

FIELD GUIDE TO

PHILIPPINE MANGROVES

J. H. PRIMAVERA, PH.D.



Philippine Tropical
Forest Conservation
Foundation, Inc.

ZSL
LIVING CONSERVATION

FIELD GUIDE TO PHILIPPINE MANGROVES

Mangrove species in this field guide are sorted by genera. Closeup photographs of distinctive features (leaves, flowers, fruits, bark, roots) are provided for visual comparison to facilitate identification of species.

J. H. Primavera, Ph. D.

Photos from:

Primavera JH, Sadaba RS, Lebata MJHL, Altamirano JP. 2004. Handbook of Mangroves in the Philippines - Panay. SEAFDEC/AQD and UNESCO, unless specified otherwise.

PREFACE

Awareness of mangrove importance, particularly for coastal protection, has grown among the general public over the past several years. In turn, this has led to numerous planting initiatives by various groups. However, most of these programs did not yield positive results mainly due to lack of science-guided protocols, particularly on what species to grow under certain conditions.

This field guide is an attempt towards broader awareness and appreciation of the common mangroves found in the Philippines. It is based on the original material, “Field Guide to Philippine Mangroves,” developed with support from the Pew Fellows Program in Marine Conservation and SEAFDEC

Aquaculture Department, and published by the Zoological Society of London-Philippines.

Seeing the vitality of this field guide, Philippine Tropical Forest Conservation Foundation, Inc. (PTFCF) partnered with ZSL-Philippines and Foundation for Communication Initiatives (FOCI) in repackaging this field guide for distribution to groups and individuals keen on mangrove rehabilitation. Together with the “Community-based Mangrove Rehabilitation Training Manual” and posters, this hopes to increase prospects of success for mangrove rehabilitation efforts, particularly in areas hit by Super Typhoon Yolanda, the most destructive typhoon ever recorded in modern history.

Acanthus

FAMILY ACANTHACEAE

FIELD GUIDE TO PHILIPPINE MANGROVES / *Acanthus*

Acanthus

Local names: lagiwliw, ragoyroy



Acanthus ebracteatus



Acanthus ilicifolius



Acanthus volubilis



Acrostichum

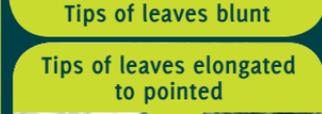
FAMILY PTERIDACEAE



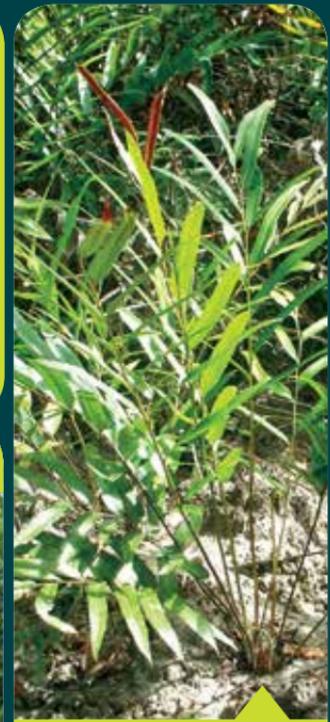
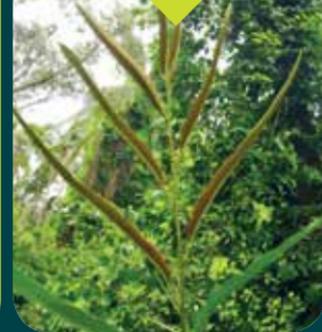
Acrostichum aureum
Local name: palaypay



