

***MEMECYLON MAXWELLII* (MELASTOMATACEAE), A NEW SPECIES OF LIMESTONE ENDEMIC WOODY SHRUB**

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ABSTRACT

Memecylon maxwellii, a new limestone endemic species, is described here in honour of J. F. Maxwell. The conservation status is assessed to be critically endangered. A brief mention is made of the significance of Maxwell's specimen numbering system.

Keywords: J. F. Maxwell, Melastomataceae, *Memecylon maxwellii*, new species, endemic, Thailand, Limestone, critically endangered

INTRODUCTION

The genus of woody trees and shrubs—*Memecylon* Linnaeus (LINNAEUS, 1753: 359) (Melastomataceae) comprises 343 species in the Old World tropics (RENNER *ET AL.*, 2007). Taxonomic revisionary work has been carried out in parts of its natural range, such as Borneo, Peninsular Malaysia and is ongoing in Thailand, where about 40 species are believed to occur (BREMER, 1983; WIJEDASA & HUGHES, 2012; HUGHES & WIJEDASA, 2012; HUGHES, 2013). During ongoing taxonomic revision work for the Flora of Thailand, a specimen was found of a hitherto undescribed species, collected by James F. Maxwell from a limestone hill in southern Thailand in 1986.

James F. Maxwell worked extensively on the taxonomy of the Melastomataceae (WIJEDASA, 2017). He reviewed the genus *Memecylon* in Peninsular Malaysia and Singapore, as part of his Master thesis in the University of Singapore (MAXWELL, 1980, 1989). This new species is described here as *Memecylon maxwellii* in honour of Maxwell, who passed away while he was in the field in 2015 (WEBB *ET AL.*, 2016). A note on his unique specimen numbering system is also provided.

TAXONOMY

***Memecylon maxwellii* Wijedasa, sp. nov.**
(Figs. 1 and 3)

Type: Thailand, Phatthalung Province, See Bahm Poht, Khao Pu - Khao Ya National Park, alt. 350 m, 23 September 1986, with flowers, *J. F. Maxwell 86-699* (holotype PSU!, isotype BKF!).

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Received 9 April 2016; accepted 14 November 2016.

Diagnosis.—*Memecylon maxwellii* is unique among all known *Memecylon* species in Southeast Asia for its leaf shape, size, hanging down branches, small flowers and fruits and limestone hill habitat (Fig. 1). The flower of *M. maxwellii* is the smallest in the region and does not show similarities to any other known species in the region. The other species, having similar leaf size in the region, are *Memecylon pauciflorum* Blume and *Memecylon scutellatum* (Lour.) Hook. & Arnott. *Memecylon maxwellii* has a caudate leaf base and oblanceolate leaf, which differs from the rhomboid leaves of *M. pauciflorum*. *Memecylon maxwellii* has thin papery leaves, which differ from those of *M. scutellatum*, which are variable in shape, leathery and turn brittle on drying.

Description.—Shrub ca. 0.5–1 m tall with a bole diameter of 5–10 cm, bark rough with no fissures. All parts glabrous. Branchlets: young branchlets white, smooth, terete, drying rough dark brown when old. Leaves, opposite, internodes 1–2.5 cm apart; lamina spear-shaped, 2.5–5.5 × 1.2–2.3 cm, chartaceous, tapering towards apex, with an acuminate tip, base caudate, margin slightly recurved when dry, young leaves maroon, mature leaves dark green above, drying to light grey, light green below, drying to light brown, drying stiff and brittle; midvein raised above and below, drying lighter than lamina below, secondary and tertiary veins indistinct above and below; petiole 1–2 mm long, 1–2 mm diameter, light green, drying light brown. Inflorescences terminal and in axils on leafy branches and on old leafless branchlets; few flowered cyme, peduncle reduced to short stalk, up to 1 mm long. Flowers 1–3, white; pedicels short, up to 1 mm long; calyx yellow-green to cream, slightly undulating with no distinct lobes, 1–2 mm in diameter; ovary indistinct from pedicel; petals 4, ovate, 2–3 mm long and 3–4 mm wide, both upper and lower surfaces white; stamens 8, erect, surrounding style; filaments 8–10 mm long, white, anther 3–4 mm long, with linear connective, light brown, anther locules white, centrally placed anther gland cream; style 8–10 mm long, white. Fruits 1 or 2 per infructescence, globose, 1–1.5 cm × 1–1.2 cm, young fruits light green, turning reddish and ripening black, soft; calyx remnant 2 mm high.

Distribution.—Thailand, Phatthalung Province, See Bahm Poht, Khao Pu-Khao Ya National Park (Fig. 2).

