There are many discoveries and new reports from the region. The genus *Hybanthus* Jacq. has c.100 species distributed throughout tropics (Mabberley, 2008). In India, the genus is represented by six species, of them *H. enneaspermus* (L.) F. Muell. and *H. travancoricus* Melch. are included in Flora of India (Banerjee & Pramanik, 1993). *H. vatsavayii* C. S. Reddy was described as a new species (Reddy, 2001), *Hybanthus stellarioides* (Domin) P.I. Forst. was reported a new record for India by Venkat Ramana *et al.*, (2011), further *Hybanthus puberulus* M. Gilbert. was published as a new by Sasi *et al.*, (2011). *Hybanthus verticillatus* (Ortega) Baill. Known only from U.S.A. recorded for the first time from Tamil Nadu, India by Francisca *et al.*, (2013). Recently, *H. puberulus* M. Gilbert. is accounted as an extended distributional record (Rajendran *et al.*, 2013).

In the present study, the authors have collected a *Hybanthus* species, while exploring the flora of the Satara district region. The identification of specimen is carried out by comparative study of the same specimens combined with the critical review of literature. The authors communicated to the Anna Monro, (Manager, Australian Botanic Gardens), Alison Vaughan (Collections Information Officer, National Herbarium of Victoria (MEL), Royal Botanic Gardens Melbourne, Australia) and Dr. Paul Forster (Queensland Herbarium, Brisbane, Australia) who pushed the *H. stellarioides* for the authentication purpose. The authors confirmed the specimen with the help of Milind M. Sardesai. The species is reported here as a distributional record for the flora of Maharashtra. A detailed description and photographs are provided.



**Figure 1:** *Hybanthus stellarioides* (Domin) P.I. Forst. A. Habit, B. Flower, C. Capsule.

## *Hybanthus stellarioides*

(Domin) P.I. Forst., *Muelleria* 8(1): 18. 1993.

*H. enneaspermus* var. *stellarioides* Domin, *Bibl. Bot.* 89(4): 983. 1928.

"*H. enneaspermus* subsp. *stellarioides* (Domin) E.M. Benn., *Nuytsia* 1(3): 229. 1972; George, *Fl. Australia* 8: 103. 1982. **Fig. 1.**

## Description of the specimen examined

Annual, 8–25 cm high. Stem erect, grooved, unbranched (rarely branched), hairy; Leaves simple, alternate, clustered at apex, linear to lanceolate, 0.7 – 6.5 X 0.1 – 0.5 cm long, glandular hairy, few lower are with entire margins and upper with dentate margins, attenuate at base, acute apex, stipules linear c. 1-3 mm long, ciliate at margins. Flowers solitary, axillary; peduncle filiform c. 6 mm long; a distinct joint exists between peduncle and pedicel; pedicel c. 2 mm long, bracts triangular c.1 mm long, ciliate at margins. Sepals 5, linear-lanceolate, subequal, 2.3 –

4 mm long, acuminate, bent backwards at apex, hairy. Petals 5, unequal; upper -2 oblong, 3 – 4 mm long, pale yellow; lateral 2 falcate, 4 – 5 mm long, pale yellow; lower enlarged into a spatulate limb with a claw; c. 5 – 11 mm long, bright orange colored. Stamens 5, c. 3.5 mm long; filaments free; lower 2 filaments with hairy appendages. 1 mm long; anthers 5 connate, lower 2 of them villous, basifixed covered with enlarged connectives, others glabrous; Pistil c. 4 mm long; stigma spatulate, stigma suberect, ovary ovoid, glabrous; ovules 6 – 12. Capsules 3-angled, 4 – 6 mm long, 3-valved, with remnant petals; longitudinally ribbed, glabrous, pale yellow.

**Flowering & Fruiting:** July – September in Maharashtra.

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**Habitat:** On the hill slopes along rock margins and in rock crevices.

**Distribution:** Australia, in India from Andhra Pradesh and now in Maharashtra.

**Specimen examined:** India, Maharashtra, Satara, Karad, July 2013 (Latitude-17°18'50.99 " N, Longitude-74°13'32.47 "E). Herbarium specimen deposited at the SUK (Shivaji University Kolhapur). Accession number-SKK-001 (SUK).

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## Indigenous Traditional Knowledge for Sustained Conservation and development

**S. Suresh Ramanan\***

Nature has been always mysterious. We humans try to understand a little but uphold ourselves that we have completely understood the nature. Even the greatest scientist does the same mistake but the nature has been always silent spectators and had been master performer.

Earlier our ancestor who was the part of nature understood it much than us- the present generation. One such great example still present to see is the living root bridges. According to many authors, these live root bridges are technically grown woven root of trees especially that belong to *Ficus* sp. The roots of these trees are moulded to form bridges across streams (*Nallahs*) and waterways so as to connect hills in which the tribal people live.

The methodologies which they use to build these bridges are very unique. They hollow out the trunks of the betel nut tree or bamboo poles and use them as moulding cast to guide the roots of the trees to grow across the bridges. Once the root reaches the other side, the roots are then inter twanged to form a base that is wide enough to allow foot space for atleast a single person.

The roots mature and continue to grow such that it can hold upto 50 persons at a time (Sanctuary Asia, Vol: XXXII No.1). the whole process may take time from 10 to 15 yrs but think it's as best conservator of

existing forest because it does not disturb the vegetation and flora. It has two main advantages:-

1. No environmental impact since no artificial material are used to build; wild animal will not see it as alien object. So no harm ultimately.
2. Provide connectivity to the tribal people there by it ensures sustained livelihood approach which was main objective of many international conservation programmes like MAB of UNESCO.

These tree bridges are found in Cheerapunji, Meghalaya state particularly in Khasi hills. The tribes here are specially known for their *Jhum* cultivation but unknowingly they did a big conservation model. Think of the impact of bridge made out of cement and steel, they have used their Indigenous traditional knowledge for the betterment of the nature.

Likewise, there are much traditionally developed Indigenous traditional knowledge hidden inside the mind of the people which should be brought out to the world for Sustained development and conservation.

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