



# Rediscovery of *Dalbergia travancorica* (Leguminosae-Papilionoideae) from the southern Western Ghats

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## Abstract

*Dalbergia travancorica* Thoth., an endemic taxon thought to be extinct has been relocated from a sacred grove of Thiruvananthapuram district in Kerala and a detailed description and illustration are provided.

**Keywords:** climbing shrub, *Dalbergia travancorica*, endemic, sacred grove

## Introduction

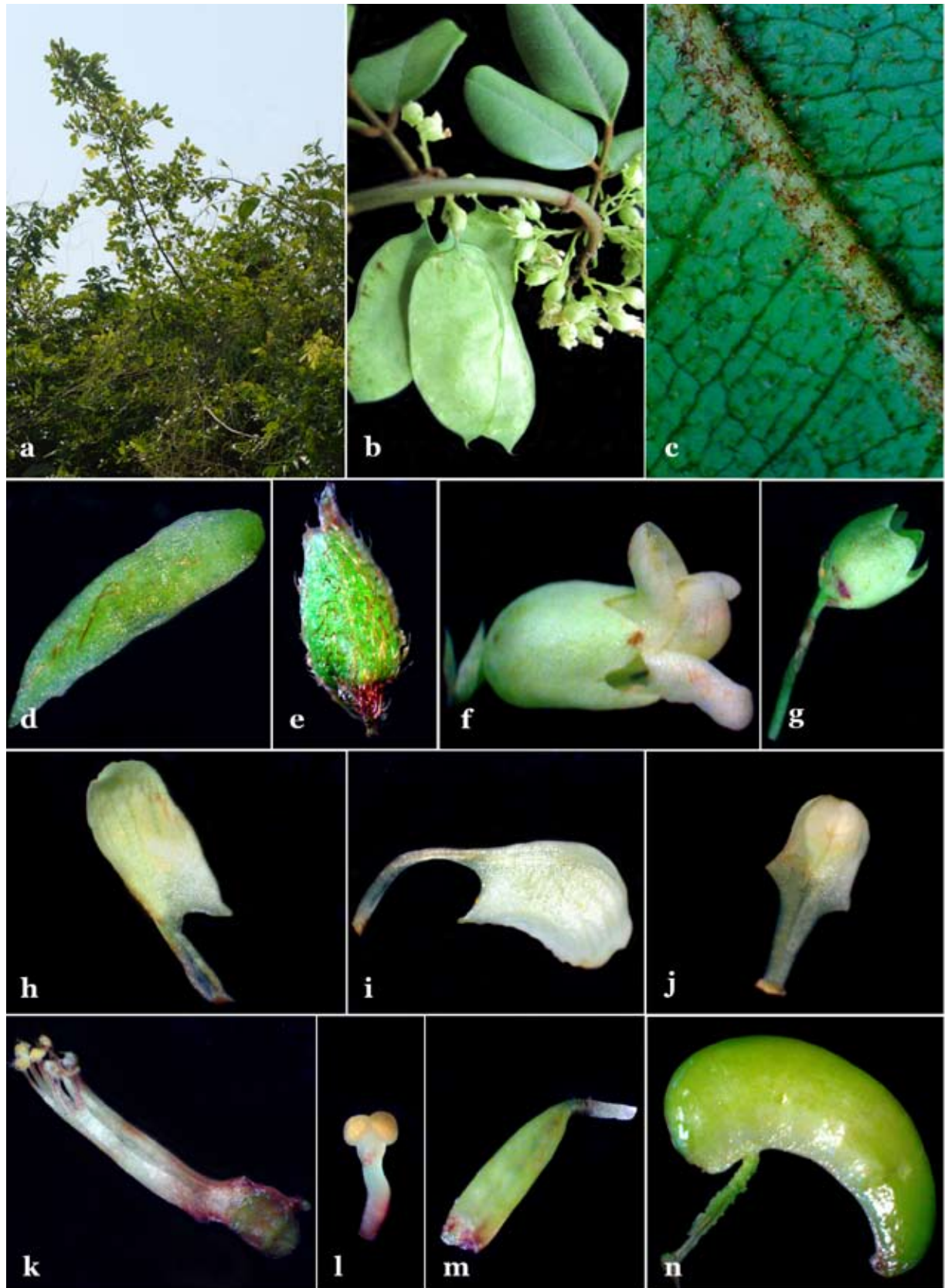
The genus *Dalbergia* L.f. consisting of 100-120 species is distributed, in the tropical belt (Lewis *et al.*, 2005). In India, it is represented by 25 species (Sanjappa, 1991); of which the Western Ghats is known to host about 18 species, 2 subspecies and 5 varieties (Nayar *et al.*, 2014).

During the course of floristic studies on sacred groves of Thiruvananthapuram district in 2002, one of the authors (ESSK) recorded an interesting climbing shrub in a sacred grove near Kariavattom. However, it was rather hard to make identification in vegetative condition. This taxon was also located in two sacred groves nearby which was also in vegetative condition. Later, in 2015 flowering specimens have been collected from one of the sacred groves and the taxon was identified as *Dalbergia travancorica* Thoth., an endemic taxon which was known only from its type collection. This species was collected over a century ago from the Travancore Hills during the colonial period. Nair (1984), in his studies on *Dalbergia* referred to the taxon as "..... only the type species collected from Travancore Hills about a century ago is the basis to include the species here. Being narrowly endemic, further field survey is required to locate it in other areas, if available; it shall be collected and introduced in botanic garden (*ex-situ*)". It indicates the scarcity of herbarium collections as well as the rarity of this species in natural occurrence. Presently the occurrence of this taxon is confined to certain lowland evergreen

patches of forests conserved in the form of sacred groves in thickly populated outskirts along the urban areas of Thiruvananthapuram district. Sacred groves are considered as remnants of primary forests conserved as a part of the cultural diversity of certain communities. Obviously it indicates the anthropological interference owing to urbanization being one of the reasons for its endangerment.

