

Beilschmiedia keralana (Lauraceae), a new species from Kerala, India

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Abstract: A new species of *Beilschmiedia* Nees, viz. *B. keralana* Robi & Balan from India is described and illustrated. *Beilschmiedia keralana* is morphologically similar to *B. jacobii* Robi, Udayan & S. George, but differs by its tree habit, silky-pubescent terminal buds, 10–13 mm long petioles, attenuate or cuneate bases of leaves, wavy margins, 7–11 pairs of lateral veins, orange flowers, shorter pointed fruits with sparse lenticels and smooth fruiting pedicels.

Key words: Agasthyamala, *Beilschmiedia*, Lauraceae, New species, southern Western Ghats

Introduction

Beilschmiedia Nees is one of the largest Pantropical genera belonging to the family Lauraceae with about 250 species distributed in tropical Asia and Africa (Van der Werff, 2003; Nishida, 2008; de Kok, 2021). It is represented by 13 species in India (Gangopadhyay *et al.*, 2020) and two species from Kerala (Sasidharan, 2013; Robi *et al.*, 2016). The genus can be recognized from its allied genera by the racemose or paniculate inflorescences that are not strictly cymose at the terminal division, bisexual and trimerous flowers with six equal or subequal tepals, six to nine fertile stamens in outer two or three whorls, two-celled anthers and non-cupular fruits.

During the revisionary studies of the family Lauraceae of south India, the authors have collected a specimen

of *Beilschmiedia* from Chemunji hills, Kerala, India. The Perusal of literature and type specimens housed at different herbaria (CAL, E, HBG, K, MH, NY, L), it is found to be more akin to *B. jacobii* Robi, Udayan & S. George. It also shows similarities with *B. wightii* (Nees) Benth. ex Hook.f., but differs by its 2–3 mm long, silky-pubescent terminal bud, 5.5–8 × 2.5–3.5 cm leaves, 1–1.5 cm long inflorescence, orange flowers, 1.2 cm long fruits. Hence it is described as a novelty here, with photographs and relevant notes for its easy identification.

Taxonomic Treatment

***Beilschmiedia keralana* Robi & Balan, sp. nov. Fig. 1**

Beilschmiedia keralana is morphologically similar to *B. jacobii*, but differs by its tree habit (*vs.* shrubs), silky-pubescent terminal buds (*vs.* rusty-tomentose), 10–13 mm long petioles (*vs.* 5–8 mm long), leaves with attenuate or cuneate bases and wavy margins (*vs.* acute base and revolute), 7–11 pairs of lateral veins (*vs.* 5–7 pairs), orange flowers (*vs.* pale-yellowish green), shorter pointed fruits covered with sparse lenticels (*vs.* longer glabrous fruits with obtuse apices), and glabrous fruiting pedicels (*vs.* lenticellate) (See Table 1).

Type: INDIA, **Kerala**, Thiruvananthapuram district: Chemunji hills, ±1400 m, 09.05.2019, *A.J. Robi & Anoop P. Balan* 100 (holo MH!; iso BAM!, KFRI!).

Trees, to 8 m tall; bark smooth; branchlets subterete, smooth and glabrous; terminal buds ovate, 2–3 mm long, acute, silky-pubescent. Leaves alternate to sub-opposite, thinly

