

RESEARCH ARTICLE

MEMECYLON MATHEWDANII (MELASTOMATACEAE), A NEW SPECIES FROM KERALA, INDIA

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Received-20.01.2026, Revised-11.02.2026, Accepted-27.02.2026

Abstract: A new species of the genus *Memecylon* from Kerala, SW India, viz. *Memecylon mathewdanii* E.S.S.Kumar, Shareef, Anusha & Rejitha is described and illustrated. A detailed taxonomic description, accompanied by photographs, notes on its ecology, and a comparative table distinguishing it from closely related species.

Keywords: *Memecylon*, Kerala, Southwest India, Endemic, Taxonomy

INTRODUCTION

The genus *Memecylon* Linnaeus belongs to the family Melastomataceae with more than 405 species of small trees and shrub distributed in the Old-World tropics (POWO, 2026). In India, the genus is represented by 59 species and seven varieties, of which 15 endemics to southern Western Ghats (Clarke, 1879; Gamble, 1915; Radh & Nampy, 2019; Shrotri *et al.*, 2025). In the present paper, we describe a new species of *Memecylon* based on several recent collections from Kerala. This species has often been misidentified as *Memecylon umbellatum* Burm.f., *M. edule* Roxb., or even *M. molestum* C.B. Clarke (Fig.2.D) [= *M. umbellatum* var. *molestum* (C.B. Clarke) M. Das] in a few recent treatises (Sivu, 2012; Das, 2017, 2020; Bharathi *et al.*, 2016). However, it is readily distinguishable from these taxa by a suite of consistent morphological characters (Table 1). Accordingly, it is here described as a species new to science. The description is supplemented with analytical photographs of the living plant, along with detailed notes on its habitat and phenology, to facilitate accurate identification in the field and herbarium.

MATERIALS AND METHODS

This work has resulted from the *ex-situ* conservation of endemic and threatened plants of the Western Ghats. The description and photographs were taken by examining living and herbarium specimens collected during the field surveys. All relevant literature, including protologues of all described species of *Memecylon* was examined. The relevant types and other specimens deposited in BM, C, CAL,

K, L, MH, TBGT (herbaria codes according to Thiers 2020+) were examined for this study. The specimens kept at BM, C, K and L were examined through high resolution images accessed at <https://jstor.org> and <https://www.gbif.org>. The description was prepared based on fresh collection examined under a Wild M3Z stereo microscope. The colour of the vegetative and floral parts were examined using Methuen Handbook of Colour (Kornerup & Wanscher, 1961).

TAXONOMY

Memecylon mathewdanii E.S.S.Kumar, Shareef, Anusha & Rejitha, *sp. nov.* (Figure 1)

Diagnosis:—*Memecylon mathewdanii* is allied to *M. edule* and *M. umbellatum*, but differs mainly in its large spreading shrubby habit, shortly acuminate leaf apices, greyish-green drying leaves, relatively shorter petioles, simple umbellate lateral inflorescences lacking secondary and tertiary axes, a pale pinkish-blue calyx tube, and ovoid-ellipsoid fruits that are yellow when young, turning blackish-purple when ripe.

Type: —INDIA, Kerala State, Thiruvananthapuram district, Mannanthala, 100 m, 12 March 2025, E. S. Santhosh Kumar 92474 (holotype:TBGT; isotypes: CAL, MH).

Description: —Large spreading shrubs, 2–3 m high; bark greyish-brown, shallowly fissured; young shoots quadrangular; branchlets terete, greyish-brown. Leaves opposite, 3.5–8 × 2.2–4.5 cm, ovate to ovate-elliptic, cuneate at base, shortly acuminate and obtuse or emarginate at the very apex; mid vein sulcate above, raised below, lateral nerves 4–5 pairs, faint but visible, coriaceous, drying greyish green above, absinth green beneath; foliar sclereid

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filiform; petiole 2–5 mm long, slender. Inflorescence lateral, 5–12 flowered umbellate cyme; peduncle 2–3 mm long, terete; pedicels 3–4 mm long, terete, slender, pinkish–white; bracts ovate, 1mm long. Flower buds obtuse to rounded at apex with exposed petals, expanded flowers 6 mm across, pale blue. Calyx campanulate, 4 mm across, shallowly 4-lobed, pale blue, papillate on the outer surface; lobes broadly triangular, pinkish. Petals 4, to 2.5 mm across, suborbicular, rounded at the apex, laterally awned, clawed at base, margin irregularly gnawed, pale blue. Disc smooth or shallowly striate. Stamens 8, equal; filaments slender, 6–8 mm long; anthers 1 mm long, connective with a gland. Ovary unilocular, placentation free central; ovules 10; style subulate, 9–12 mm long; stigma simple. Fruit a berry, ovoid-ellipsoid, 5–8 × 3.5–5 mm, yellow turn blackish purple when ripe with a smooth surface and a crown

formed by persistent hypantho-calyx. Seeds 1-per fruit, ovoid.

