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## RESEARCH ARTICLE

## NOTE ON THREE EXOTICS GETTING NATURALIZED IN KERALA

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**Introduction**

Exotics form a major component of the flora especially in the tropics. In Kerala, among the 5094 species of flowering plants, 880 are exotics, introduced as horticultural/ornamental, plantation crops, food/fodder plants as well as invasive species (Sasidharan, 2011). During the enumeration of Flowering Plants in Kerala, it is found that *Laportea aeustans*, (Urticaceae), *Spilegia anthelmia* (Spigeliaceae) and *Solanum pseudocapsicum* var. *diflorum* (Solanaceae) are not so far reported from Kerala. Among them, the former two are growing as weeds in the plains and the latter one is occasionally grown as a vegetable and also getting naturalized, especially in places above 700 m altitude. Brief description, notes and images are provided to facilitate identification.

**Laportea aestuans** (L.) Chew, Gard. Bull. Singapore 21: 200. 1965; Friis in Polhill, *Fl. Trop. E. Africa*, Urticaceae 23. 1989; Chen and Ming-Jou Wu, *Taiwania*, 52(1): 60. 2007. *Urtica aestuans* L., Sp. Pl., ed. 2, 2: 1397. 1763; *Fleurya aestuans* (L.) Miquel, *Fl. Bras.* 4(1): 196–197 1853.

Specimen examined: [KFRI] N. Sasidharan, 28072, dated 19.08. 2013, Manacud, Thiruvananthapuram, Kerala. [Images A1 & A2]

Annual herbs, to 1 m high; stem unbranched, covered with long glandular hairs. Leaves alternate, 7-12 x 5-10 cm, ovate, rounded to cordate at base, acute to acuminate at apex, margin dentate, dentations mucronate, scattered with irritant hairs, more on lower side and petiole; stipules partially connate, bifid at apex; petioles 5-10 cm long. Flowers in terminal and axillary, bisexual panicles; peduncle covered with glandular hairs. Male flowers: tepals 4 or 5, with few long glandular hairs at the apex; stamens 4 or 5, white; female flowers: tepals 4, the two laterals ca. 0.5 mm long, the dorsal ones ca. 0.25 mm long, geniculate, with 3-5 glandular hairs. Ovary ovoid, asymmetrical; stigma linear, unbranched. Achenes obliquely ovoid, compressed, ca. 1.5 mm across, with inconspicuously warty depression on both surfaces; pedicel to 2 mm long.

Distribution: Tropical America, West Indies, Tropical Africa, Madagascar, Arabia, Indo-Malesia to Pacific Islands and Taiwan.

Flowering & fruiting: June to November.

Notes: The plants are seen growing as a weed in homesteads in the Thiruvananthapuram and Kollam Districts. Morphologically *Laportea aestuans* is closely related to *L. terminalis* in the vegetative characters. The branched racemose panicles of *L. aestuans* distinguish it from the unbranched elongated peduncle with flowers fascicled at intervals of *L. terminalis*.

Dr. Lakshminarasimhan, Cental National Herbarium, Calcutta informed that two specimens of *Laportea aestuans* from India, one from Kumaon (Present State of Uttarakhand) and one from Shevroy Hills, Taminadu are available at Kew Herbarium as per the information provided by Dr. Melanie Thomas, Kew Herbarium (*pers. comm.*).

**Solanum pseudocapsicum** L. var. **diflorum** (Vellozo) Bitter, Bot. Jahrb. Syst. 54(5): 498 1917. *Solanum diflorum* Vellozo, Fl. Flumin. 2: t. 102. 1827.

Specimens examined: [KFRI] *N. Sasidharan 11497*, dated 15.03.2009, Pulpally, Wayanad Dist., Kerala. [Images B1 & B2].

Erect, branched shrubs to 2 m tall, stems, leaves, and inflorescences minutely tomentose with branched hairs. Leaves alternate, 2–6 × 1–2.5 cm, elliptic to narrowly oblong, base cuneate, decurrent, apex obtuse, margin entire or slightly wavy; lateral nerves 4 or 5 pairs; petiole 2–5 mm. Flowers leaf opposed or extra-axillary, solitary or rarely paired; pedicel 3–4 mm long, tomentose. Calyx green, tube 1.5 mm long, lobes ca. 2 mm long, oblong, reflexed. Corolla 1 cm across white with green shade at mouth, lobes elliptic, acute, slightly curved back. Staminal filaments less than 1 mm long, glabrous; anthers ca. 2 mm long, yellow. Fruiting pedicel ca. 1 cm, expanded at apex. Berry 1.5–2 cm across, orange-red, fleshy; fruiting calyx reflexed; seeds discoid, 2–3 mm in diam.