Received: 13.03.2024; Revised & Accepted: 24.04.2024

Published Online: 30.06.2024

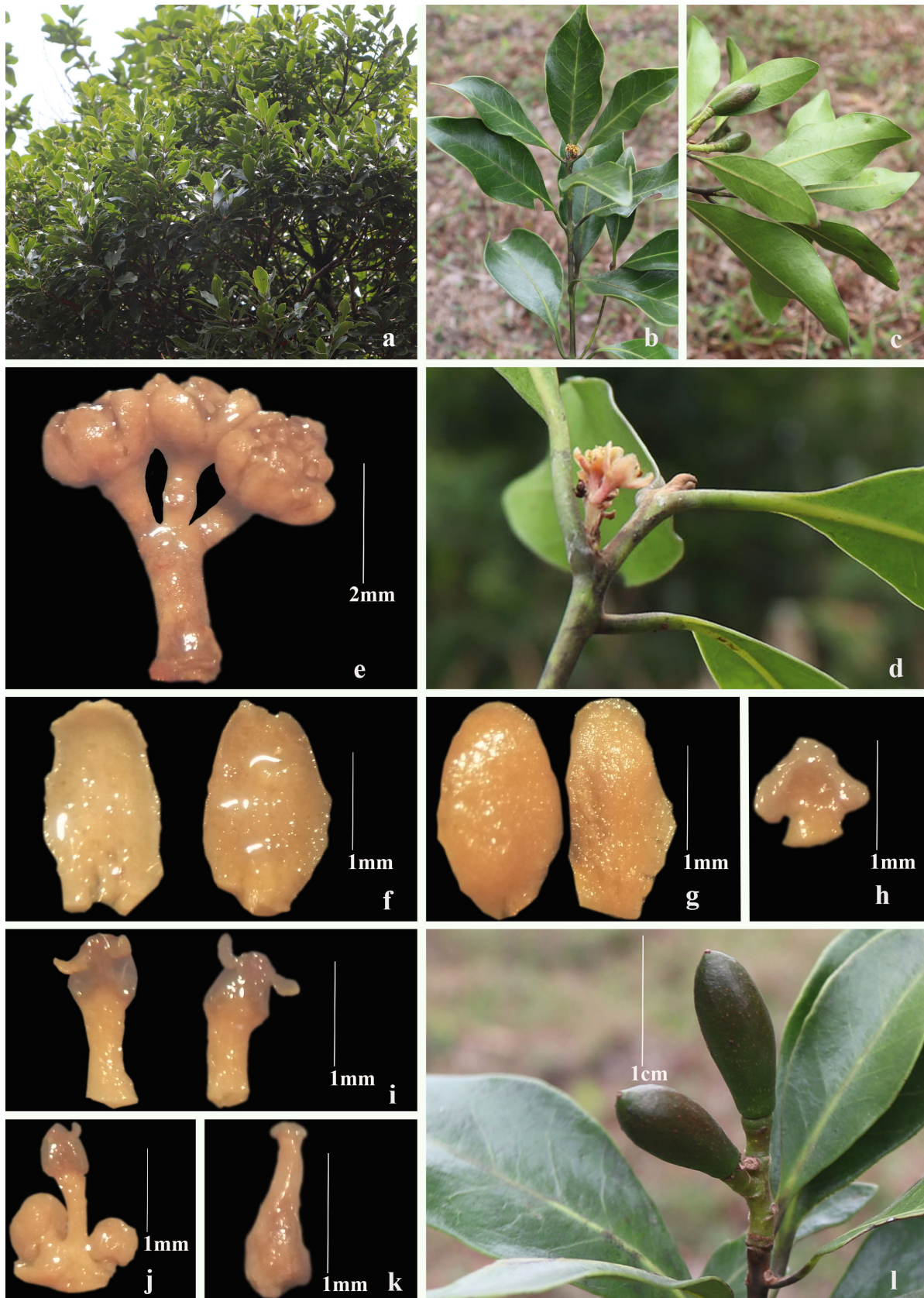


Fig. 1. *Beilschmiedia keralana* Robi & Balan: **a.** Habit; **b.** A twig with leaves—adaxial view; **c.** A twig with leaves—abaxial view; **d.** A twig with axillary inflorescence; **e.** Inflorescence; **f.** Perianth lobes—inside view; **g.** Perianth lobes—outside view; **h.** Staminode; **i.** Eglandular stamens; **j.** Stamens with basal glands; **k.** Gynoecium; **l.** Fruits (from Robi A.J. & Anoop P. Balan 100; photos by A.J. Robi).

Table 1. Morphological comparison of *Beilschmiedia jacobii* and *B. keralana*.

Characters	<i>Beilschmiedia jacobii</i> Robi, Udayan & S.George	<i>Beilschmiedia keralana</i> sp. nov.
Habit	Shrubs	Trees
Terminal bud	2 mm long, rusty-tomentose	2–3 mm long, silky-pubescent
Petiole	5–8 mm long	10–13 mm long
Leaves	3–7 × 1–3 cm, base acute, apex obtuse or rounded, margin flat and incurved; midrib elevated on both sides	5.5–8 × 2.5–3.5 cm, base attenuate or cuneate, apex obtuse, margin wavy; midrib flat above, prominent below
Lateral veins	5–7 pairs	7–11 pairs
Flowers	Pale yellowish-green	Orange
Fruits	c. 2.5 cm long, obtuse at both ends, smooth; fruiting pedicels lenticellate	c. 1.2 cm long, apex slightly pointed, sparsely lenticellate; fruiting pedicels glabrous

coriaceous; petioles 10–13 mm long, flattened above, rounded below, slender, glabrous; lamina elliptic-oblong, 5.5–8 × 2.5–3.5 cm, base attenuate or cuneate, margin entire, wavy, apex obtuse, not glaucous below; midrib flat above, prominent below, glabrous; lateral veins 7–11 pairs, faint adaxially, thin, raised abaxially, glabrous, looped towards margin; intercostae reticulate, prominent abaxially, faint adaxially. Inflorescences axillary, racemose, 1–1.5 cm long; peduncle densely silky-tomentose; bracts usually caducous, orbicular, densely silky-pubescent, ciliate along margins. Flowers 2–3 mm long, orange; tepals 6 in two whorls of 3 each, elliptic or ovate-elliptic, c. 2 × 1.5 mm, obtuse or slightly incurved at apex, equal, pubescent on both sides; stamens 9 in 3 whorls, outer 3, 1.5 mm long, purple; filament c. 1 mm long, linear, densely pubescent; anthers ovate, c. 0.5 mm long, obtuse at apex, 2-locular, introrse; middle whorl almost same as the outer; inner whorl 3, c. 1.5 mm long, latrorse, 2 glands at the base of the filament, free; glands orbicular, shortly stipitate; staminodes 3, cordate, c. 1 mm long, pilose at base; ovary ovoid, c. 1.5 mm long, glabrous; sparsely pubescent style; stigma capitate. Berries ellipsoid, c. 1.2 cm long, apex slightly pointed, glabrous, sparsely

lenticellate; fruiting pedicels c. 5 mm long, thick, greenish, glabrous.

Flowering & fruiting: Flowering from November to January; fruiting from April to May.

Habitat: Occurs in montane evergreen forests at an altitudinal range between 1400–1600 m asl. This species is very rare in fragmented forests in Chemunji region of Agasthyamala Biosphere Reserve.

Distribution: So far, known only from the Chemunji hills, Thiruvnanthapuram, Kerala, India.

Etymology: The specific epithet “*keralana*” is named after the area including Kerala State, India.

Conservation status: Very rare in its known distribution range and the population is restricted to one isolated location. The area of occupancy is estimated to be less than 10 Km². In the absence of detailed data on populations, the species is categorized as ‘Data Deficient’ (DD) (IUCN, 2022).

Acknowledgements

The authors are grateful to the Principal, Bishop Abraham Memorial College, Thuruthicad, Pathanamthitta. The facilities provided by the Kerala Forest Department during field works are thankfully acknowledged.

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