Phenology: —Flowering and fruiting occur during March-June.

Distribution: — It is so far known only from Kerala state (Thiruvananthapuram and Malappuram districts).

Etymology: —This new species is named in honour of Dr Mathew Dan, Senior Principal Scientist (Retd.), JNTBGRI for his contribution to the field of Systematic Botany.

Additional Specimens Examined: —INDIA, Kerala state, Malappuram district, Calicut University campus, 27.05.2015, *Moumita Das Das, Satheesh K.T. & Mini V. 30890* (CAL); Thiruvananthapuram district, Mannanthala, 100 m, 26 May 2024, *E. S. Santhosh Kumar 96347* (TBGT).

Table 1. Diagnostic morphological characters of *Memecylon mathewdani* sp.nov. and related species

Characters	<i>Memecylon edule</i> (Fig.2. A& B)	<i>M.umbellatum</i> (Fig.2. C)	<i>M.mathewdani</i> (Fig.1.)
Habit	Shrubs or trees, 3–15 m high.	Large shrubs or small trees, 3–5 m high	Large spreading shrubs, 2–2.5 m high
Branchlets	Terete or subterete	Terete to subquadrangular	Terete
Leaves	Ovate-elliptic or elliptic, 4–7 × 2–3.5 cm	Elliptic or elliptic-ovate, obovate or suborbicular, 2.5–8 × 1.2–4.5 cm	Ovate or ovate-elliptic, 3.5–8 × 2.2–4.5 cm
Leaf apices	Obtuse or slightly caudate at apex	Obtuse-rounded or notched at apex	Shortly acuminate and obtuse or emarginate at the very apex
Drying colour of leaves	Greenish to dark blackish-brown	Yellowish green	Greyish green
Petioles	4–8 mm long	4–6 mm long	2–4 mm long
Inflorescence	Axillary or lateral	Axillary or lateral	Lateral
Peduncle	Primary axes 4–9 (–20) mm long; secondary axes 2–7 mm long; tertiary axes 4.3 mm long	Primary axes up to 10 mm long; secondary axis 2–6 mm long	Primary axis up to 2 mm long; secondary and tertiary axes absent
Pedicel	1.5–2 mm long	2–5 mm long	3–4 mm long
Hypanthocalyx	Campanulate, 2 mm wide truncate to shallowly 4 lobed	Campanulate, 4 mm wide shallowly 4 lobed	Campanulate, 4 mm wide shallowly 4 lobed, papillate
Calyx tube	Greenish-white	Pale blue	Pale-Pinkish blue
Petals	Ovate-deltoid, 1–2.5 × 1–1.75 mm, usually truncate with a claw, apex acute	Sub orbicular to 2.5 mm across.	Sub orbicular, clawed at base, apex rounded.
Filaments anther-connective	2–3 mm long (in bud), 'e' shaped, 1–1.75 × 0.5 mm, white or pale yellow	6–8 mm	8 mm long, anther 1 mm long.
Style	1.25 mm (bud), 6 mm long	9–12 mm long	11 mm long
Fruit	Globose, 7 × 8 mm in diameter, yellowish-green turning bluish-black. Persistent calyx crown raised, nearly truncate.	Globose, 7 mm diameter. Yellowish green to bluish black	Ovoid-ellipsoid, 5–8 × 3.5–5 mm in diameter. yellow turn blackish purple when mature

Note: — *Memecylon mathewdani* was once a fairly common species, predominantly occurring in

wastelands and along road cut walls bordering state highways of southern Kerala. However, in recent

years, a significant proportion of these habitats has been lost due to road widening and various forms of habitat alteration associated with developmental activities. As a result, the species has experienced a noticeable decline in its natural populations. It is typically found in association with species such as *Osbeckia aspera* (Meerb. ex Walp.) Blume, *Osbeckia virgata* D.Don, *Memecylon umbellatum* Burm.f., *Canthium coromandelicum* (Burm.f.) Alston, and *Getonia floribunda* Roxb., among others.

Memecylon mathewdanii is also misidentified as *M. molestum*, which is otherwise a medium sized evergreen tree reaching 30-40 ft height with strong wood usually seen in the shola forests of Kerala state. Many of the local floristic treatises wrongly attributed *M.mathewdanii* as *M.molestum*, *M.umbellatum* or *M.edule*. These species can easily be distinguished based on the following keys:

Key to the species of *Memecylon* closely allied to *M.mathewdanii*:-

- 1. Medium to large sized trees *M.molestum*
- 1. Shrubs to small trees 2
- 2. Inflorescence strictly lateral; flowers in simple umbels *M. mathewdanii*
- 2. Inflorescence mostly axillary, very rarely lateral; flowers in branched umbels 3
- 3. Leaf apices obtuse or slightly caudate; drying leaves greenish to dark blackish brown; petals ovate-deltoid *M. edule*
- 3. Leaf apices obtuse-rounded or notched; drying leaves yellowish green; petals suborbicular *M.umbellatum*

