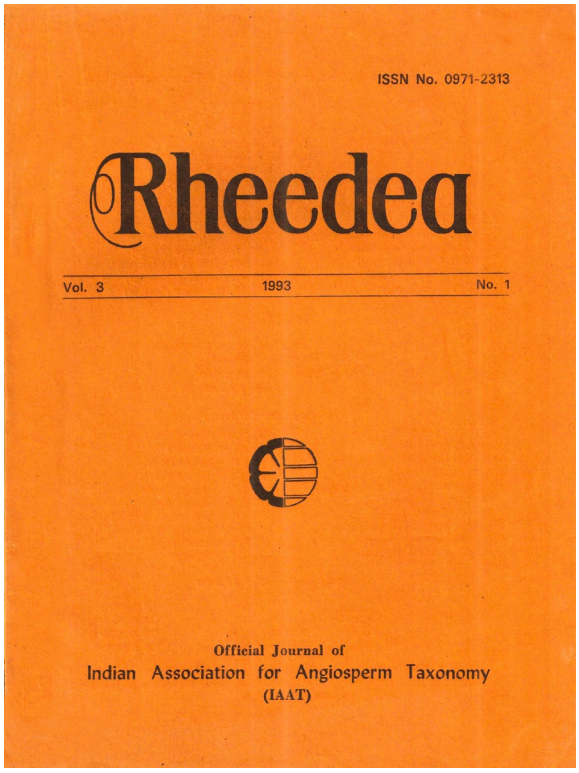
RHEEDEA
Journal of the Indian Association for Angiosperm Taxonomy

Vol. 03(1): 22–25 (1993)
ISSN: 0971-2313 (Print edition)
ISSN: 2582-2438 (Online edition)

# *Sida linifolia* Cav. (Malvaceae) - a new record for India

Pradeep A.K. & V.V. Sivarajan




How to cite:

**Pradeep A.K. & V.V. Sivarajan 1993**. *Sida linifolia* Cav. (Malvaceae) - a new record for India. *Rheedea* 3(1): 22–25.

https://dx.doi.org/10.22244/rheedea.1992.03.01.04

*Published in print*: 30.06.1993 *Published Online*: 01.01.2022

Rheedea

Vol. 3 (1): 22—25 1993

# Sida linifolia Cav. (Malvaceae) - a new record for India

**A. K. Pradeep and V. V. Sivarajan**

Department of Botany, University of Calicut, 673 635, Kerala, India

**Abstract**

*Sida linifolia* Cav. of the sect. *Stenindae* Griseb. is reported here for the first time from India. Its complete description, illustration and other relevant notes are provided for easy identification.

