

## ***Spigelia* L. (Loganiaceae), a newly recorded genus in Kanniyakumari District, Tamil Nadu, India**

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### **Abstract**

The neotropical species *Spigelia anthelmia* L. was firstly collected from Kanniyakumari district, Tamil Nadu, India. Brief description and photographs are provided for easy identification of the species.

### **Keywords**

*Spigelia anthelmia* L., Kanniyakumari District, Tamil Nadu, India

### **INTRODUCTION**

During the herbarium enrichment survey tour in October, 2021, an interesting plant species was noticed growing in the moist places of Chunkankadai wetland. The species collected by the authors was identified as *Spigelia anthelmia* L. It is native to tropical America, from Florida to Brazil, and naturalized in India, West African, Thailand, Singapore, Peninsular Malaysia, Java and China (Swamy and Jalendar, 2021). A comparative study of the literatures (Geetha *et al.*, 2010; Sukumaran and Jeeva, 2011; 2012; Deletta *et al.*, 2018) confirmed that this species and its genus is not reported from Kanniyakumari district of Tamil Nadu state and therefore has been described here.

*Spigelia anthelmia* L., Sp. Pl. 149.1753; Oomachan and Srivastava in J. Bombay Nat. Hist. Soc. 84 (3): 730 - 732. 1987; Srivastava, Flora of Madhya Pradesh 2: 93. 1997; Uma Maheshwari *et al.* in Bull. Bot. Surv. India 37: 133 - 137; Pardeshi and Srinivasu in Bull. Bot. Surv. India 48 (1 - 4): 201 - 204. 2006; Meena and Yadav in J. Indian Bot. Soc. 89 (3 and 4): 258 - 261. 2010; Desai and Raole in Bombay Nat. Hist. Soc. 110 (3): 234 - 236. 2013; Hedge *et al.* in Res. Rev. J. Bot. 2(2): 9-11. 2013; Kamble *et al.* in Bioinfolet 10(4a): 1100-1101. 2013; Sasidharan and Dantus in Int. J. Adv. Res. 2(10): 1065-1068. 2014; Meena *et al.* in J. Econ. Taxon. Bot. 38 (2): 340 - 342. 2014; Khan in BIOINFOLET 14(4a): 344-346. 2017; Swamy and Jalendar in Indian For. 147 (6): 596-597. 2021. (Fig. 1).



**Figure 1.** Flowering twig of *Spigelia anthelmia* L.

Annual erect herbs, up to 60 cm high; stem glabrous, simple or sparsely branched. Internodes 4 - 6 cm long, glabrous. Leaves opposite, ovate - lanceolate or lanceolate, decurrent at the base, entire along margin, acuminate at apex, slightly scabrous above, glabrous or minutely puberulent along the midnerve beneath; lower leaves linear - lanceolate, 1 - 1.5 × 0.5 cm, lateral veins 2 - 3 pairs; the upper two pairs of leaves in whorls, decussate, ovate - lanceolate or ovate - oblong, 3.5 - 8 × 0.7 - 3 cm, lateral veins 4 - 5 pairs; stipules interpetiolar, broadly triangular, 2 × 2.5 mm, membranous. Inflorescences 3 - 8 cm long, terminal, usually in slender secund and cincinnus cymose of 10 - 15 flowers. Flower whitish with purple stripes; bracteole linear - lanceolate, 1.2 - 1.8 mm long. Calyx - lobes 5, almost free up to base, linear - lanceolate, 2.5 - 3.5 mm long. Corolla tubular - campanulate; tube 5 - 10 mm long, whitish - purple strips, 5 - lobed; lobes ovate, acute at apex, 2 - 3 mm long, as long as wide with two purple stripes. Stamens 5, included; filaments 4 - 5 mm long; anthers yellow. Ovary globose, 2 - locular, 6 - 8 ovules per locule; style 6 - 7 mm long. Capsules cordiform, 3 - 5 × 4 - 6 cm, bilobate, finely muriculate with persistent portion of style and rhombic calyx; seeds several per locule, obliquely ellipsoid - reniform, 1.8 - 2.0 × 1.2 - 1.5 mm, verrucose, dark brown to black.

**Phenology:** Leenhouts (1962) reported that it flowers and fruits throughout the year, its flowers open between 14 and 17 h and the plants are autogamous.

**Habitat:** Occasional in moist areas.

**Associated species:** *Brachiaria reptans* (L.) C.A.Gardner & C.E.Hubb., *Cynodon dactylon* (L.) Pers., *Euphorbia hirta* L., *Hybanthus enneaspermus* (L.) F.Muell., *Lindernia ciliata* (Colsm.) Pennell and *Murdannia zeylanica* (C.B.Clarke) G.Brückn.

**Distribution:** INDIA: Madhya Pradesh, Peninsular India, Maharashtra, Rajasthan, Gujarat, Karnataka and Telangana.

**Specimen examined:** Tamil Nadu, Kanniyakumari District, Chunkankadai wetland, 8.3223856° N, 77.9443889° E, 17.10.2021, D. Kiruba Christ Daslin, A. Ayun Vinuba and T.S. Shynin Brintha 001005 (SCCH).

**Ethnobotany:** In South America and the West Indies, its roots are used as a powerful vermifuge, hence its English name Worm Grass but it is also known to poison the nervous system. It was reported to be the chief ingredient of 'poudres de succession' that was used by the notorious French Poisoner Mdm de Brinvilliers (Julius et al., 2013).

**Notes:** Based on the former distribution of the species, it is possible for *S. anthelmia* to occur in India. This record has proved that hypothesis and connected the distribution of *Spigelia anthelmia* L. from the Neotropics to Indian Peninsula. In the present study, while interviewing the native people we come to understand that the species is native to the area; hence we suggested that it has not invaded. However, more detailed monitoring and evaluation are required.

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