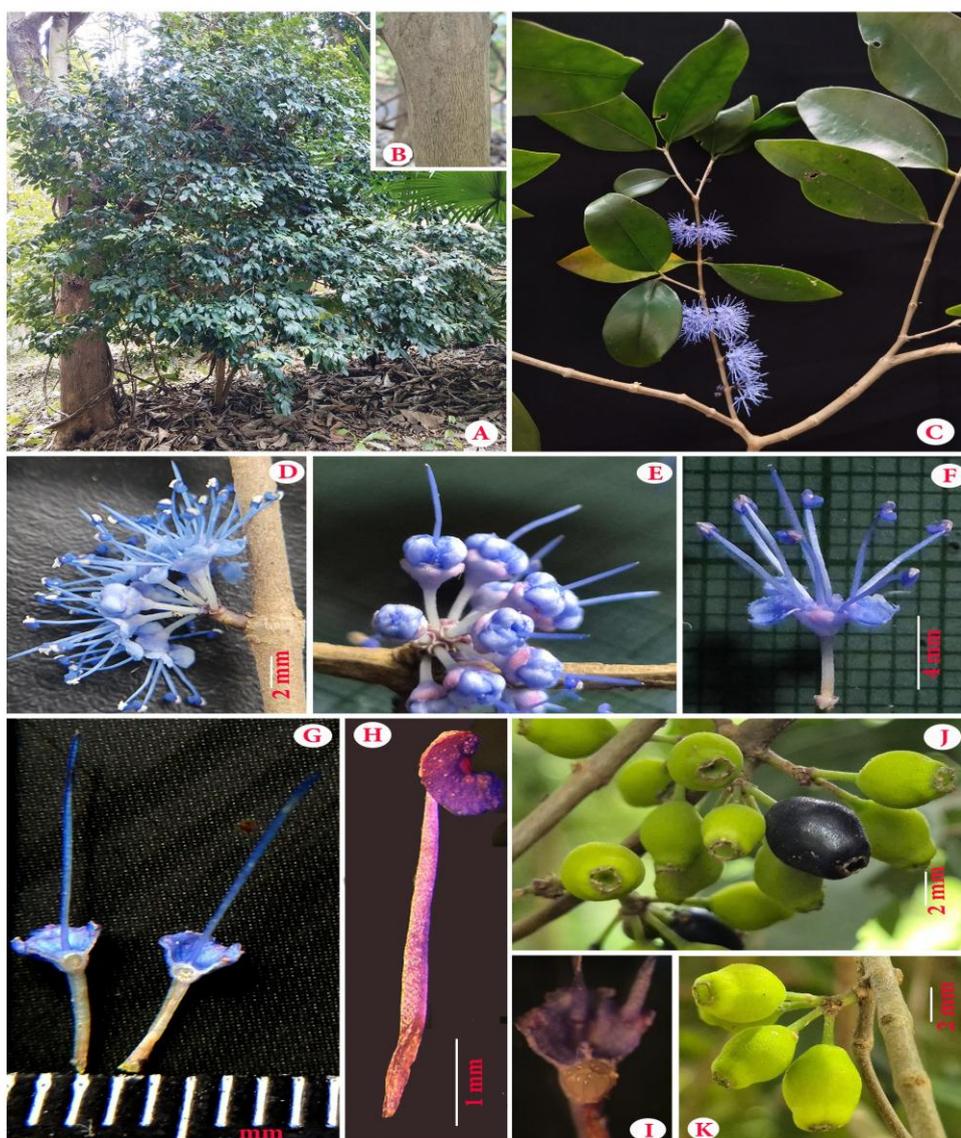


Figure 1. *Memecylon mathewdanii*, sp. nov. : A. Habit; B. Bark; C. Flowering twig; D. Inflorescence; E. Inflorescence (Bud stage); F. A single flower; G. L.S. of calyx showing style; H. A stamen; I. L.S. of calyx showing ovules; J & K. Fruits.



Figure 2. A. Illustration of *Memecylon edule* Roxb.; B. Lectotype of *Memecylon edule* Roxb. (Left top specimen Wall Cat. 4107A; K001038141 © Board of Trustees, RBG Kew); C. Lectotype of *Memecylon umbellatum* Burm.f. (BM000621285 © Natural History Museum, reproduced with permission); D. Type of *Memecylon molestum* Cogn. (K004414598 © Board of Trustees, RBG Kew).

ACKNOWLEDGEMENTS

The authors are grateful to the Director of the Jawaharlal Nehru Tropical Botanic Garden and

Research Institute for providing research facilities, and to the Kerala State Council for Science, Technology and Environment for financial support. They also thank the officials of the Kerala Forest

Department for granting permission to conduct field explorations in forest areas. The authors further express their sincere thanks to the Board of Trustees of the Royal Botanic Gardens, Kew and to the authorities of the Natural History Museum, London for permitting the use of herbarium images in this manuscript.

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