



### Taxonomic status of *Pavetta bourdillonii* (Rubiaceae)

The genus *Pavetta* L. has about 300 species distributed in the paleotropical regions of the world (Mabberley, 2008). Bremekamp (1934) laboriously studied this genus in details but his narrow species concept resulted in the recognition of many more species than can be justified taxonomically. He recognized 42 species for the Indian subcontinent, while Rout and Deb (1999) accepted only 25 species. Most of the characters used by Bremekamp to delimiting species, such as stem characters (green vs corky), shape and size of leaves, and arrangements of bacterial nodules in the leaves, were rejected by Rout and Deb. However, the position of the inflorescence (axillary vs. terminal) was found to be useful taxonomically by both parties.

Bremekamp (1934) described *Pavetta travancorica* Bremek., *P. concanica* Bremek., and *P. laeta* Bremek. from India but their recognition was rejected by Rout and Deb (1992) who reduced the latter two to synonymy under *P. travancorica*. Sivadasan and N. Mohanan (1999) subsequently described *P. bourdillonii* based on a collection from the Agsthyamala Hills in the Thiruvananthapuram District of Kerala. They compare their new species with *P. travancorica* because of the shared axillary inflorescence, distinguishing *P. bourdillonii* on the basis of its arborescent (not suffrutescent) habit, and its simple, 3(–4)-flowered cymose inflorescence (not a many-flowered corymbose inflorescence).

Rout and Deb (1999) subsequently reduced *Pavetta bourdillonii* to the synonym under *P. travancorica* but remained silent about the peculiar characters justifying their reduction. Today, except for some authors (Mohanan and Sivadasan, 2002; Nayar *et al.*, 2006), *P. bourdillonii* is considered a synonym of *P.*

*travancorica* (Govaerts, 2011; The Plant List, 2013).

Perusal of the pertinent literature, type specimens, and detailed field study at the Agasthyamala Biosphere Reserve, the type locality of *Pavetta bourdillonii*, demonstrated that this species is distinct from *P. travancorica* and worthy of recognition as a distinct species. While these two species often grow side by side in the type locality, the fact that both remain distinct, in our opinion, is justification to recognize each as a distinct entity.

*Pavetta bourdillonii* Sivad. & N. Mohanan, *Bot. Bull. Acad. Sin.* (Taipei) 40: 61. 1999.

**Type:** Kerala, Agasthyamalai Hills, Attayar, Jun 1994, N. Mohanan 12442 (holotype: K; isotypes: CAL, MH, TBGT!).

**Small trees**, 4–8 m high. **Leaves** to 12 × 3.5 cm, obovate, cuneate at base, acuminate at apex; petiole 4–6 mm long; lateral nerves 4–6 pairs; stipules broadly triangular-ovate, to 2 × 3.5 mm. **Inflorescences** axillary, 1–4-flowered, usually a 3-flowered cyme; peduncle short, 1–1.5 mm long; bracts 2; pedicels slender, 1–1.5 cm long. **Calyx** tube to 1 mm long, glabrous; lobes triangular. **Corolla** white; tube slightly widening distally, 1.8–2 cm long, villous within except at base; lobes 4, oblong-elliptic, to 1 × 0.3 cm, acute at apex. **Stamens** 4, attached at throat of corolla tube; anthers linear, 6–7 mm long, connective slightly produced above; filaments short. **Ovary** crowned by an annular disc, to 1 mm long, 2-celled; style slender, 3–3.5 cm long; stigma linear. **Fruits** ovoid, 0.3–0.4 × 0.2–0.25 mm, crowned with calyx segments. **Seeds** 1–2, hemispheric to subglobose.

*Pavetta bourdillonii* and *P. travancorica* can be further distinguished by the following characters summarized below (Table 1).

**Table 1:** Comparison of selected morphological characters of *Pavetta bourdillonii* and *P. travancorica*

Character	<i>P. bourdillonii</i>	<i>P. travancorica</i>
Habit	small tree, 4–8 m high	shrub, 1–1.5 m high
Leaf shape	obovate	elliptic or elliptic-lanceolate
Lateral nerves	4–6 pairs	8–14 pairs
Stipules	1.5–2 × 3–3.5 mm	5–9 × 4–5 mm
Peduncle	1–1.5 mm long	15–60 mm long
Flowers per inflorescence	1–4	30–90
Pedicel	1–1.5 cm long	0.3–0.8 cm long
Corolla tube	18–20 mm long	6.5–12 mm long
Style	3–3.5 cm long	1.8–2.6 cm long
Drupe shape	ovoid	subglobose or slightly 2-lobed
Seed shape	hemispheric to subglobose	hexagonal

**Distribution and conservation status:** *Pavetta bourdillonii* is endemic to the Agasthyamala Biosphere Reserve of southern Western Ghats. It is known presently from a single population composed of less than 50 mature individuals occupying an area less than 10 km<sup>2</sup> at an elevation of 700–750 m. The young fruits are severely damaged by borer insects/pests resulted in low regeneration of seedlings. Since it is known only from a single population, following the IUCN criteria (IUCN 2001) for assessing the status of rare and threatened plants, *P. bourdillonii* is considered as Critically Endangered (CR), in the category [B2a, D].

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