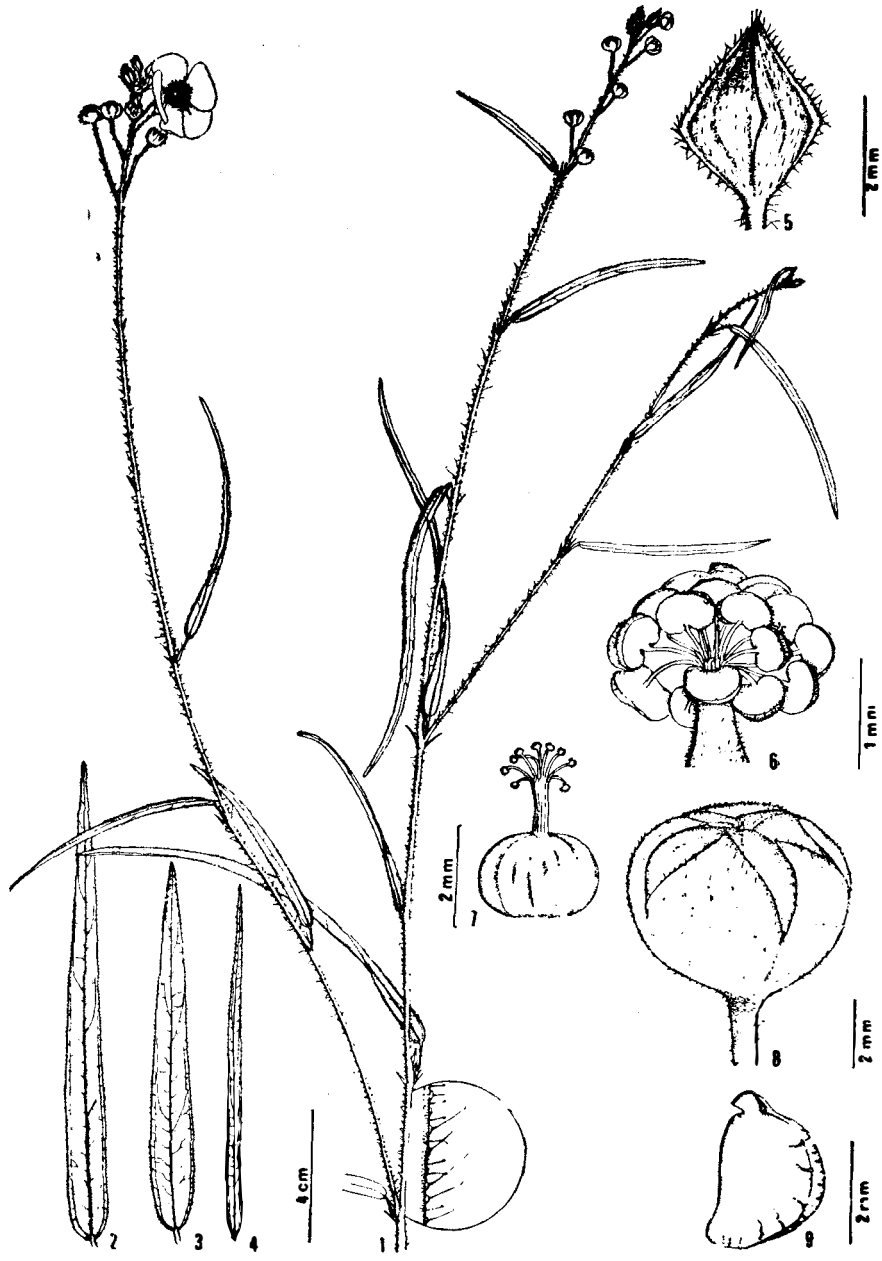
*Sida* Linn. is a heliophilic genus, occurring mostly in open waste lands throughout the tropics and subtropics of the world, and has about 200 species falling under eleven sections (Fryxell, 1985). Of these, thirteen species have been reported from India till now (Paul & Nayar, 1988; Sivarajan & Pradeep, 1990) falling under the four sections, viz. sects. *Sidae*, *Cordifoliae* (DC.) Fryx., *Nelavagae* Borss. and *Spinosae* Small.

The Indian representatives of the genus display wide range of interspecific and intraspecific variations, so much so that taxonomic delimitation using the traditional characters of leaf, stipules, peduncle joints etc. is often difficult. The mericarp characters being subject to little environmental changes, however, provide, useful parameters for species recognition as has been demonstrated by Sivarajan *et al* 1992

During our revisionary work on Peninsular Indian Malvaceae, recently we collected an interesting specimen from the open waste-lands in Thiruvananthapuram city. Unlike other species reported from India, this can be recognised very easily from its vegetative features, especially leaves, and belongs to the section *Stenindae* Griseb. (characterised by entire, linear to lanceolate leaves; racemose or corymbose inflorescence; subterete calyx-tube; shortly two-beaked, indehiscent mericarps).

This section is so far reported to occur in Central and South America, Africa and Fiji (Fryxell, 1988). Clement (1957) followed Grisebach (1859) and recognised only a single species, *S. linifolia* Cav. in this section. But, he recognised two varities as follows:

> Stem glabrescent to hispidulous; leaves linear to narrowly lanceolate, 30-110 mm long, 2-12 mm wide; petals 8.0-9.2 mm long; calyx lobes




Figs. 1-9. *Sida linifolia* 1. Habit, 2-4. Leaf forms, 5. Flower bud, 6. Staminal column, 7. Pistil, 8. Schizocarp 9. Mericarp

2.0 - 2.5 mm high; carpels 5-9.....*S. linifolia* var. *linifolia*.

Stem and rest of plant villous; leaves 25-60 mm long, 7-15 mm wide, lower ones broadly lanceolate; petals ca. 15 mm long; calyx lobes ca. 4. mm long, carpels usually 6.....*S. linifolia* var. *brevis*

Fryxell (1985), however, recognised var. *brevis* as a distinct species and treated it under the name *S. hassleri* Hochr. This species is endemic to Paraguay, while *S. linifolia* is distributed in America and Africa.

We have studied our material with the help of available literature and type photographs, kindly sent to us by Prof. Aymonin from Paris and have found that it belongs to *S. linifolia* Cav. From its highly restricted occurrence here, (we have not been able to collect it from anywhere else), it seems that this species is a rather recent immigrant in the Indian subcontinent.

*Sida linifolia* is strikingly different from the other Indian species in its growth habit, foliage and indumentum. Being a new record for India, its complete description, illustration and other relevant notes are provided here for easy identification.

**Sida linifolia** Cavanilles, Diss. 1: 14. t. 2. f. 1. 1785; Fryxell. Sida 11: 62-91. 1985 & Syst. Bot. Monog. 25: 398. 1988.