Native of South America, cultivated and naturalized elsewhere. (South Africa, New Zealand, Australia, China).

Flowering & fruiting: April to October.

Note: *S. pseudocapsicum* var. *diflorum* can be distinguished by the conspicuous puberulent dendritic hairs and ca. 2 mm long anthers against the glabrous stem, leaves and short anthers of *S. pseudocapsicum* var. *pseudocapsicum*, which is very common in the High Ranges. *S. pseudocapsicum* var. *diflorum* is grown in homesteads and the fruits are used as tomato.

**Spigelia anthelmia** L., Sp. Pl. 149. 1753; Leenhouts in Steenis, Fl. Males. I, 6: 376. 1962; Oomachan & Srivastava, *J. Bombay Nat. Hist. Soc.* 84: 730. 1987; Philcox in Dassanayake (ed.) *Revsd. Handb. Fl. Ceylon* 10: 266. 1996; Umamaheswari *et al.*, *Bull. Bot. Surv. India* 37(1-4): 133. 1995 (2000); Hegde *et al.*, *J. Bot.* 2 (2): 9. 2013.

Specimen Examined: (KFRI) *KJ Dantus, 28050; 11.07.2014*, Kasargode, Kerala.

[Images C1 & C2].

Annual glabrous viscous herbs. Leaves opposite-decussate, upper ones often verticillate (4–6), 3–12 × 1–5 cm, ovate lanceolate, decurrent at base, acuminate at apex, margin entire, scabrid above; lateral nerves 5–8 pairs, the basal pair; sessile; stipules inter-petiole, ovate, obtuse. Flowers in monochasial trichotomous terminal and axillary, up to 12 cm long cymes. Calyx 5-lobed, lobes unequal, 2.5–4 cm long, linear lanceolate. Corolla pink, tube ca. 1 cm long; lobes 5, ovate-acute, 1.5 mm long. Stamens 5, included within the corolla tube, filaments appendaged at the middle. Ovary sub-globose, bilocular; ovules 6–8 per locule; style terminal, 2 mm long, stigma ovate. Capsule sub-globose, with persistent style, 2-lobed, ca. 5–6 mm, papillose; seeds pyriform, rugose, brown to black.

Distribution: Native of South America. Now naturalized in Africa, Southeast Asia, Sri Lanka, Australia.

Note: Oomachan & Srivastava (1987) first reported *Spigelia anthelmia* from Madhyapradesh. Later Umamaheswari *et al.* (2000) reported its occurrence from several parts of Tamilnadu. Recently it has been reported from Tumkur Taluk of Uttarkannada of Karnataka State (Hegde *et al.*, 2013) and from Shoolpaneshwar Wildlife Sanctuary, Narmada District, Gujarat (Desai & Vinay, 2013). With the present collection from Kerala, it is now recorded from all the southern states of India. This weed is seen eaten by Cattle and may be the main distribution source.



Plate I. A1 & A2 - *Laportea aestuans*; B1 & B2 - *Solanum pseudocapsicum* var. *diflorum*; C1 & C2 - *Spigelia anthelmia*

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**REFERENCES**

- Desai, R.J. & V. Raole (2013). *Spigelia anthelmia* L. (Spigeliaceae): new record the flora of Gujarat State, India. *J. Bombay Nat. Hist. Soc.* 110 (3): 234-235.
- Hegde, G., S.R. Hebbar & G. R. Hegde (2013). *Spigelia* L. (Spigeliaceae/Strychnaceae): Addition of Genus to Flora of Karnataka. *J. Bot.* 2 (2): 9-11.
- Sasidharan, N. (2011). Flowering Plants of Kerala VER 2.0. KFRI DVD No. 14. Kerala Forest Research Institute, Peechi.
- Umamaheswari, P., S.A. Muthukumar & P. Daniel (2000). *Spigelia anthelmia* L. (SPIGELIACEAE) – New to the Flora of Peninsular India. *Bull. Bot. Surv. India* 37 (1-4): 133-136.