



NEW DISTRIBUTIONAL RECORD OF *DESMODIUM SCORPIURUS* (SW.) DESV., FOR VIDARBHA REGION (MAHARASHTRA) INDIA

Komalchand N. Sathawane and Jagannath V. Gadpayale

Department of Botany, S. N. Mor College of Art, Commerce and Smt. G. D. Saraf
 Science College, Tumsar (M.S.), India- 441 912.

komal_1965@rediffmail.com

ABSTRACT:

The present work serves the Morphotaxonomic study of *Desmodium scorpiurus* (Sw.) Desv., which is new report for Vidarbha region (Maharashtra State) India. It is an attempt to make a comprehensive account having details on updated classification and distributional status for the collected specimen. It also provides the ecological and phonological information.

Keywords: Morphotaxonomic, *Desmodium*, Bhandara District.

INTRODUCTION:

The *Desmodium* Desv., genus (Fabaceae, subfamily Papilionoideae; Ohashi, 2014) is included in the tribe Desmodieae and comprises about 524-530 species, with greater diversity in Southeast Asia, Mexico and South America (Ohashi - 2014). The genus *Desmodium* Desv., (Fabaceae) mostly distributed in subtropical and tropical regions. Hyde *et al.* (2012) report the distribution of 450 species of *Desmodium* in warm regions, especially in East Asia, Brazil and Mexico. A Williams (1983) state, South-east Asia is a centre of legume diversity while Schubert (1980) considers Mexico and Brazil as the centers of diversity of *Desmodium*.

In India it is represented by 47 species, 7 subspecies and 5 varieties (Sanjappa, 1992) of which 24 species, 2 subspecies and 2 varieties are reported from Kerala (Nayar *et al.*, 2006). During the latter part of 1990's three species of *Desmodium* viz., *D. scorpiurus* (Sw.) Desv., *D. tortuosum* (Sw.) DC., and *D. uncinatum* (Jacq.) DC., were reported as new to India from Kerala (Tandyekkal & Mathew, 1995; Tandyekkal, 1997; Sasidharan, 1996). In Hooker's "Flora of British India" (1879, 1999 (reprint)) 49 species of *Desmodium* were recorded while Flora of Maharashtra (Singh N. P. and Karthikeyan S., 2000) reports 18 species of this genus. The previous taxonomic reports on *Desmodium* species for Vidarbha region except Gadpayale *et al.* (2015) doesn't give any clear information about the occurrence of *D. scorpiurus* (Sw.) Desv from the present study area hence this

specimen here considered as first report for the floristic wealth of Vidarbha region.

MATERIALS AND METHODS

Extensive field explorations were made all over the Vidarbha region (MS), India for floristic study in different seasons to get the taxa both in reproductive and vegetative phases. All relevant data about the plants have been recorded in a field book. Photographs were taken, and collected a sufficient number of plants based on the population, for making herbarium specimens. Herbarium specimens were prepared following the wet method (Fosberg and Sachet, 1965). All the specimens are identified with the help of relevant literature and floras. The herbarium and photographs of specimens are deposited in PGT Department of Botany RTM Nagpur University, Nagpur as well as in Department of Botany, S. N. Mor College of Art, Commerce and Smt. G. D. Saraf Science College, Tumsar (M.S.), India- 441 912.

Taxonomic treatment of *Desmodium scorpiurus* (Sw.) Desv:-

Desmodium scorpiurus (Sw.) Desv J. Bot. 1:122. 1813; Vartak & Kumbhojkar in J. Bombay Nat. Hist. Soc. 81 : 224. 1984. *Hedysarum scorpiurus* Sw. Prodr. 107. 1788.

Slender, trailing, pubescent herbs up to 1.5 m long; stem sub-terete, clothed with minute hooked hairs; branches few. Leaves alternate, pinnately trifoliate; rachis 1.7-6.5 cm x 1-2 mm, minutely hooked hairy; leaflets subsessile,

elliptic to ovate, obtuse at apex, entire, the terminal leaflet often larger, to 1.6-5.5 x 1-3 cm; stipules persistent, connate, amplexicaul, striate, auriculate at the base, acuminate at apex, pubescent and ciliate; stipules to 2 mm long, subulate, pubescent. Inflorescent racemose, 5-15 cm long, minutely pubescent, leaf-opposed, 12-22-flowered. Flowers to 5.5 x 4 mm, solitary or in clusters of 2-3 at nodes, pedicels 4-5 mm long, filiform, hairy. Calyx hairy, to 3 mm long, campanulate with a short tube below; lobes 5, to 2.6 mm long, the two upper connate for most part except at the 2-toothed apex, others linear-lanceolate, the lower slightly larger. Petals white to pink or white turning to pale yellow; standard broadly obovate, 4 mm, slightly emarginated at apex, cuneate at the base; wings sub-elliptic, to 3.5 x 2 mm, rounded at apex, slightly auriculate and shortly clawed at the base; keels longer than the wings, to 4 x 1 mm, clawed, truncate or retuse at the apex, base with a thin lamellate appendage. Stamens diadelphous; staminal column to 3.5 mm long, closely set with minute, hooked hairs. Style to 1 mm long, bent, glabrous; stigma capitate, glabrous. Pod linear, slightly turgid, intended on both the sutures, to 3.3 x 3.3 cm, densely hooked hairy, 4-7 jointed; seeds oblong, sub-turgid, 3 x 1.3 mm, brown, smooth.

