



## A New Species of *Memecylon* (Melastomataceae) from Western Ghats, India

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**ABSTRACT:** *Memecylon travancorense* Sivu, N. S. Pradeep, Pandur. & Ratheesh, a new species of *Memecylon* from Agasthyamala Biosphere Reserve of the southern Western Ghats is described herewith illustration and photographs. Its distinctive characters are discussed and comments made on differences between this and its allied taxa. This new species is similar to *M. wightii*, but clearly distinct by having sub-terete, greyish white branchlets, broadly elliptic to oblong leaves with slightly cordate to rounded leaf base, umbellate inflorescence with quadrangular peduncles and shortly pedicellate flowers. Information on habitat, distribution, and conservation status are provided.

**KEY WORDS:** India, Kerala, Melastomataceae, *Memecylon*, New species, Western Ghats.

### INTRODUCTION

The genus *Memecylon* L. consists of more than 300 taxa, distributed mainly in the Old World tropics (Renner *et al.* 2007 onwards). In Peninsular India, the genus includes 35 species with 19 Western Ghats endemics Santhosh Kumar *et al.*, 2003; Rajendra Prasad *et al.*, 2006; Sivu *et al.*, 2012a, b, 2014a, b, 2015 & 2016).

During the taxonomic studies on the genus *Memecylon* in Western Ghats, the first author collected one interesting specimen from Ponmudi hills in the Agasthyamala Biosphere Reserve of Thiruvananthapuram District, Kerala State and Keerippara forest areas of the Kanyakumari District, Tamil Nadu State, at an altitude 700 to 760 m. Further studies and perusal of relevant literature showed that this taxon to be quite distinct from the hitherto known taxa and apparently belong to a new species, which is described and illustrated here as *Memecylon travancorense* sp. nov.

### TAXONOMIC TREATMENT

*Memecylon travancorense* Sivu, N. S. Pradeep, Pandur. & Ratheesh, sp. nov. **Figs. 1 & 2**

**Type:** INDIA: Western Ghats, Kerala, Thiruvananthapuram, Ponmudi, way to Kowdiyar Mottai, evergreen forest, 30 December 2009, ± 700 m, A. R. Sivu, 65148 (Holotype TBGT; Isotype MH)

Glabrous shrubs, upto 0.5 m tall; branchlets sub-terete; bark greyish white. Leaves opposite, elliptic to broadly oblong, 11–15 × 4–6 cm, subcoriaceous, shining above, pale beneath, base rounded to slightly cordate,

margin entire, apex broadly acuminate; intramarginal nerves prominent above, straight nerves with midrib; petiole ca. 2 mm long. Inflorescence in short pedunculate umbels, in leaf axils and at leafless nodes, 10–12 flowered, 12–20 mm across; peduncles 3–4 mm long, quadrangular; pedicels slender, 1–3 mm long, yellowish green; bracteoles scaly, lanceolate, ca. 0.5 mm long, light green. Flowers 4.5–6 mm across, pinkish blue; buds obtuse. Calyx campanulate, ca. 2.5 mm across, shallowly 4-lobbed, pale pink, disc rays faint. Petals 4, broadly obovate, ca. 1.5 × 2 mm, blue. Stamens 8, equal, incurved in buds; filaments slender, bluish, ca. 2.5 mm long; anthers curved, white, connective with a gland, ca. 1 mm long. Ovary unilocular, 5-ovuled, placentation free-central; style filiform, ca. 4 mm long, pinkish blue; stigma pointed. Berries globose, 7–8 mm across, greenish yellow, bluish black when mature. Seed 1.

**Phenology:** Flowering and fruiting occurs during September–April.

**Distribution & Habitat:** *Memecylon travancorense* grows in medium altitude evergreen forests at elevations of 700–760 m a.s.l. in Agasthyamala Biosphere Reserve. It is known from the Ponmudi Ghats of Thiruvananthapuram district, Kerala State and Keerippara of Kanyakumari district, Tamil Nadu. The populations in both the areas are small and fragmented.

