Research article

Memecylon pseudomegacarpum M.Hughes (Melastomataceae), a new species of tree from Peninsular Malaysia

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Abstract. A new species, Memecylon pseudomegacarpum (Melastomataceae), is described from southern Peninsular Thailand, Peninsular Malaysia and Singapore. This taxon was previously known under the misapplied name M. megacarpum, which is now considered endemic to Borneo. Memecylon pseudomegacarpum sp. nov. differs from M. megacarpum in having smaller leaves (8–)10.5–17(–22.5) cm rather than (10–)17–28(–35) cm long, with an elliptic lamina (not lanceolate) with a raised mid-rib (not sunken) and a marginal vein which is 2–4 mm from the margin (not 5–12 mm). Both species have similar flowers and share large (c. 15 mm diameter) globose fruits.

Keywords. Memecylon, new species, Malaysia, Singapore, Thailand.


Introduction

Memecylon L. currently contains 320 species (Renner et al. 2007) of small trees and shrubs found in the tropical forests of the Old World, with 33 species currently accepted from Peninsular Malaysia (Maxwell 1980; Wijedasa & Hughes 2012). During a revision of Memecylaceae (currently included within Melastomataceae (Angiosperm Phylogeny Group 2009)) for the new Flora of Peninsular Malaysia, the author has come across some taxa in need of description, and some names in need of synonymy or clarification (Wijedasa & Hughes 2012). Such a case is presented by the name Memecylon megacarpum coined by Furtado (1963) as a nomen novum for the later homonym M. pulchrum Cogn., the type of which is from Sarawak. Memecylon megacarpum was first applied to specimens from Peninsular Malaysia by Maxwell (1980). Material of this taxon had previously been misidentified under M. heteropleurum Blume (King 1900) which is now considered a synonym of M. excelsum Blume. Maxwell (1980) highlighted the distinctness of the taxon from M. excelsum, but also noted that the application of M. megacarpum was not certain as he had not seen the types of this name. Bremer (1983) examined the types during his revision of Bornean Memecylon, and observed that the ‘Malaya collections are not entirely similar to those from Borneo’. This prompted an investigation of all relevant herbarium material of Memecylon from Borneo and the Malay Peninsula, in order to review the application of the name M. megacarpum across the region, and decide whether a new taxon needed to be raised.
Fig. 1. Image of a syntype of *Memecylon megacarpum* Furtado [Beccari 1833 (FI)].
Materials and Methods

Herbarium specimens of *M. megacarpum* and other large-leaved species with conspicuous venation which are potentially confusable (*M. acuminatissimum* Blume, *M. excelsum*) were examined from throughout their range in Southeast Asia, from BM, E, FI, K, L, KEP, PSU and SING herbaria. Type material for all three names was also seen (*M. acuminatissimum*, Korthals s.n., K[2], L; *M. excelsum*, Blume s.n., L; *M. megacarpum*, Beccari 1833, FI, K (Fig. 1).

Results

The herbarium material previously identified as *M. megacarpum* could be sorted into two morphologically distinct groups based on leaf characters, corresponding with a distribution either in the Malay Peninsula or Borneo. The material from the Malay Peninsula does not match the types of the any of the other taxa studied, leading the author to the conclusion that it represents a new taxon. The species rank was chosen as there are four leaf characters (size, shape, mid-rib, marginal vein) which distinguish it from the otherwise florally similar *M. megacarpum*. A comparison of shared and differential characters for all four species is given in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Lamina shape</th>
<th>Lamina length</th>
<th>Mid-rib</th>
<th>Marginal vein, mm from margin</th>
<th>Fruit shape</th>
<th>Inflorescence</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>M. acuminatissimum</em></td>
<td>ovate-lanceolate</td>
<td>10–27</td>
<td>raised</td>
<td>1–3</td>
<td>ellipsoid</td>
<td>lax</td>
</tr>
<tr>
<td><em>M. excelsum</em></td>
<td>elliptic-lanceolate</td>
<td>13–28</td>
<td>sunken</td>
<td>3–8</td>
<td>ellipsoid</td>
<td>condensed</td>
</tr>
<tr>
<td><em>M. megacarpum</em></td>
<td>lanceolate</td>
<td>17–28</td>
<td>sunken</td>
<td>5–12</td>
<td>globose</td>
<td>condensed</td>
</tr>
<tr>
<td><em>M. pseudomegacarpum</em></td>
<td>elliptic</td>
<td>10.5–17</td>
<td>raised</td>
<td>2–4</td>
<td>globose</td>
<td>condensed</td>
</tr>
</tbody>
</table>

Table 1. Summary of diagnostic characters for *M. pseudomegacarpum* and similar species.

*M. pseudomegacarpum* M. Hughes, sp. nov.

*Memecylon pseudomegacarpum* M. Hughes, sp. nov.


Diagnosis

The new species, *M. pseudomegacarpum*, differs from *M. megacarpum* in having smaller leaves (8–)10.5–17(–22.5) cm rather than (10–)17–28(–35) cm long, with an elliptic lamina (not lanceolate) with
Fig. 2. Image of an isotype of *Memecylon pseudomegacarpum* sp. nov. [Wilkie et al. FRI172079 (E)].
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a raised mid-rib (not sunken) and a marginal vein which is 2–4 mm from the margin (not 5–12 mm); in floral and fruit characters the species are similar.

