A new endemic species of *Trigonachras* (Sapindaceae) from Sabah, Malaysia (Borneo)

SVEN BUERKI1*, CHRISTOPHER DAVIDSON2, JOAN T. PEREIRA3 & MARTIN W. CALLMANDER4, 5

1Jodrell Laboratory, Royal Botanic Gardens, Kew, Richmond, Surrey, TW9 3DS, U.K.
2Idaho Botanical Research Foundation, 637 Warm Springs Ave., Boise, Idaho 83712, U.S.A.
3Forest Research Centre, Sabah Forestry Department, P.O. Box 1407, 90715 Sandakan, Sabah, Malaysia.
4Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166-0299, U.S.A.
5Conservatoire et Jardin botaniques de la ville de Genève, ch. de l’Impératrice 1, case postale 60, 1292 Chambéry, Switzerland

*Corresponding author, email: s.buerki@kew.org

Abstract

A new species of *Trigonachras* from Borneo is described and illustrated. *Trigonachras postardanjeisin* is endemic to the ultramafic soils of the Tawai Forest Reserve in Sabah, Malaysia (Borneo). It is morphologically close to the widespread *Trigonachras acuta* but differs by its glabrous inflorescence and infrutescence axes and fruits. The two species also differ by their ecology and distribution. Line drawings are provided for the new taxa, along with discussions of its morphological affinities and preliminary risk of extinction assessment.

key words: new species, South-East Asia, taxonomy, ultramafic soil

Introduction

The Sapindaceae family (sensu Buerki et al. 2010, but slightly different from Acevedo-Rodríguez et al. 2011) is well diversified in Malesia with ca. 235 species classified into 42 genera, and constitutes an important element of the humid forests (Adema et al. 1994). The family is also important for the regional economy, including *Dimocarpus longan* Loureiro (1790: 233) and *Nephelium lappaceum* Linnaeus (1767: 125) (Adema et al. 1994). However, recent phylogenetic analyses based on plastid and nuclear DNA sequences have challenged the monophyly of several genera of Sapindaceae occurring in this area, e.g. *Arytera* Blume (1849: 169) and *Cupaniopsis* Radlkofer (1879a: 498) (Buerki et al. 2012a). This new evidence requires some additional taxonomic work to circumscribe generic delimitations within South-East Asian Sapindaceae. The authors, together with a team from the Sandakan Herbarium of the Sabah Forestry Department, have recently conducted fieldwork in Sabah, in the Malaysian part of Borneo, to expand their taxon sampling in Sapindaceae and Pandanaceae by collecting genera and species not included in their previous phylogenetic analyses (see Buerki et al. 2009 for Sapindaceae; Buerki et al. 2012b for Pandanaceae). During this fieldwork, an unknown collection of a large and locally dominant flowering tree of Sapindaceae (Buerki et al. 338) was collected in the Tawai Forest Reserve (Bukit Tangkunan) growing on ultramafic soil (Fig. 1). Further observations conducted at the herbaria of Sandakan (SAN) and Singapore (SING) allowed matching this specimen with a fruiting collection from the same locality (Leopold & Amin SAN 75360) in the genus *Trigonachras* Radlkofer (1879b: 116) and previously described by Leenhouts as *Trigonachras* sp. nov. A. (Leenhouts 1988: 207). In his taxonomic treatment of the Malesian genus *Trigonachras*, Leenhouts (1988) recognized eight species and three additional morphological entities—these entities were not formally described due to the incomplete material, notably missing flowers. However, Leenhouts (1988) and Adema et...