This species was originally described by Thothathri in 1972 based on an adequately old collection during the colonial period by an unknown collector without any reference and deposited at MH. Gopalan & Henry (2000) included this species in their 'Endemic plants of India' as presumed to be an extinct taxon. A perusal of literature and various herbaria consultation revealed that the one and only specimen of this taxon is the type material deposited at MH (Accession no. 17025). From conservation point of view, the present collection of this species has remarkable relevance in preservation of sacred groves, since it occurs only in these lowland evergreen patches of forests as 'relics of the past'. Being an interesting rediscovery of a 'narrow endemic' taxon hitherto known only from type collection is described and illustrated here based on recent collections.

***Dalbergia travancorica*** Thoth., Reinwardtia 8: 329. 1972 & Tax. Rev. Dalberg. Ind. Subcont.: 79. 1987; Sanjappa, Legum. India : 141. 1991; Sud. Kumar



**Fig.1.** *Dalbergia travancorica* Thoth.: **a.** Habit; **b.** Branchlet showing flowers and fruits; **c.** Portion of leaflet showing mid rib-abaxial side; **d.** Bracteole; **e.** Bract; **f.** Flower; **g.** Calyx; **h.** Keel petal; **i.** Wing petal; **j.** Vexillum; **k.** Staminal tube; **l.** Single stamen; **m.** Pistil; **n.** Seed (immature) (not to scale).

& P.V. Sane, Legum. South Asia: 176. 2003: T.S. Nayar *et al.*, Flow. Pl. W. Ghats India (Dicots) 1: 419. 2014.

Climbing shrubs; young branchlets rusty pubescent, mature one puberulous. Leaves imparipinnate, 6–11 cm long, alternate, stipulate, rachis puberulous; leaflets mostly 5, rarely 7, lower ones always smaller than upper larger ones, elliptic, 2.5–6.5 × 1.5–3 cm, rounded at base, mostly obtuse to retuse or rarely acute at apex, entire at margins, coriaceous, glabrous above, brown puberulous to pubescent below; lateral veins inconspicuous, petiolule 2–4 mm long, silky pubescent; stipules prominent, oblong, 7–9 mm long, shortly acuminate at apex, brown pubescent. Inflorescence in short axillary panicle, 1–3 cm long, rachis and branchlets pubescent. Flowers 6–8 mm long, pedicellate; bracts very conspicuous, gibbous, ovate-triangular, 1.5–3 mm long, pubescent without; bracteoles 2, embracing the calyx tube on either sides, 1–1.5 mm long, ovate-oblong, pubescent without; pedicels short, 2–3 mm long, pubescent. Calyx campanulate, 4–5 mm long, pubescent without, 5-toothed, anterior 3 triangular-ovate, smaller, posterior 2 ovate-rounded, larger than the anterior ones. Standard petal ovate-orbicular to ovate-oblong, 6–7 mm long, deflexed, retuse at apex, blade auricled below, distinctly clawed; wings ovate-oblong, c. 4 mm long, clawed; keels boat-shaped, c. 3.5 mm long, clawed, connate above at their apex, all petals glabrous. Stamens 9, monadelphous, sheath 6–7 mm long, split open dorsally; filaments free at their apices. Ovary oblong, 5–6.5 mm long, distinctly stipitate, glabrous except the pubescent, dorsal suture, 2–3-ovuled; style slender; stigma minute. Pods oblong, 2.7–3.5 × 0.6–0.8 cm, flat, glabrous, smooth, long stalked; one seeded.

*Flowering & fruiting:* April – July

*Habitat:* *D. travancorica* occurs in a small sacred grove (*Sri DharmaSastha Temple Kavu*, Kariyavattom) as a liana entangled over the neighbouring vegetation. The main associated species are *Artocarpus hirsuta* Lam., *Capparis rheedei* DC., *Dalbergia horrida* (Dennst.) Mabb., *Diospyros candolleana* Wight, *Erycibe paniculata* Roxb. and *Walsura trifolia* (A. Juss.) Harms.

*Distribution:* Kerala & Tamil Nadu (Endemic).

*Specimen examined:* INDIA, Kerala, Thiruvananthapuram district, Kariyavattom, 13.04.2015, A. Gangaprasad 7312 (KUBH).

*Notes:* *D. travancorica* is closely allied to *D. rubiginosa* Benth., another endemic species of peninsular India but differs from the former in having elliptic leaflets with rounded apices and the conspicuous persistent bracts even in fruiting.

The present collection shows some minor variations from its type material such as shorter inflorescence (2.5–5 cm vs 1–3 cm) and shorter pedicel length (4–5 mm vs 0.8–1.2 mm). However, it does not warrant any typical taxonomic delimitation and may be considered as an individual variation.

We have introduced this species in the field gene bank of JNTBGRI during 2005 and the plant is well acclimatized and flourishing.

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