A monograph of the Anisophylleaceae (Cucurbitales) with description of 18 new species of *Anisophylea*

XIN CHEN¹, HAI HE²* & LI-BING ZHANG³*

¹ Department of Botany, College of Biology and the Environment, Nanjing Forestry University, 159 Longpan Rd., Xuanwu Qu, Nanjing, 210037, P. R. China
² College of Life Sciences, Chongqing Normal University, Shapingba, Chongqing 400047, P. R. China
³ Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, U.S.A. and Chengdu Institute of Biology, Chinese Academy of Sciences, P.O. Box 416, Chengdu, Sichuan 610041, P. R. China

*Authors for correspondence: e-mails: hehaicq@yahoo.com; libing.zhang@mobot.org

Magnolia Press
Auckland, New Zealand
XIN CHEN, HAI HE & LI-BING ZHANG

A monograph of the Anisophylleaceae (Cucurbitales) with description of 18 new species of *Anisophylea* (Phytotaxa 229)

189 pp.; 30 cm.

2 October 2015

ISBN 978-1-77557-809-3 (paperback)


FIRST PUBLISHED IN 2015 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: magnolia@mapress.com

http://www.mapress.com/phytotaxa/

© 2015 Magnolia Press

All rights reserved.

No part of this publication may be reproduced, stored, transmitted or disseminated, in any form, or by any means, without prior written permission from the publisher, to whom all requests to reproduce copyright material should be directed in writing.

This authorization does not extend to any other kind of copying, by any means, in any form, and for any purpose other than private research use.

ISSN 1179-3155 (Print edition)

ISSN 1179-3163 (Online edition)
Abstract


Key words: *Anisophyllea*, *Combretocarpus*, new species, lectotypification, pantropical, *Poga*, *Polygonanthus*, taxonomy

INTRODUCTION

Anisophylleaceae, a member of the order Cucurbitales (Zhang et al. 2006, 2007, Schaefer & Renner 2011), are a little-known pantropical family of trees and shrubs. Species of the family are widespread in tropical Africa, the Malay Peninsula, and tropical South America (Ding Hou 1958, Juncosa & Tomlinson 1988a, Zhang et al. 2007, Schwarzbach & Tomlinson 2008, Chen et al. 2013).

Anisophylleaceae are generally recognized to contain four genera, of which *Anisophyllea* R.Brown ex Sabine (1824: 446), the most diverse genus in the family, has been estimated to contain 10–30 species (King 1897, Engler & von Brehmer 1917, Juncosa & Tomlinson 1988a, Schwarzbach & Tomlinson 2008). However, no modern taxonomic revision of the family has ever been conducted and all the taxonomic works so far have been regional, such as those by Henslow (1878), King (1897), Ding Hou (1958), and Wong & Madani (1995) on the species of the Malay Peninsula, and those by Baker (in Oliver 1871), Engler & von Brehmer (1917), and Lewis (1956) on African species, and Chen et al. (2013) on Malagasy species. In this paper, we reviewed taxonomic history and evaluated taxonomic characters. Based on intensive examination of herbarium specimens and literature, we classify the family into 71 species in four genera: *Anisophyllea* with 67 species (18 of them are new), of which 30 are in Malesia, 26 in mainland Africa, five in Madagascar, and two in South America; *Combretocarpus* J.D.Hooker (in Bentham & Hooker 1865: 683) with one species in Borneo and Sumatra; *Poga* Pierre (1896: 1254) with one species in equatorial Africa; and *Polygonanthus* Ducke (1932: 345) with two in the Brazilian Amazon Basin. With 18 species new to science together with four we described last year (Chen et al. 2013) or approximately one third of the 71 species in the family being unknown, Anisophylleaceae are definitely among the least-known angiosperm families.

TAXONOMIC HISTORY

Taxonomic history of Anisophylleaceae

Traditionally, Anisophylleaceae were included in Rhizophoraceae as the subfamily Anisophylleoidae or the tribe Anisophylleae. Bentham & Hooker (1865) regarded *Anisophyllea* as the third tribe of Rhizophoraceae besides *Rhizophorea* and *Legnotidae*, and added *Combretocarpus* to the tribe. Bailey (1875, 1877) treated these plants...