Type: in insula Caienae and in Peru. *Jussieu* s. n. (P-JU no. 12243A)

*Sida linifolia* var. *linifolia* sensu Clement, Contr. Gray Herb. 180: 82-87. 1957.

*Sida graminifolia* Richard, Actes Soc. Hist. Nat. Pairs 1: 111. 1792.

*Sida viminea* Fischer ex Link Enum. Pl. 2: 202. 1822.

*Sida linearifolia* Thonning in schumacher & Thonning, Beskr. Guin. Pl. 303. 1827, non St. - Hilaire.

*Sida angustissima* Miquel, Stirp, Surin, Sel. 102. 1850, non St.-Hilaire.

*Sida longifolia* Brandegee, Zoe 5: 212. 1905.

*Sida fiebrigii* Ulbrich, Bot. Jahrb. Syst. 54. (Beibl. 117): 72. 1916.

Erect, branched undershrubs, to 1.5 m tall. Stem terete, green, often purplish at nodes, hirsute with stiff, bulbous based simple hairs intermingled with glandular hairs. Leaves alternate, distantly arranged, lamina 8-17 × 0.4-1.5 cm, narrowly lanceolate, to linear, basally 3-nerved, margins entire, minutly hairy, apex acute, sparsely hirsute above and beneath; petioles upto 1 cm long, slightly flattened, pulvinulate below the leaf blade. Stipules 5-8 mm long, linear or narrowly lanceolate, margins pubescent with simple patent hairs. Flowers initially solitary in the upper axils, afterwards by the reduction of upper leaves (the leaves then represented by stipules only) in terminal racemose or corymbose

inflorescence; pedicels 5 mm long in flower, upto 1 cm in fruits, articulated above the middle. Calyx 7 mm long, 1 cm across, widely campanulate, divided to the middle, lobes 5, triangular, acuminate, pubescent with simple hairs externally, glabrous within. Corolla 2 cm across, creamy-white with a dark red centre; petals 1 cm long, cuneate, slightly oblique, usually emarginate, glabrous. Staminal column 2 mm long, short-hairy, antheriferous at apex; anthers yellow, numerous; the filaments slender, 1 mm long. Ovary depressed - globose, glabrous; styles 8-9; stigmas globose, reddish, minutely hairy. Schizocarp 6mm across, oblate, glabrous; mericarps 8-9, 3 × 2 mm, brownish-black when mature, laterally flattened, glabrous, muticous at apex. Seeds 2 × 2 mm, flattened, reniform, dark brown, glabrous throghout.

*Sida linifolia* is unique in its linear-lanceolate leaves, 10-20 times as long as wide and long terminal corymbiform or racemose inflorescence. It occurs at low elevations and flowers from July to November. The flowers open only at noon (between 12.00 - 12.30) and wither before 2.00 pm. under Indian conditions.

Specimens examined ; Kerala: Thiruvananthapuram, *Pradeep* 5344, 44986 (CALI).

Acknowledgements

The authors are thankful to Dr. Paul A. Fryxell, Texas A & M University, USA, and to Judith A. Warnement, Gray Herbarium, Harvard University, USA for literature, and to Prof. Aymonin, Natural History Museum, Paris for type photographs. Mr. S. D. Biju, Tropical Botanical Garden and Research Institute, Thiruvananthapuram helped us in collecting the material. One of us (AKP) is grateful to the Council of Scientific and Industrial Research, New Delhi, for awarding Senior Research Fellowship.

**Literature cited**

Clement, I. D. 1957. Studies in *Sida*. (Malvaceae) *Contr. Gray Herb.* 180: 1-91.

Fryxell, P. A. 1985. Sidus sidarum - V. The North and Central American species of *Sida*. *Sida* 11: 62-91.

Fryxell, P. A. 1988. Malvacecae of Mexico. *Systematic Botany Monographs* 25.

Grisebach, A. H. R. 1859. *Flora of the British West Indian Islands*. Leipzig.

Paul, T. K. & Nayar, M. P. 1988. Malvaceae. Pp. 64-233 In: Nayar, M. P., Thothathri, K. & Sanjappa, M. (ed.), *Fascicles of Flora of India*, Howrah. 19: 64-223.

Sivar jan, V. V. & Pradeep, A. K. 1990. *Sida fryxellii*, a new species of Malvaceae from Peninsular India. *Kew Bull.* 45: 725-727.

Sivarajan, V. V., Pradeep, A. K. & George, E. J. 1992. Mericarp morphology of Indian species of *Sida* L. (Malvaceae) in relation to taxonomy. *J. Taiwan Mus.* 45: 65-73.