Habitat and ecology.—On shaded slopes in primary forest on a limestone hill at 350 m elevation. Thin soil. Flowering and fruiting observed in May and September.

Etymology.—The specific epithet “maxwellii” is chosen in honour of J. F. Maxwell who first collected this species.

Vernacular name.—Phlong khimao, พลองขี้เมา, (“drunken man” in Thai after the drooping down branches of the tree).

Conservation status.—The only known population of this species is inside the Khao Pu - Khao Ya National Park, which was surveyed over two days. The species has never been collected outside of the type locality, which was confirmed after discussion with J. F. Maxwell. As per the IUCN Red List Criteria (IUCN, 2012), less than 20 individuals are known to exist. The currently known extent of occurrence (EOO) of this species is less than 5 km². Consequently, the species should be considered as Critically Endangered (CR), according to IUCN criteria D.

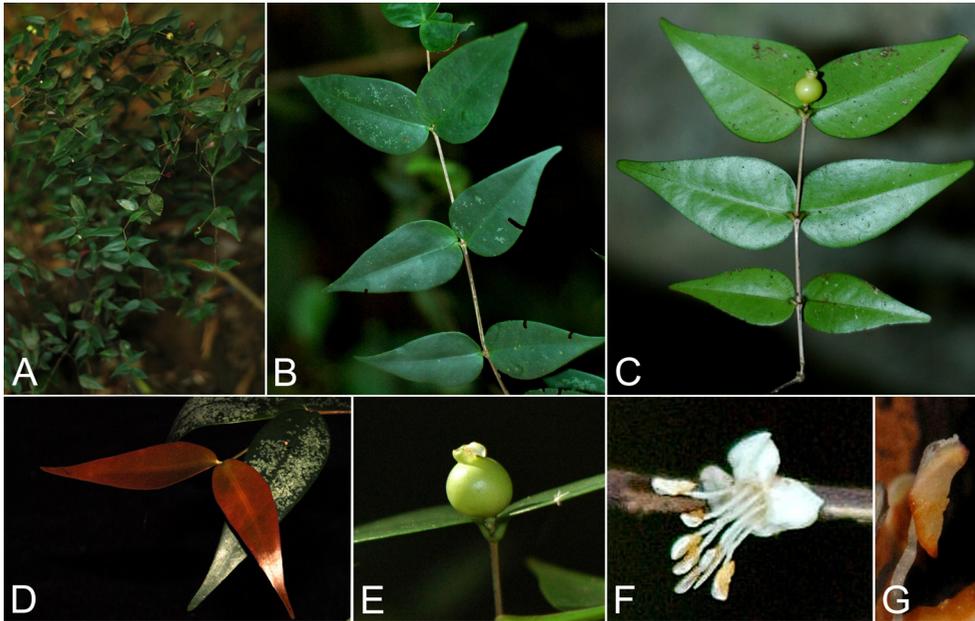


Figure 1. Photos of the *Memecylon maxwellii* at type locality (A–G). A, Partial photo of habit showing drooping down branches. B & C, Upper and lower side of leaves. D, Young leaves. E, Fruit. F, Flower. G, close up of anther. The photos (A–G) were taken on 13 May 2013 by Voradol Chumchumroom, Thaveechok Jurumscay and the author.

