



## SCOPARIA DULCIS VAR ABRAHAMII PARDESHI & SRINIVASU (PLANTAGINACEAE): AN EXTENDED DISTRIBUTIONAL PLANT RECORD TO VIDHARBHA REGION OF MAHARSHTRA STATE, INDIA

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### ABSTRACT:

During the field exploration from Chandrapur district an interesting plant of family Plantaginaceae collected from Vidharbha region of Maharashtra state. After critical observations of specimen and review of relevant literature it was identified as *Scoparia dulcis* var. *abrahamii* Pardeshi & Srinivasu. It is reported as an extended distributional record to the Vidharbha region. A detailed taxonomic description, distribution and images of the species are provided along with a taxonomic key for easy identification.

**Keywords:** *Scoparia dulcis* var. *abrahamii*, Plantaginaceae, Vidharbha., Maharashtra

### INTRODUCTION:

*Scoparia* L. genus is representatives of the Gratiolateae, a mainly Neotropical tribe of Plantaginaceae family (Estes & Small, 2008). Recent molecular phylogenetic studies have shown that Amphianthus, Bacopa, Gratiola, Mecardonia, Otacanthus, Scoparia, and Stemodia belong to a strongly supported tribe Gratiolateae (Olmstead et al. 2001; Albach et al. 2005; Oxelman et al. 2005; Rahmzadeh et al. 2005). According to Fay et al. (2010) many non-parasitic members of Scrophulariaceae sensu lato included in the family Plantaginaceae sensu APG III (2009).

*Scoparia* L. genus comprises from 10 to 20 species, depending on circumscriptions (Fries 1906; Barroso 1952; Souza & Giulietti 2009). In Maharashtra only one species reported *Scopariadulcis* L. (Singh & Kartikeyan, 2001; Almeida, 2001). Recently Pardeshi & Srinivasu (2009) reported new variety *Scoparia dulcis* var. *abrahamii* Pardeshi & Srinivasu from Mumbai, Maharashtra state.

### METHOD AND MATERIAL:

The taxonomic survey was done to identify the distribution of the plant under study. It was followed by a detailed taxonomic investigation.

### RESULT AND DISCUSSION:

An occurrence of *Scoparia dulcis* var. *abrahamii* Pardeshi & Srinivasu (Plantaginaceae) from Chandrapur district shows an extended distributional record to Vidharbha region of Maharashtra state.

#### Key to the variety of *Scopariadulcis*

1. Corolla lobes 4-5, oblong sub-acute, falcate, white with pinkish ting to entire lobes

....var. *abrahamii*

2. Corolla lobes 4, oblong round, not falcate, white with purplish ring at the base of lobes .....

var. *dulcis*

Characteristics that separate *Scoparia dulcis* var. *abrahamii* from *Scoparia dulcis* listed as follows in Table no.1.

Taxonomic Treatment :

*Scoparia dulcis* var. *Abrahamii* Pardeshi & Srinivasu. NELUMBO, 51; 231-232, 2009 (Plate, No.01).

Description: Under shrub, 50-100 cm height, perennial, bushy, erect, densely branched and usually three braches at each node; Stem glabrous, farinose with fine white dots, dull green, ridged, 4-5 angled at base, young branches 4-8 angled, pale

green; Internodes up to 6.5 cm on main stem and 0.6 cm on branches; Leaves foetid, simple, glabrous, exstipulate; Petiole slender, glabrous, 1-0.4 cm long; Lamina 0.5 -2.3 cm long and 0.3-1 cm broad, deep green above and pale beneath, rhomboid-obovate larger leaves, and 3-nately whorled on main stem and smaller linear-spathulate leaves on branches with both opposite and 3-nately whorled; Margin entire up to the middle of lamina and slightly serrated from the middle of the lamina or slightly towards the apex, lamina glabrous on both surface, broader in the middle and tapering towards both ends, acute apex, base tapering, punctuate beneath; Venation reticulate, 3 main nerves, alternate poorly prominent; Flowers pedicilate, bisexual, complete, solitary or 2, axillary, tetramerous, hypogynous, actinomorphic, white with pinkish tinge, 0.4-0.5×0.6-0.9 cm across; Pedicel 0.4-0.5cm long; Calyx valvate, persistent, campanulate divided up to the base, 4 sepals, ovate, 0.2 cm long with 3 parallel nerves, ciliate and puberulent; Corolla rotate, fugacious, valvate, tube less than 0.1 cm, pilose with many 0.2 cm long hairs; Petals usually 4, frequently fifth petal also present, petals 0.3-0.4×0.15cm long white with pinkish tinge, oblong-sub-acute somewhat falcate, equal; Stamens 4-5, epipetalous, equal, inserted at the base of corolla tube; Filaments glabrous, equal, 0.2-0.25 cm long, white at the base and pinkish at apex, Anther dithecal, pale yellow, 1.5mm long, oblong-sub-sagittate, exserted, dehiscence longitudinal; Style 0.2 cm long, terminal, white at the base and pinkish from middle to the apex; Stigma capitate; Carpels 2, syncarpous; Ovary superior, bilocular, many ovules in each locule, axile placentation; Fruit loculicidal capsule, pale brown, glabrous, ultimately bifid, sub-globose or sub-ovoid, 0.2-0.3cm long × 0.3cm across, persistent style base at the apex and persistent calyx surrounding more than half way, membranous valves; Seeds many, oblong, dark brown, shortly apiculate at one end with small pitting.

Habitat: Weed along the Roadside.

Flowers and Fruiting- Whole year in favourable condition.

Distribution In Maharashtra- Mumbai, Chandrapur (Now it is collected by Umakant Deshmukh on dated 15 April, 2018, from Ramnagar area of Chandrapur city, GPS location N 19°57'.44.1", E 79°17'.13". Herbarium specimen deposited at P.G. Department of Botany Janata Mahavidyalay, Chandrapur (Voucher No.612).

#### CONCLUSION:

The extended distributional record of *Scoparia dulcis* var. *abrahamii* Pardeshi & Srinivasu from the Vidharbha region of Maharashtra, India was reported. A detailed taxonomic description, distribution and images of the species are provided along with a taxonomic key for easy identification of the plant variety under study.

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**Table no.1.Comparison of varieties of *Scopariadulcis* .**

Character	<i>Scopariadulcis</i> var <i>abrahamii</i>	<i>Scopariadulcis</i>
Leaf Colour Margin	Dark green Slightly serrated ,Starts from the middle of the leaf or towards the apex	Pale green Deeply serrated ,Starts from before the middle of the leaf
Corola Lobe Number Size Shape Colour	4-5 lobes 3.5-4×1.5-2 mm Oblong ,sub-acute and falcate White with pinkish ting to entire lobes	4 lobes 2.8-3×1.5-2 mm Oblong round and not falcate White with purplish ring at the base of lobes



**Plate.No. 01.Fig.A-C.Scopariadulcisvarabrahamii. A-Flowering branch;B-Single flower ;C- Leaf showing dorsal and ventral side. Fig-D-F.Scopariadulcisvar.dulcis D-Flowering branch ;E-Single flower ;F- Leaf showing dorsal and ventral side.**