**Etymology**

Derived from the Greek *pseudo-*, meaning resembling but not equalling, and the epithet of the species *Memecylon megacarpum* (Latin; the large-fruited *Memecylon*).

**Type**

PENINSULAR MALAYSIA: Kelantan, Gunung Chamah, about 200 m on logging road above Camp Tengah, 5°10′48″N, 101°33′35″E, alt. 1240 m, 4 Aug. 2010, Wilkie, P., Ong, P.T., Imin, K. & Nazre *FRI72079* (holo-: KEp, iso-: E) (Fig. 2).

Other specimens examined


Description

Shrub or more usually a small to medium-sized tree, to 15 m high; bole to 15 cm diameter. Bark very thin, dark grey to brown, finely fissured. Branchlets brown, 2 grooved or slightly flattened on 2 sides, becoming terete when mature, internodes 3.5–11 cm long, demarked by a thin interpetiolar line. Leaves opposite, simple, glabrous; petiole 1–4 mm long, 2 mm wide; lamina stiff, glossy green above, drying dark brown and slightly paler reddish brown beneath, usually elliptic, sometimes elliptic-lanceolate, (8–)10.5–17(–22.5) × (4–)5–7(–9) cm; base obtuse or acute, usually c. 90°; margin entire; apex acuminate to shortly acuminate, acumen up to 15 mm long; mid-rib raised above, sometimes flattish, prominent below; venation pinnate, lateral veins visible and slightly sunken above, 14–16 pairs, prominent below and appearing quite straight and regularly spaced; marginal vein distinct, looping between the lateral veins, 2–4 mm from margin. Inflorescences axillary, either on older leafless branches or amongst the leaves, glomerulate with 5–15 flowers, total length c. 1 cm, glabrous; primary peduncles very short, 1–2 mm long, often arising from woody tubercles. Flowers bisexual; pedicels stout, c. 2 mm, 2 conspicuous triangular bracteoles sometimes present; ovary inferior, indistinct from the calyx; calyx initially sub-globose, very pale pink, 3–4 mm diameter, quite fleshy, becoming funnel-shaped and truncate at maturity with 4 short slits, minutely papillose; petals 8, very pale pink, triangular, c. 4 mm long, reflexed; anthers 8, with an elongated C-shaped blue connective, with a large and distinct centrally placed gland; style filiform, caducous, stigma minute. Fruits unilocular berries; stalk 2–3 mm long; berry large for the genus, globose, often very slightly flattened at the poles, 13–17 × 15–18 mm, slightly rough in texture; calyx remnant raised, 3–4 mm wide.

Distribution

Southern Peninsular Thailand, Peninsular Malaysia and Singapore (Fig. 3).

Conservation status

Least Concern. The species is widespread in Peninsular Malaysia and occurs in several protected areas.
Ecology

Common in primary or disturbed lowland mixed dipterocarp forest often on flat and poorly drained areas on riverbanks and valley bottoms, but also found on hillsides and ridges, from low altitudes to occasionally c. 1400 m in hill mixed dipterocarp forest or in peat swamp forest or on limestone hills.

Discussion

*Memecylon pseudomegacarpum* sp. nov. and *M. megacarpum* can be separated at a glance with a little experience. *Memecylon megacarpum* is much more easily confused with *M. excelsum* Blume when sterile as both have a sunken mid-rib, the latter being otherwise easily distinguishable by its smaller, ellipsoid fruits. The raised mid-rib is diagnostic for *M. pseudomegacarpum* sp. nov. and in Peninsular Malaysia is found in only one other species, *M. acuminatissimum* Blume, which differs in having ovate-lanceolate leaves, longer (5–8 cm) cymose inflorescences, and smaller, ellipsoid fruit (6–8 mm diameter). Currently *M. pseudomegacarpum* sp. nov. is known only from southern Peninsular Thailand, Peninsular Malaysia and Singapore. Although no specimens are known from Indonesia, it seems plausible that the
distribution could extend into that country via the Riau Islands and possibly eastern Sumatra. Images of cited specimens are available from Hughes & Wijedasa (2012).

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References


Berchtold B.V. von & Presl J.S. 1820. O přirozenosti rostlin, aneb rostlinár, obsahující: gedánj on živobytý rostlinném pro sebe a z ohledu gíných životů, podlé stawu nynějšjho znánj; k rozsijrěn přírodnictwj; w poatěnįj na užitečnost w rolnictwj, hospodářstwj, řemeslech, uměń i obchod w w wztahowįj obwįsįstnįj na lekařstwj. Enders, Prague.


Linnaeus C. von 1753. Caroli Linnaei ... Species plantarum :exhibentes plantas rite cognitas, ad genera relatas, cum differentiis specificis, nominibus trivialibus, synonymis selectis, locis natalibus, secundum systena sexuale digestas... Laurentii Salvii, Holmiae [Stockholm].