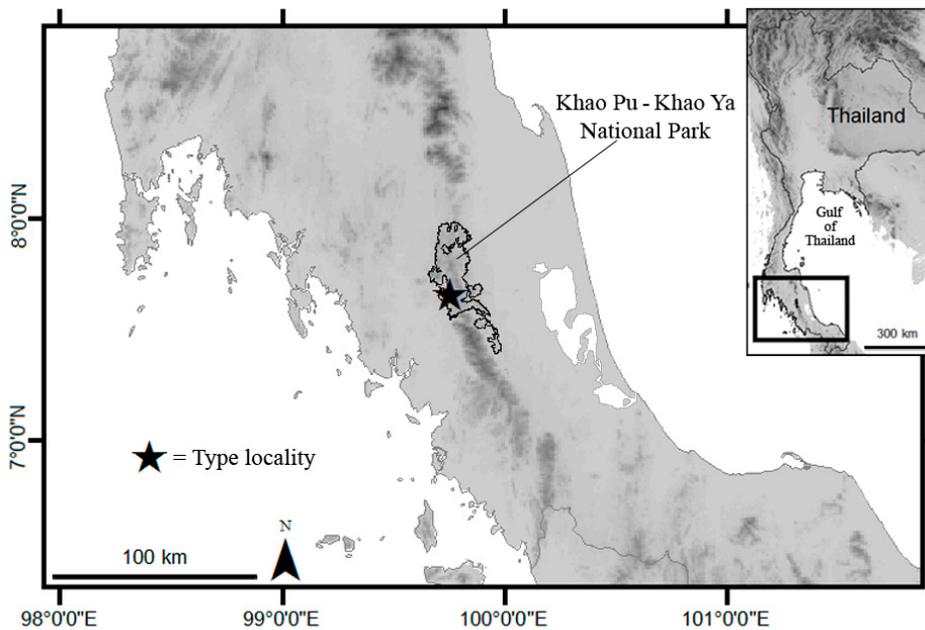


Figure 2. Distribution map of *Memecylon maxwellii*.

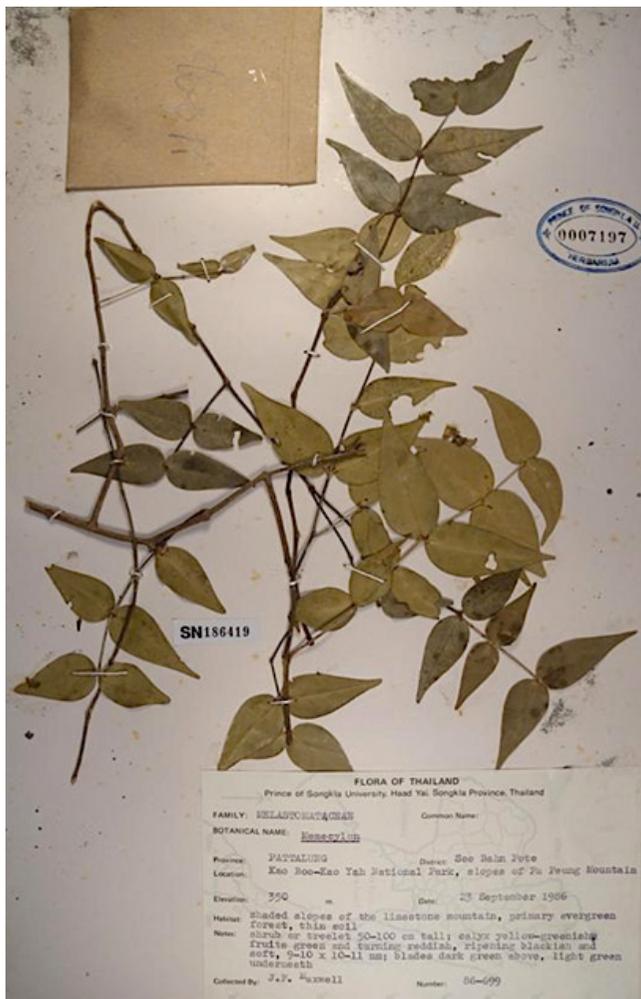


Figure 3. Type specimen of *Memecylon maxwellii* Wijedasa, sp. nov., Maxwell 86-699 (PSU).

NOTE ON MAXWELL'S SPECIMEN NUMBERING SYSTEM

Most plant collectors label their specimens using their name or initials, followed by a running number. The number continues throughout their botanical careers and provides a useful tool, when related back to their specimen collecting books. However, in the case of some collectors, who collect thousands of specimens throughout their careers, keeping track of specimens and plants they have seen may be confusing.

Max's numbering system differed from the conventional system in having the year first, followed by a running number, starting from 1 at the beginning of each new year. For instance, Max's collection number of 86-699 here would mean that it was specimen number 699 which he collected in year 1986.

While reviewing the genus for Thailand, it was found that Maxwell's specimen (*Maxwell 86-699*, BKF) was a hitherto undescribed species. The leaf and flower characters are distinct from all other species in the region. In 2013, the author, with assistance from the Forest Herbarium (BKF), visited the site to recollect the species. After an intensive search, a small population of less than 20 plants was found at the base of a slope.

When the re-discovery of this species was mentioned to Max, he asked what his specimen number was. After a few moments thinking, he immediately described the location where the population was found. This was 27 years after he had collected the species. His numbering system was his method of keeping track of plants he had seen in different places at different times of his career. To Max, his specimen numbering system was a permanent spatial, temporal record of plants he had seen and collected throughout his life.

ACKNOWLEDGEMENTS

I thank Dr. Rachun Pooma, Dr. Voradol Chamchumroom, Pachok Puudjaa, Thaveechock Jumruschay and BKF for facilitating field work. This study was funded by SING, National Parks Board of Singapore and the Lady Yuen Peng McNeice Graduate Fellowship.

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