

## A NEW GENERIC RECORD TO THE FLORA OF GUJARAT STATE (INDIA): *SPIGELIA ANTHELMIA* L. (LOGANIACEAE)

S.L. MEENA, P. HARI KRISHNA, C.R. JADHAV & V. MAINA

*Botanical Survey of India, Arid Zone Regional Centre, Jodhpur, Rajasthan - 342008.*

### ABSTRACT

The present paper deals with the genus *Spigelia* L., belonging to family Loganiaceae. It is reported here as an addition to the Flora of Gujarat State. The paper also envisages brief citation, description, phenological data and illustrations of the species.

### INTRODUCTION

During the botanical exploration of floral wealth of the State. However, *S. Shoolpaneshwer Wildlife Sanctuary (WLS), Narmada District, Gujarat, the senior author collected specimens of an interesting plant. After critical examination and going thorough literature, the identity of the specimens determined as *Spigelia anthelmia* L. (Loganiaceae). So far, this taxon has not been recorded from the State [T. Cooke (1901-1908), Blatter (1908-1909), Saxton & Sedgwick (1918); Saxton (1922), Thakar (1926), Santapau (1962), Shah (1978), Raghavan *et al.* (1981), Bole & Pathak (1988), Pilo, *et al.* (1996), Pandey & Singh (1999) and Singh & Parabia (2003)].*

Recently, Pandey & Padhye (1997), Pandey (2001, 2002), Parmar & Singh (2003), Meena & Pandey (2004), Meena (2004, 2004 a, 2005, & 2007), Maina & Meena (2012), Maina & Jadhav (2013) have made some additions enriching our knowledge about the

floral wealth of the State. However, *S. anthelmia* L. could not be recorded by them; probably it is a recent invasion in the State. Present record from Gujarat, thus bridges the gap between Peninsular India and North-West India through Rajasthan and Gujarat. The specimens have been deposited in BSJO (Jodhpur) and CAL (Kolkata).

The genus *Spigelia* L. comprises about 70 species, distributed in the tropics of the World (Heywood *et al.*, 2007). *Spigelia anthelmia* L., probably a native of Malaysia, was first reported in India from Jabalpur, Madhya Pradesh by Oomachan & Srivastava (1987), subsequently Umamaheswari (2000) reported this taxon from Peninsular India and recently by Meena and Yadav (2010) from Sitamata Wildlife Sanctuary in Rajasthan.

*Spigelia anthelmia* L., Sp. Pl. 149.1753; Oomachan & Srivastava in J. Bombay Nat. Hist. Soc.

84 (3): 730 - 732. 1987; R. C. Srivastava in *Flora of Madhya Pradesh* 2: 93. 1997; Umamaheshwari *et al.* in *Bull. Bot. Surv. India* 37 : 133-137; Pardeshi & Srinivasu in *Bull. Bot. Surv. India* 48 (1-4): 201-204. pl.1 & 2. 2006; Meena & Yadav in *J. Indian Bot. Soc.* 89 (3 & 4): 258-261.2010.

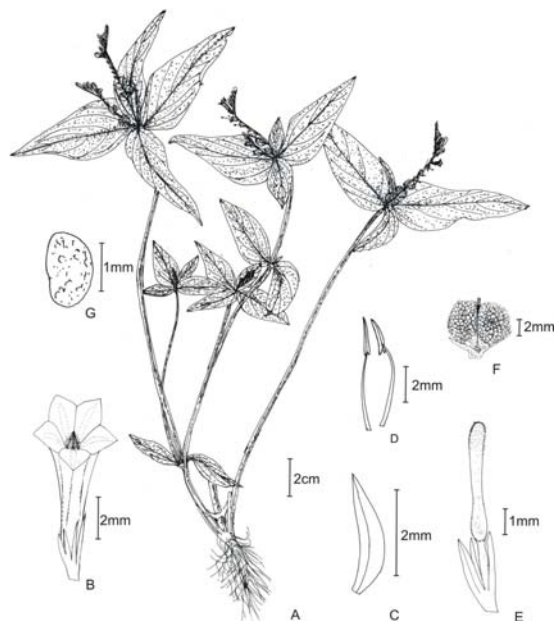


Fig. 1. *Spigelia anthelmia* L.: A. Habit, B. Flower, C. Sepal, D. Stamens, E. Pistil & Calyx, F. Fruit, G. Seed.

Erect, annual herbs, 10 - 60 cm high, simple or sparsely branched. Stem terete, glabrous. Leaves in a (pseudo -) whorl of 4, ovate - oblong to ovate - lanceolate; the upper ones usually in whorls of 4, one pair larger than the other, 3-8 x 0.8-3 cm, acuminate or acute at apex, cuneate and often decurrent at base, entire, slightly scabrous above, glabrous or minutely puberulent along the mid-nerve beneath; stipules deltoid. Flowers in cincinni, sessile or subsessile; cincinni in the axil of upper whorled leaves, appearing terminal. Calyx - lobes 5, almost free up to base, ovate - lanceolate or linear - lanceolate. Corolla 0.8-10 mm long, hypocrateriform, purplish or white to red, glabrous. Stamens inserted on the corolla - tube; anthers 5, yellow.

