



***Rafflesia verrucosa* (Rafflesiaceae), a new species of small-flowered *Rafflesia* from eastern Mindanao, Philippines**

DANILO S. BALETE¹, PIETER B. PELSER², DANIEL L. NICKRENT³ & JULIE F. BARCELONA^{2,4}

¹Department of Zoology, Field Museum of Natural History, 1400 S. Lake Shore Drive, Chicago, IL 60605, USA.

²School of Biological Sciences, University of Canterbury, Private Bag 4800, Christchurch 8140, New Zealand.

E-mail: pieter.pelsers@canterbury.ac.nz, barcelonj@hotmail.com.

³Department of Plant Biology, Southern Illinois University, Carbondale, IL 62901-6509 USA. E-mail: nickrent@plant.siu.edu.

⁴Philippine Native Plant Conservation Society, Inc. (PNPCSI), Ninoy Aquino Parks & Wildlife Center (NAPWC), Protected Areas and Wildlife Bureau (PAWB), Department of Environment & Natural Resources (DENR), North Avenue, Diliman, Quezon City, Philippines

Abstract

The new parasitic plant species *Rafflesia verrucosa* from Mt. Kampalili in eastern Mindanao (Philippines) is described, bringing the total number of Philippine *Rafflesia* to ten. *Rafflesia verrucosa* is the first small-flowered *Rafflesia* described from Mindanao Island, and differs notably from similar-sized species by the dense and prominently raised warts on the perigone lobes and diaphragm, the cup-shaped disk ornamented with dense pubescence on the abaxial surface, in the anther sulci and corona extending to the basal third of the disk exterior, the pleated, laminar and interconnected processes, the toroid annulus, and the extremely small and more numerous (20 or 21) anthers. Like *R. baletei* of Luzon, this new species has bisexual flowers. *Rafflesia verrucosa* is the third species found in the island of Mindanao where it occurs in montane forest from ca. 1300–1550 m., an exceptionally high elevation range for Philippine *Rafflesia*. It has the smallest flowers on average in the genus.

Key words: Mount Kampalili, eastern Mindanao, parasitic plants

Introduction

Rafflesia Brown (1821: 207; Rafflesiaceae) is a genus of endophytic holoparasitic plants growing in species of the liana genus *Tetrastigma* (Miquel 1863: 72) Planchon (1887: 423; Vitaceae) in tropical forests of Indonesia, Malaysia, the Philippines and Thailand. In his book on *Rafflesia*, Nais (2001) recognized 18 species, of which two, *R. manillana* Teschemacher (1844: 65) and *R. schadenbergiana* Göppert ex Hieronymus (1885: 3) are from the Philippines. Nine additional currently accepted species of *Rafflesia* have been described since Nais' landmark work. Seven of these are found in the Philippines (Barcelona & Fernando 2002, Fernando & Ong 2005, Barcelona *et al.* 2006, 2008, 2009a, Galang & Madulid 2006, Madulid *et al.* 2007; reviewed in Barcelona *et al.* 2009b), one was described from Sumatra (*R. bengkuluensis* Susatya, Arianto & Mat-Salleh 2006: 147), and one from Peninsular Malaysia (*R. azlanii* Latiff & Wong 2003: 137). These recent discoveries more than quadrupled the total number of known Philippine *Rafflesia* in less than a decade. Of the Philippine species, five are found in Luzon (*R. aurantia* Barcelona *et al.* (2009a: 18), *R. baletei* Barcelona *et al.* (2006: 232), *R. leonardi* Barcelona *et al.* (2008: 224), *R. manillana* and *R. philippensis* Blanco (1845: 565)), one in Samar (*R. manillana*), two in Panay (*R. lobata* Galang & Madulid (2006: 2) and *R. speciosa* Barcelona & Fernando (2002: 648)), one in Negros (*R. speciosa*), and two in Mindanao (*R. mira* Fernando & Ong (2005: 267) and *R. schadenbergiana*; Fig. 1). The previously known Mindanao species have the largest flowers among Philippine *Rafflesia*.