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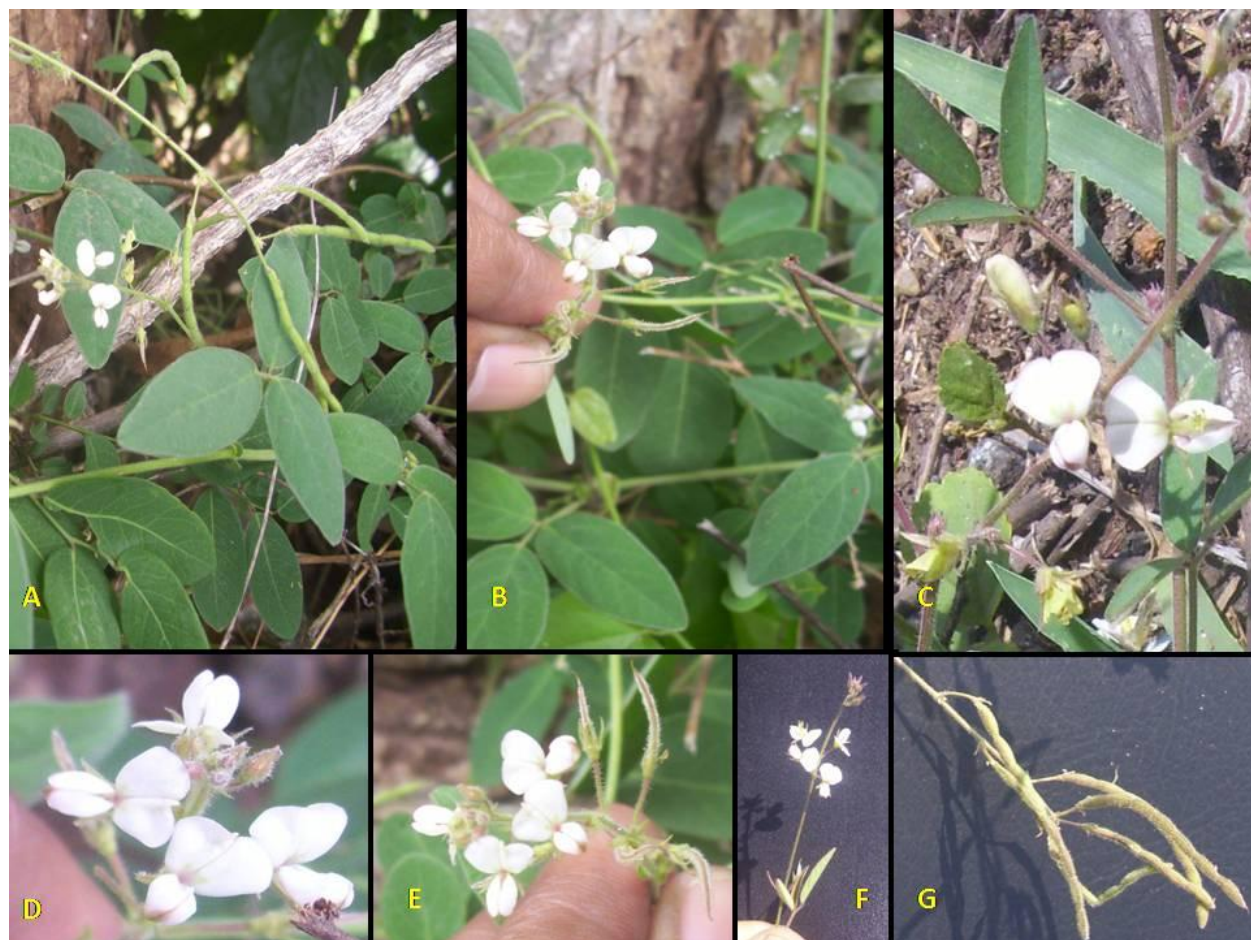


Photo plate: - *Desmodium scorpiurus* (Sw.) Desv- **A-C** in habit, **D-F** Inflorescence and flowers and **G** – Pods (fruits- Legumes).

Distribution: - Native to America; introduced and naturalized in pacific region of Asia.

Habitat: wasteland, along the roadside.

Flowering & fruiting: - December- July.

Specimen collected from: - Warathi, (Bhandara district) 09/03/2015, Nagbhid (Chandrapur district) 07/05/2015, Borgaon (Nagpur district) 12/04/2015, Wardha (Wardha district) 13/04/2016.