Ovary superior, placentation axile. Capsules 2-lobed, *ca* 5 mm in diam., obovoid, squamulate - tuberculate. Seeds ovoid or obliquely ellipsoid, black.

*Fl. & Fr.:* June - October.

*Notes:* Native of Malaysia; it is an invasive alien species in deciduous forests, grasslands and wastelands, often forming pure formations.

*Specimens examined:* Gujarat: Narmada Dist.: Near Zarwani (Narmada river side)-Shoolpaneshwer Wildlife Sanctuary, *S.L. Meena* 27399, 09.06.2012; Kangala Forest block-Shoolpaneshwer Wildlife Sanctuary, *S.L. Meena* 27602, 28.08.2013 (BSJO).



Plate 1. *Spigelia anthelmia* L. in flowering and fruiting.

## ACKNOWLEDGEMENTS

The authors are thankful to Dr. P. Singh, Director, Botanical Survey of India, Kolkata for providing necessary facilities and to Dr. V. Singh Ex-Additional Director BSI, AZRC, Jodhpur for valuable suggestions and encouragement.

## REFERENCES

- BLATTER, E. 1908-09. On the flora of Kutch. *J. Bombay Nat. Hist. Soc.* 18: 756-776; 19: 157-176.
- BOLE, P.V. & J.M. PATHAK 1988. *Flora of Saurashtra*, Part-II & III. Botanical Survey of India, Calcutta.
- COOKE, T. 1901-08. *The Flora of Bombay Presidency*, Vol. 2. London.

- HEYWOOD, V.H., R.K. BRUMMITT, A. CULHAM & O. SEBERG 2007. Flowering plant families of the World. Royal Botanical Garden, Kew.
- MAINA, V. & S.L. MEENA 2012. A new record for the Flora of Gujarat State, India. *J. Econ. Taxon. Bot.* 36(1): 54-56.
- & C.R. JADHAV 2012. A new record to the Flora of Gujarat State, India. *J. Econ. Taxon. Bot.* 37(1): 216-219.
- MEENA, S.L. 2004. Some new Plants to the Flora of Gujarat, India -I. *J. Econ. Taxon. Bot.* 28 (2): 387-88.
- 2004a. Two new species of *Fimbri-stylis* (Cyperaceae) from Gujarat. *J. Econ. Taxon. Bot.* 28 (2): 389-391.
- 2005. Some new plants to the Flora of Gujarat, India-II. *J. Econ. Taxon. Bot.* 29 (2): 375-77.
- 2007. Some new plants to the Flora of Gujarat, India-III. *J. Econ. Taxon. Bot.* 31 (2): 466-69.
- MEENA, S.L. & R.P. PANDEY 2004. A reassessment of phytodiversity of Gujarat State: Floristic composition and analysis, vegetation, threatened and rare taxa and their conservation strategies. *J. Econ. Taxon. Bot.* 28 (4): 867-894.
- PANDEY, R.P. 2001. Addition to the Flora of Gujarat-II. *J. Econ. Taxon. Bot.* 23 (3): 623-625.
- 2002. Addition to the Flora of Gujarat-III. *J. Econ. Taxon. Bot.* 26 (2): 505-508.
- & P.M. PADHYE 1997. Addition to the Flora of Gujarat-I. *J. Econ. Taxon. Bot.* 21 (1):103-106.
- & V. SINGH 1999. Gujarat: *Floristic diversity and conservation strategies in India*. In V. Mudgal & P. K. Hajara, Flora of India 2: 775-806. Botanical Survey of India, Kolkata.
- PARMAR, P.J. & V. SINGH 2003. Interesting plant records from Gujarat, India. *J. Econ. Taxon. Bot.* 26 (4): 418-420.
- PILO, B., B.J. PATHAK, B.A. KUMAR, V.K. MURUKSAN, K.R. VINOD & S. KUMARI 1996. *Biological diversity of Gujarat - Current knowledge*. Gujarat Ecological Commission, Vadodara.
- RAGHVAN, R.S., B.M. WADHWA, M.Y. ANSARI & ROLLA S. RAO 1981. A check list of plants of Gujarat. *Rec. Bot. Surv. India* 21 (2):1 -127.
- SANTAPAU, H. 1962. *The Flora of Saurashtra*, Part 1. Saurashtra Research Society, Rajkot.
- SAXTON, W.T. 1922. Additional notes on plants of north Gujarat. *Rec. Bot. Surv. India* 9 (3): 251-226.
- & L.J. SEDGWICK 1918. Plants of north Gujarat. *Rec. Bot. Surv. India* 6: 207-323.
- SHAH, G.L. 1978. *Flora of Gujarat State*, Vol. I & II. Sardar Patel University, Vallabh Vidhyanagar, Gujarat.
- SINGH, A.P. & MINOO PARABIA 2003. The floral diversity of Gujarat State: A review. *Indian Forester* 129 (12): 1461-1469.
- THAKAR, J. I. 1926. *Plants of Kutch and their utility* (In Gujarati). Rajkot.