



PHYTOTAXA

12

Updated checklist of vascular plants of the Mbaracayú Forest Nature Reserve (Reserva Natural del Bosque Mbaracayú), Paraguay

MARIA C. PEÑA-CHOCARRO¹, CRISTINA ESPADA-MATEOS¹, MARÍA VERA², GLORIA CÉSPEDES² & SANDRA KNAPP^{1*}

¹*Department of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD, United Kingdom.*

^{*}*E-mail: s.knapp@nhm.ac.uk*

²*Fundación Moisés Bertoni, Casilla 714, Asunción, Paraguay.*



Magnolia Press
Auckland, New Zealand

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(*Phytotaxa* 12)

224 pp.; 30 cm.

18 Nov. 2010

ISBN 978-1-86977-601-5 (paperback)

ISBN 978-1-86977-602-2 (Online edition)

FIRST PUBLISHED IN 2010 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: magnolia@mapress.com

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

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ISSN 1179-3155 (Print edition)

ISSN 1179-3163 (Online edition)

Table of contents

Abstract	3
Introduction	3
Checklist	8
LYCOPODS	8
FERNS	9
SEED PLANTS	27
Acknowledgments	222
References	223

Abstract

The Mbaracayú Forest Nature Reserve (Reserva Natural del Bosque Mbaracayú) is one of the last remaining pieces of Atlantic forest remaining in eastern Paraguay, and the flora is composed of a mixture of tropical and temperate elements. We present here an updated checklist of the vascular plants of the Mbaracayú Forest Nature Reserve, which includes 1177 species (with 1 subspecies and 16 varieties) in 139 families and 605 genera. Four hundred and twenty three (423) of these are new records for the Reserve, 195 new records for the province of Canindeyú and 9 (with 1 subspecies) are new published records for Paraguay. Voucher specimens, local and general distribution details are provided for each taxon, and a brief analysis of the diversity and phytogeography of the flora is presented.

Key words: Atlantic Forest, biogeography, bosque Atlántico Interior, deforestation, new records

Introduction

The Mbaracayú Natural Forest Reserve (Reserva Natural del Bosque Mbaracayú) is situated in the northeastern part of the Oriental region of Paraguay in the department of Canindeyú between 55°20'–55°33'W latitude and 23°59'–24°16'S longitude. The reserve covers an area of approximately 600 km² and is largely covered with Atlantic Forest (bosque Atlántico Interior: FMB 1991; Selva Paranaense, Laclau 1994; Mata Atlántica, Davis *et al.* 1997). Most of the reserve lies between 140 and 150 m above sea level and a series of rolling hills known as the Sierra de Mbaracayú provides topographical relief.

In the 1980s the original area now occupied by the reserve (then much smaller than at present) was the property of the World Bank and during its tenure some parts of the forest were selectively logged for tropical hardwoods. In 1991, thanks to the efforts of many individuals and organisations (such as The Nature Conservancy) the area was purchased and passed to the Fundación Mbaracayú for management. At this time the Fundación Moisés Bertoni, a Paraguayan NGO involved in conservation throughout the country, undertook the management and protection of the reserve. With the help of private donations and the ceding of government controlled lands, the reserve has grown considerably from its original size. Between 1992 and 1994 approximately 6000 hectares of grassland, the “campos cerrados” known as Aguara Ñu, were incorporated into the area of the reserve.

Approximately 80% of the area of the Mbaracayú Reserve is covered with Atlantic Forest. This forest is a subtropical semideciduous wet forest (Hueck 1978, Keel & Herrera-MacBryde 1997) with a canopy height of approximately 30m. Depending upon the area of the reserve, soils are composed of clay-loam (near Jeju-mi) or are more sandy (near Karapa in the north, see Figure 1). Among the most common trees are ‘yvra ro’, *Pterogyne nitens* Tulasne (1843: 140), ‘yvyra pere’, *Peltophorum dubium* (Sprengel (1825: 343)) Taubert (1892: 176), ‘tajy jhù’, *Handroanthus heptaphyllus* (Vellozo (1829: 251)) Mattos (1970: 2), ‘urunde’y para’, *Astronium graveolens* Jacquin (1760: 33) and ‘yvyraro mi’, *Aspidosperma polyneuron* Müller Argovensis (1860: 57) (Marín *et al.* 1998). The understory is dominated by smaller trees of ‘ñandypa mi’, *Sorocea bonplandii* (Baillon (1875: 296)) W.C.Burger, Lanjouw & Wessels-Boer (1962: 465) and the introduced