



### ***Elaeocarpus aristatus* (Elaeocarpaceae): New for southern India**

Species of *Elaeocarpus* L. (Elaeocarpaceae Juss.) are characteristically trees or shrubs distributed from Madagascar in the west to Fiji and Hawaii in the east; of the some 350 recognized species, the greatest concentration of species is found in Borneo and New Guinea (Zmarzty, 2001). Most species of *Elaeocarpus* are large to medium-sized trees with buttressed root (in mature individuals) bearing raceme inflorescences with beautiful, fragrant flowers. Many species of *Elaeocarpus* are economically important as a source of timber, edible fruits, decorative seeds, and even as medicinals. Out of the some 120 species reported from Asia, 25 occur in India (Khan *et al.*, 2003). In India, the species of *Elaeocarpus* are confined mostly to northeastern and southern India with a few species restricted to the Andaman and Nicobar islands. Six species, viz. *E. blascoi* Weibel, *E. gausseii* Weibel, *E. glandulosus* Wall. ex Merr., *E. munroii* Mast., *E. recurvatus* Corner, and *E. venustus* Bedd. are endemic to southern peninsular India. The species generally prefer a warm humid climate and usually occur at elevations between 500 to 2000 m, and though widely distributed they are never found in abundance at any particular locality (Murti, 1993). Identification and description of species of *Elaeocarpus* in India have been accomplished by several researchers (Ramamoorthy, 1976; Saldana, 1984; Murti, 1993; Meijer, 1995; Daniel, 2005). But, almost all of the literature have problem with the identification, typification and nomenclature due to the citation of misidentified materials.

On a field collection trip to the Sirumalai Hills of Eastern Ghats in the Dindigul District of Tamil Nadu, a specimen of tree with a large trunk and elongated leaves was collected. Later, on the basis of a detailed study of herbarium material, it was identified as *Elaeocarpus aristatus*. Until now the species was restricted to

the northeastern states in India where initially it was collected by William Roxburg and described in detail with an illustration in his *Flora Indica*. Later, Wight (1838) illustrated the habit of the species and its beautiful flowers. Still, controversies exist among scientists regarding application of the name *E. aristatus*. In some cases, misidentified specimens of *E. aristatus* were compared with other species of *Elaeocarpus* and merged with *E. rugosus* Roxb. ex G. Don and specimens from the Andaman and Nicobar islands. In our opinion, *E. aristatus* is a distinct species that we now report from a new locality in the Sirumalai Hills of Tamil Nadu, India.

***Elaeocarpus aristatus* Roxb.** (Fig. 1, Table 1)  
*Flora Indica* 2: 599. 1832.

**Type:** Sylhet, Bangladesh [“India orientalis”], 1811, *W. Roxburgh 117*. Lectotype (**hic designatus!**) BM, bar code 000795193 [flowering material]).

**Trees** 20–40 m high, old trees buttressed at base. **Stipules** subulate, hairy, caducous. **Leaves** alternately crowded at end of branchlets; petioles 1.5–2 cm long, sparsely hairy; blades 10–15 cm long, 5–8 cm wide, cuneate-obovate, glabrous, coriaceous, obtuse and obtusely serrulate marginally. **Inflorescences** racemose, 8–20 cm long, axillary, drooping, sparsely hairy. **Flowers** few, long-pedicelled, generally drooping, large, 2–3 cm across yellow and fragrant; sepals 5, 1–1.5 cm long, lanceolate, villous; petals 5, 1.5–1.8 cm long, cuneiform, white-hairy, deeply lacinate apically; stamens 45–50 on smooth and slender filaments  $\leq 1$  cm long arranged in scarcely distinct bundles of five on the top of a hairy receptacle, each filament terminated by a linear, 4–5 mm long anther opening at the top and terminated by a long, simple, straight arista; ovary ovate, hairy, elevated on a hairy receptacle, 2-loculed, bearing a longer than anthers subulate style terminated by an acute stigma. **Fruits** a drupe,

3–3.5 cm long, rugose, ellipsoid; nut oblong, pointed at both end, distinctly ridged laterally, 1–2-loculed; seeds solitary, oblong, flat; integument 1, thick, hard, dark brown in perisperm; embryo inverse; cotyledons oblong, thin, three-nerved; radicle oval, superior.

