



A new species of *Barringtonia* (Lecythidaceae) from Thailand and taxonomic notes on *B. schmidtii*

WORANART THAMMARONG¹, PRANOM CHANTARANOETHAI¹ & PIMWADEE PORNPONGRUNGRUENG^{1*}

¹Applied Taxonomic Research Center, Department of Biology, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand

*Corresponding author: ppimwa@kku.ac.th

Abstract

A new species of *Barringtonia* (Lecythidaceae), *B. thailandica*, is described from eastern Thailand. This species resembles *B. acutangula* in habit, leaf and flower characters, but differs mainly by its ellipsoid-shaped fruit with eight ribs. Additionally, *B. schmidtii* is reinstated as an independent species and it can be distinguished from its closely related taxa *B. acutangula* by its swollen leaf base, tomentose rachis, hypanthium and sepals, yellow filaments as well as obovoid-shaped, 4-angled and puberulent fruit. *B. bicolor* and *B. badia* are conspecific with *B. schmidtii*.

Key words: IUCN; synonymy; taxonomy

Introduction

The genus *Barringtonia* Forster & Forster (1776: 75) is an Old World genus in the family Lecythidaceae. It is mainly distributed in the Malay Peninsula, Borneo and New Guinea (Prance & Jebb 2011, Prance 2012). This genus is a tree or shrub with simple leaves crowded at the end of the branches, with reddish or pinkish pendulous inflorescence except for erect inflorescences in some species (Chantaranoethai 2010). The diagnostic characters for species identification include hypanthium, fruits, calyx and the presence of pedicels. Most species of *Barringtonia* were found in freshwater swamps, along stream and a few species occur in upland forests up to 2000 m above sea level (Prance & Kartawinata 2013). Because of the incomplete material lacking of most important identification characters of leaf, flowers or fruits, the taxonomic status and species delimitation of some taxa are still uncertain. Therefore, additional taxonomic data and material are required to provide more accurate information for species delimitation.

The genus *Barringtonia* has been treated in the flora of various areas in Asia, 11 species recognized in the Malay Peninsula (Ridley 1922), 15 species in Malaya (Whitmore 1973), 20 species in Sabah and Sarawak (Pinard 2002), 10 species in Myanmar (Kress *et al.* 2003), 25 species in Peninsular Malaysia (Prance 2012), 61 species in Malesian Regions (Prance & Kartawinata 2013). The most recent revision of *Barringtonia* was done by Prance (2013), who reported 69 species throughout its distribution area.

The genus *Barringtonia* in Thailand was studied by several authors (Craib 1931, Chantaranoethai 1995, Pooma & Suddee 2014). Craib (1931) carried out a checklist and recorded 15 taxa. Chantaranoethai (1995) provided a preliminary revision with recognizing 11 species. Pooma & Suddee (2014) provided an updated checklist with 11 taxa. However, the complete account of the genus *Barringtonia* for Flora of Thailand is still under preparation.

During revising of Lecythidaceae in Thailand, a plant similar to *Barringtonia acutangula* (Linnaeus 1753: 471) Gaertner (1791: 97) was found from Yot Dom Wildlife Sanctuary, Ubon Ratchathani Province, but differs by its fruit characters. Accordingly, it is described below as a new species, *B. thailandica* W. Thammarong, P. Pornpongrungrueng & Chantar.

Moreover, based on extensive investigation on the herbarium specimens and type material from several herbaria as well as the field investigations, it is found that *B. schmidtii* Warb. ex Craib (1915: 332) should be a distinct species. It was previously treated as the synonym of *B. acutangula* subsp. *spicata* (Blume 1827: 1097) Payens (1967: 231) by many authors (Payens 1967, Prance 2013, Prance & Kartawinata 2013). It might be resulted by lacking of fruit of *B. schmidtii*. However, we found that they can be distinguished from each other by several characters especially fruit characters (Table 1). Thus, *B. schmidtii* is here reinstated as a distinct species. Moreover, we found two additional taxa, *B. badia* Prance (2010: 14) and *B. bicolor* Craib (1929: 118) resemble *B. schmidtii* in their morphology, thus these names are reduced here to the synonymy of *B. schmidtii*.