**Etymology:** The specific epithet ‘travancorense’ refers to “Travancore”, the famous Princely Kingdom once ruled the high ranges of southern Western Ghats beyond south of Palaghat Gap, which is now recognized as one of the hotspot areas of the Western Ghats.

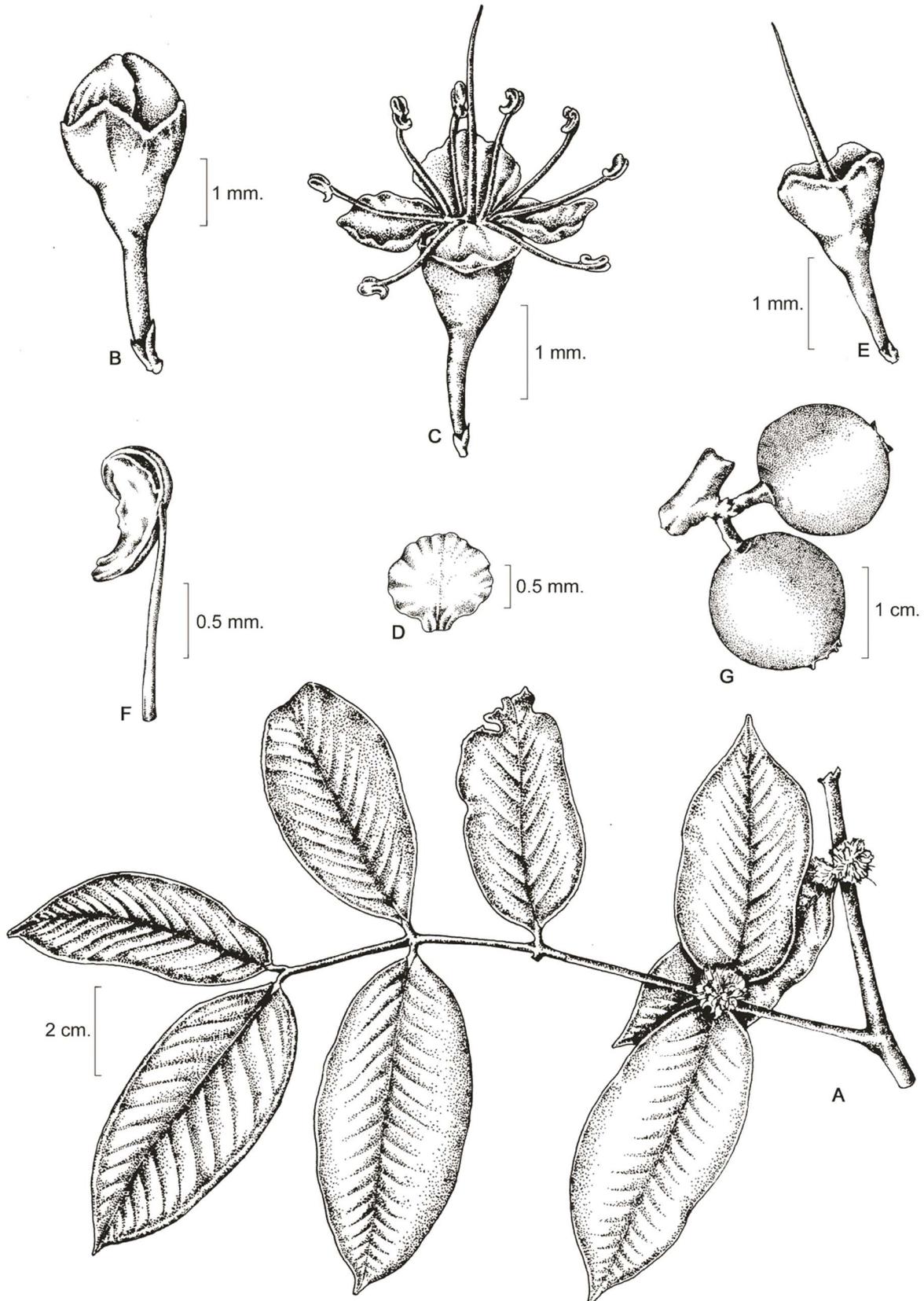
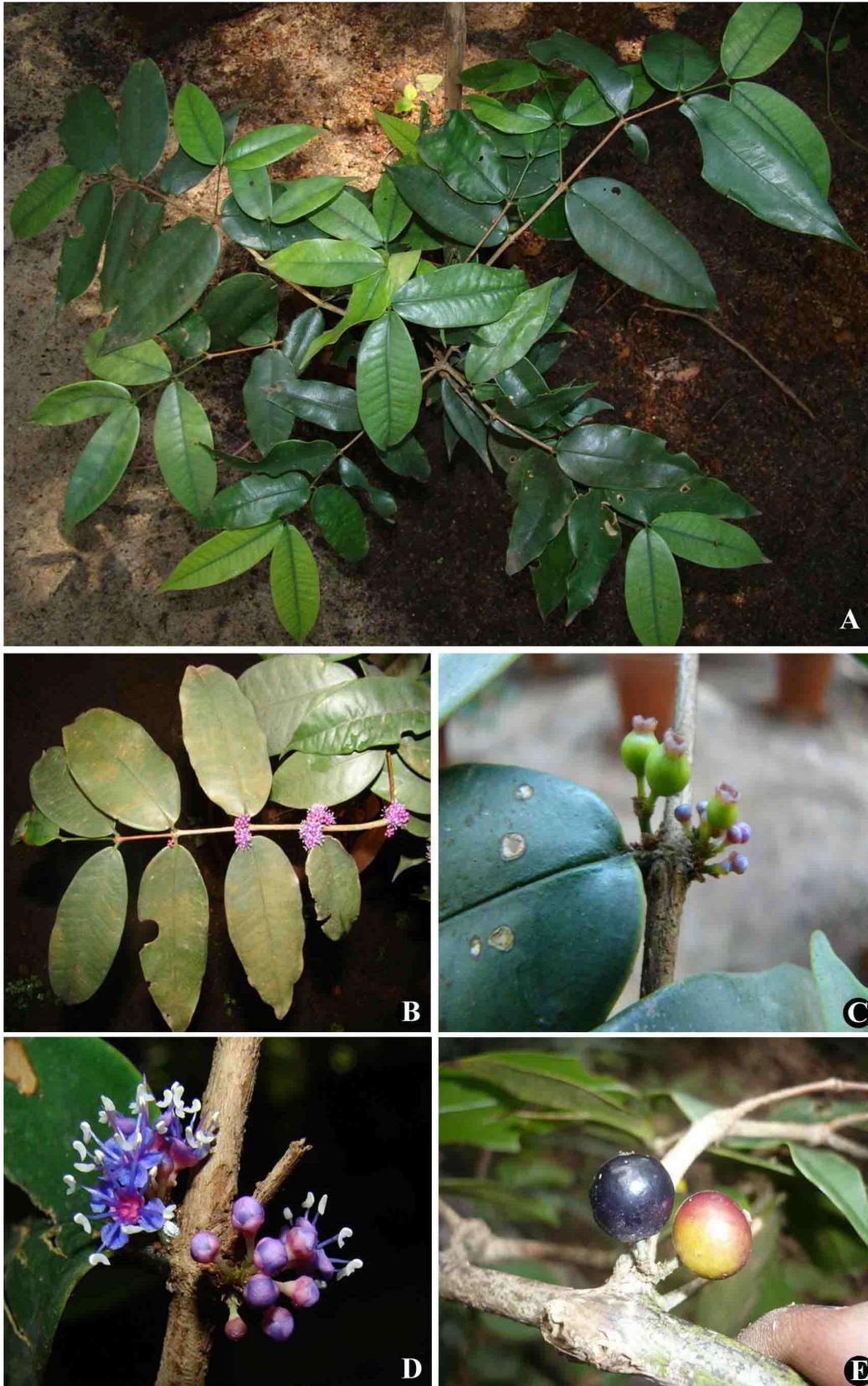


Fig. 1: *Memecylon travancorens* Sivu *et al.* sp. nov.; A. Habit, B. flower bud, C. A flower, D. Petal, E. Corolla tube, F. Stamen, G. Fruits.