**Specimen examined:** **East Bengal:** Sylhet, Bangladesh [“India orientalis”], 1811, W. Roxburgh 117 (BM, bar code 000795192 [fruiting material]); without location, 1867, W. Griffith s.n., (MH accession no. 64121); without location, 1867, W. Griffith 706 (K, P). **West Bengal:** without location, Apr 1873, without collector. India: Tamil Nadu, 7 Jun 2014, D. Felix Irudhyaraj & R. Ramasubbu (GU,

accession no. 0295). Dindigul District: lower slopes of Vellimalai, Sirumalai Hills, 10°13'28.902"N, 77°59'44.854"E, 1720 ft. elev., 14 Aug 2014 D. Felix Irudhyaraj & R. Ramasubbu (GU, accession no. 0260).

**Flowering:** April–June. **Fruiting:** July–October.

**Habitat and distribution:** In moist deciduous and evergreen forests at an altitude of 1720 ft. Bhutan, Bangladesh and Myanmar. India: West Bengal, Sikkim, Assam, Arunachal Pradesh, Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Andaman & Nicobar Islands, and Maharashtra.

**Table 1:** Comparison between *Elaeocarpus aristatus* and its closely allied species

<i>Elaeocarpus aristatus</i>	<i>Elaeocarpus rugosus</i>	<i>Elaeocarpus tuberculatus</i>
Flower bud lanceolate	Flower bud cylindrical, ovoid, conical or oblanceolate	Flower bud lanceolate
Flower 1.8–2 cm across	Flower 1–1.5 cm across	Flower 2–2.5 cm across
Filament 1 cm with anther 4–5 mm long (awns as long as anther)	Filament 1.5–2.5 mm with anther 5–6 mm long (awns shorter than anther)	Filament 1.5–2 mm with anther 4–6 mm long (awns almost as long as anther)
Seed pointed at both end, 1- or rarely 2-loculed	Seed 1-loculed, strongly rugous and 1-seeded	Seed 1–2-loculed, not pointed at both end

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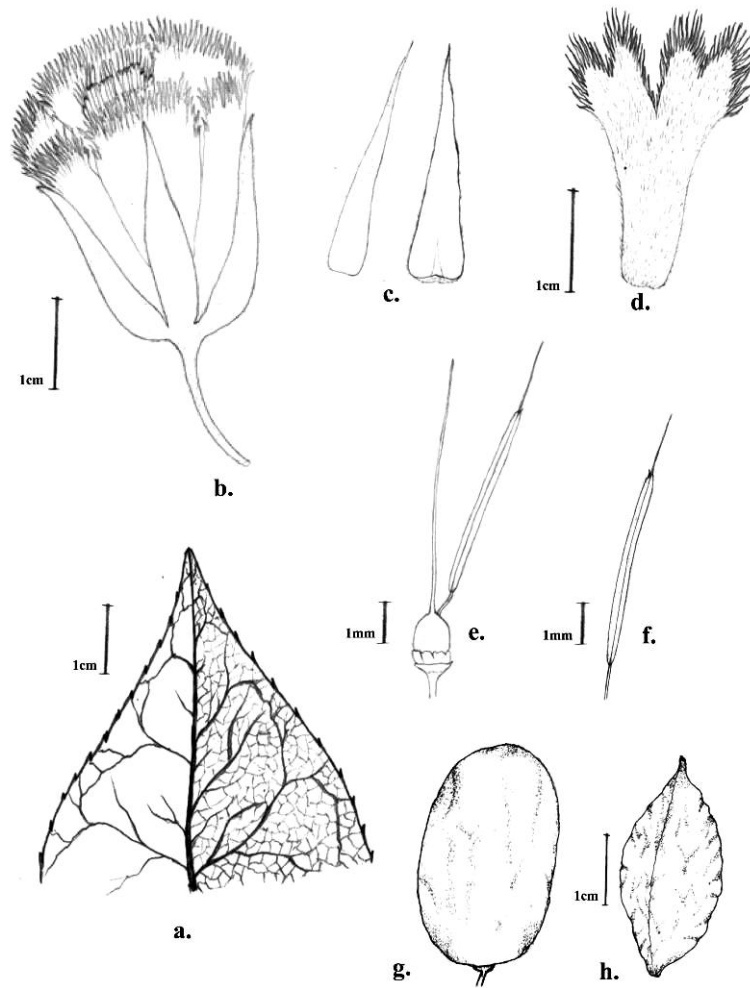
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# PLATE 11



**Figure 1:** Flowering twig of *Elaeocarpus aristatus*



**Figure 2:** *Elaeocarpus aristatus* (a) leaf apex, (b) flower, (c) sepals, (d) petal, (e) ovary with single stamen, (f) anther, (g) fruit, and (h) seed.