

## ***Spigelia* (Loganiaceae), a new generic record for Thailand**

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ABSTRACT. *Spigelia anthemia* L., is newly recorded for Thailand. The genus and species are described. The key to the genera in the Flora of Thailand is emended.

The Loganiaceae has been published in the Flora of Thailand and included six genera (Griffin and Parnell, 1997). Curiously, the originally American genus *Spigelia* was not known from Thailand even though the one naturalized species, *Spigelia anthemia* L., has been recorded from West Africa and Malesia (Leenhouts, 1962). During fieldwork by the author in South-eastern Thailand, specimens belonging to this genus were collected. Their identification was checked by Somran Suddee (BKF) using the treatment of Leenhouts (1962) and found to match the description of *S. anthemia* L.

Since the treatment of Loganiaceae for the Flora of Thailand (Griffin and Parnell, 1997) several genera have been referred to other families. However, the new genus record of *Spigelia* can be easily added to the key to the genera (p. 197) and inserted at the end of the second lead as follows:

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|---|----------------------|--------------------|
| 1. Herbs                                |                      |                    |
| 5. Leaves uninerved. Flowers 4-merous   | 5. <b>Mitrasacme</b> |                    |
| 5. Leaves penninerved. Flowers 5-merous |                      | 6. <b>Mitreola</b> |
| 6. Inflorescences dichasially branched  |                      | 7. <b>Spigelia</b> |
| 6. Inflorescences unbranched            |                      |                    |

### **SPIGELIA**

L., Gen. Pl. ed. 5: 74. 1754; Leenhouts in Fl. Mal. I. 6: 377. 1962.

Annual or perennial herbs or undershrubs. *Leaves* often partly in (pseudo) whorls at the base of the inflorescence, short-petioled or sessile, the bases connected by interpetiolar stipules or sheaths. *Inflorescences* terminal and/or in the upper leaf-axils, cincinnous, sometimes reduced to a few flowers. *Flowers* sessile or almost so, 5-merous. *Sepals* free or connate at the base, with some colleters at the base on the inner surface. *Corolla* lobes valvate in bud, shorter than the tube. *Stamens* included, anthers dorsifixated, introrse, lanceolate or ovate, 2-celled. *Ovary* superior, 2-celled, with many ovules. *Capsule* 2-lobed, 2-celled, 4-valved, valves caducous with the exception of a cupular basal part. *Seeds* globose to angular, verrucose; endosperm fleshy or cartilaginous.

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About 50 species in tropical and subtropical America, one naturalized in West Africa and Malesia. One species in Thailand.

**Spigelia anthelmia** L., Sp. Pl. 1: 149. 1753; K. Heyne, Nutt.: Pl. 1267. 1927; Backer & Bakh. f., Fl. Java 2: 207. 1965; Leenhouts in Fl. Males. ser. I, 6: 378. Fig. 38. 1962; Soerjani, Kosterm. & Tjitosoepomo, Weeds of Rice in Indonesia: 336, 614. Figs. 4.153, 5.21. no. 81. 1987. Fig. 1.

Annual herb, 2–50 cm high, unbranched or with some pairs of strong branches near the base; stems erect, terete, glabrous, with a few remote pairs of rather small leaves and an apical pseudo-whorl of 4 larger ones. *Leaves* connected by interpetiolar, broadly triangular, blunt, glabrous stipules, blade ovate-oblong to ovate-lanceolate, 3–10 by 1–3.5 cm, herbaceous, scabrous above, glabrous and paler beneath, cuneate and often decurrent at the base, attenuate at the apex; nerves 5–7 pairs, strongly ascending; sessile or subsessile. *Inflorescences* a spike, terminal and usually in the axils of the whorled upper leaves, up to 8.3 cm long, peduncle very short, glabrous or nearly so. *Bracts* lanceolate, 1.5–2 mm long. *Flowers* spaced, subsessile, arranged in one sided spikes. *Sepals* free, somewhat unequal in length, ovate-linear-lanceolate, 2.5–3 mm long, acute, glabrous or outside sparsely puberulous, pale green. *Corolla* salver-shaped, 5-lobed, glabrous, cream-yellow or pink to purplish with 5 dark red double stripes coinciding with center of lobes; tube 5–8.5 mm long, lobes triangular, c. 1.5 mm long. *Stamens* glabrous, inserted slightly below the middle of the tube, filaments filiform, 1.5–2 mm long, anther attached slightly above the base, lanceolate, 1 – 1.3 mm long, obtuse, yellow. *Ovary* glabrous, subglobose, 0.5–0.75 mm diam., style cylindrical, c. 2 mm long, stigma ovate-lanceolate, c. 3.5 mm long, pubescent near the tip, caducous. *Capsule* 3–4.5 by 4.5–6 mm, squamulate-tuberculate mainly in the upper half, brown when mature, 7–13-seeded. *Seeds* obliquely ellipsoid or ovoid, 1.5–2.5 by 1–1.5 mm, dull brown, tuberculate.

Thailand.—CENTRAL; Bangkok [Khlong Sam Wa, *Phonsena* 4275 (**BKF, L**)]; SOUTHEASTERN; Chanthaburi [Khao Khitchakut National Park, *Phonsena* 4309 (**BKF**); Makham, *Phonsena* 4297 (**BK, BKF**)]; Trat [Mu Ko Chang National Park, *Phonsena* 3744 (**BKF, L**, Suan Luang Rama IX Herbarium), *Phonsena* 4226 (**BKF**)].

Distribution.—Native to Tropical America, naturalized in tropical West Africa and Malesia.

Ecology.—A weed of paddy fields, roadsides, waste places, from sea level up to 100 m. Flowering and fruiting April–Sept.

Vernacular.—Ya phayat (ຢ້າພະຍາດ) (Chanthaburi).

Uses.—A decoction of the roots is well-known as an effective vermifuge. The plant is reported to be poisonous.

Note.—The description above is that of Leenhouts (1962) with minor modifications.



Figure 1. *Spigelia anthelmia* L.; A. habit; B. flowers. Photographed by P. Phonsena.

#### ACKNOWLEDGEMENTS

I am grateful to Willem de Wilde and Brigitte Duyfjes (L) and Axel Dalberg Poulsen (E) for discussions and revision of the manuscript, Somran Suddee (BKF) who helped me to identify the first collection, and Miss Kanokon Bunpha who assisted with the preparation of the manuscript.

#### REFERENCES

- Griffin, O. and Parnell, J. (1997). Loganiaceae. In: T. Santisuk and K. Larsen (eds), Flora of Thailand 6(3): 197–225. The Forest Herbarium, Royal Forest Department, Bangkok.
- Leenhouts, P.W. (1962). Loganiaceae. In: C. G. G. J. van Steenis (ed.), Flora Malesiana ser. I. 6: 293–387. Wolters-Noordhoff Publishing, Groningen, Netherlands.