**Fig. 2:** *Memecylon travancorense* Sivu *et al.* sp. nov.; **A.** Habit, **B.** A branch with flowers, **C.** Flower buds & young fruits, **D.** Flowers, **E.** Fruits.

**Table 1:** Comparison of morphological characters of *Memecylon travancorense* with the related species.

Characters	<i>M. travancorense</i>	<i>M. clarkeanum</i>	<i>M. heyneanum</i>	<i>M. wightii</i>
Habit	Under Shrub, upto 0.5 m tall	Shrub to small tree, upto 2.5 m tall	Shrub, upto 2 m tall	Shrub to small tree, upto 3 m tall
Branchlets	Sub-terete, greyish white Elliptic to oblong, margin	Sub-terete, brownish grey Elliptic to lanceolate, margin	Terete, brownish Lanceolate, margin	Winged, brownish grey Elliptic to ovate, margin
Leaves	entire 11-15 × 4-6 cm	slightly revolute 8-20 × 3-6 cm	entire 20-25 × 5-6.5 cm	revolute 4-8 × 1.5-3.5 cm
Petiole	ca. 2 mm long	7-8 mm long	8-10 mm long	Sessile
Leaf base	Rounded to slightly cordate	Cuneate and narrowed	Acute	Cordate and semi-amplexicaule
Leaf apex	Broadly acuminate	Acute to acuminate	Caudate to acuminate	Caudate to obtuse
Inflorescence	Umbels	Fascicles	Cymes	Fascicles
Peduncle	3-4 mm long	Absent	Absent	Absent
Pedicel	1-3 mm long, yellowish green	Absent	1-2.5 mm long, pink	3-5 mm long, green
Buds	Obtuse at apex	Acute at apex	Acute at apex	Obtuse at apex
Calyx tube	Campanulate, pale pink	Campanulate to cup shaped, yellowish or white	Campanulate, pink	Campanulate, pink or light green
Stamens	Filament blue, anther white	Filament yellowish white, anther yellow	Filament blue, anther pale pink	Filament and anther blue

**Conservation status:** Populations of the new species are fragmented, seen in medium evergreen forests at ca. 700 m elevations and represented by a few scattered mature individuals in two localities of Agastyamala Biosphere Reserve of the southern Western Ghats. In both localities there were only less than 50 individuals restricted to an area of 1 km<sup>2</sup>. Further field explorations are essential to have a thorough knowledge on range of distribution and assessment of status of the species; and hence as per IUCN categories and criteria (IUCN 2011) it is herein categorized as 'Data Deficient' (DD).

**Paratype:** INDIA, Tamil Nadu: Kanyakumari District, Keeripara Maramali forest area, ±760 m, 20 January 2010, Sivu, A. R., 63575 (TBGT).

**Relationships:** *Memecylon travancorense* sp. nov., resembles *M. wightii*, *M. clarkeanum* and *M. heyneanum* in general habit, venation and texture of leaves and shape and texture of petals. But the shape of the branchlets and leaf base, size of the petiole, peduncle and pedicel, nature of inflorescence and colour of the stamen etc. are mainly differentiate the new species from the allied species. *Memecylon travancorense* is having sub-terete branchlets, sub sessile leaves with slightly cordate to rounded leaf base, pedicellate flowers in umbel inflorescence with up to 4 mm long quadrangular peduncle and stamens with blue filament and white anther in contrast to winged quadrangular branchlets, sessile leaves with semi-amplexicaule leaf base, pedicellate flowers in fascicles and stamens with blue filament and white anther of *M. wightii*.

*M. clarkeanum* is having leaves with up to 8 mm long petiole and cuneate leaf base, sessile flowers in fascicles, and stamens with yellowish anther and *M. heyneanum* is having up to 1 cm long petioled leaves with acute leaf base, pedicellate flowers in cymose inflorescence,

stamens with blue filaments and pale pink anther. Peduncle is totally absent in *M. wightii*, *M. clarkeanum* and *M. heyneanum* (Table 1).

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