Tips of leaves blunt



Tips of leaves elongated to pointed



Acrostichum speciosum
Local name: palaypay

Aegiceras

FAMILY MYRSINACEAE

FIELD GUIDE TO PHILIPPINE MANGROVES / *Aegiceras*



Aegiceras corniculatum

Local names: saging-saging, tinduk-tindukan



Fruits curved

Aegiceras

FAMILY MYRSINACEAE

Aegiceras floridum

Local names: saging-saging, tinduk-tindukan



Fruits straight

Avicennia

FAMILY AVICENNIACEAE

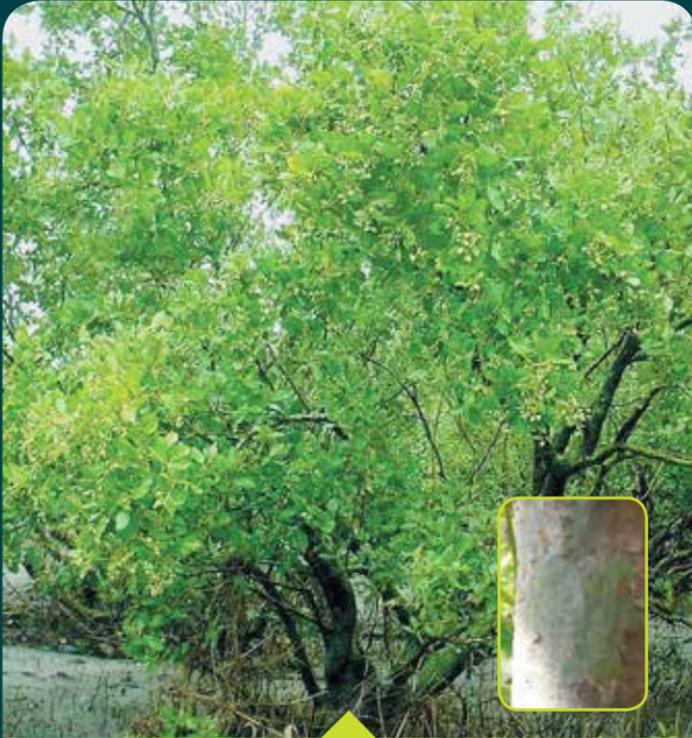
Avicennia alba

Local names: bungalon, apiapi, miapi



Avicennia

FAMILY AVICENNIACEAE



Avicennia marina
Local names: bungalon, apiapi, miapi



Avicennia

FAMILY AVICENNIACEAE

FIELD GUIDE TO PHILIPPINE MANGROVES / *Avicennia*

Avicennia officinalis

Local names: bungalon, apiapi, miapi



Avicennia

FAMILY AVICENNIACEAE



Avicennia rumphiana
Local names: bungalon, apiapi, miapi



Hairy, brownish leaf underside, hairy fruit



Brownlowia

FAMILY TILIACEAE

FIELD GUIDE TO PHILIPPINE MANGROVES / *Brownlowia*



Brownlowia tersa
Local name: maragomon



Bruguiera

FAMILY RHIZOPHORACEAE



Bruguiera cylindrica
Local names: pototan, busain



Bruguiera

FAMILY RHIZOPHORACEAE



Bruguiera gymnorrhiza
Local names: pototan, busain

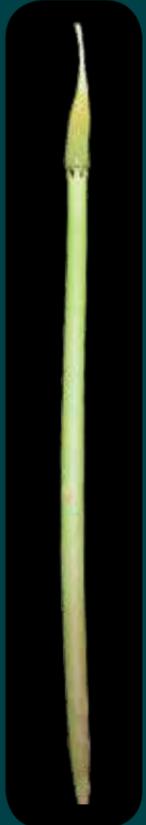


Bruguiera

FAMILY RHIZOPHORACEAE



Bruguiera parviflora
Local name: langarai



Bruguiera

FAMILY RHIZOPHORACEAE



Bruguiera sexangula
Local name: pototan



Camptostemon philippinensis
FAMILY BOMBACACEAE

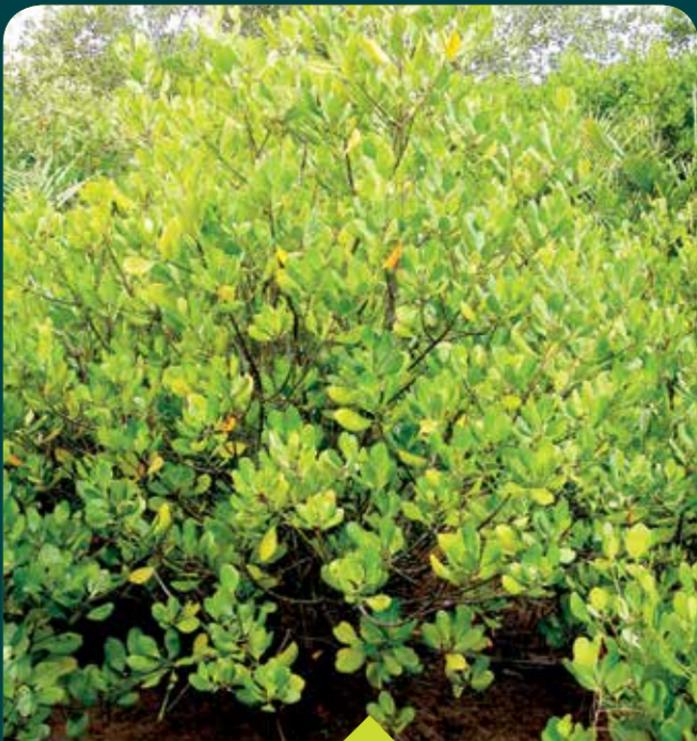


Camptostemon philippinensis
Local name: gapas-gapas



Ceriops

FAMILY RHIZOPHORACEAE



Ceriops decandra
Local name: baras-baras



Ceriops

FAMILY RHIZOPHORACEAE



Ceriops tagal
Local names: tungog, tangal



Excoecaria agallocha

FAMILY EUPHORBIACEAE



Excoecaria agallocha
Local names: lipata, buta-buta



Leaves with milky sap



Male flowers



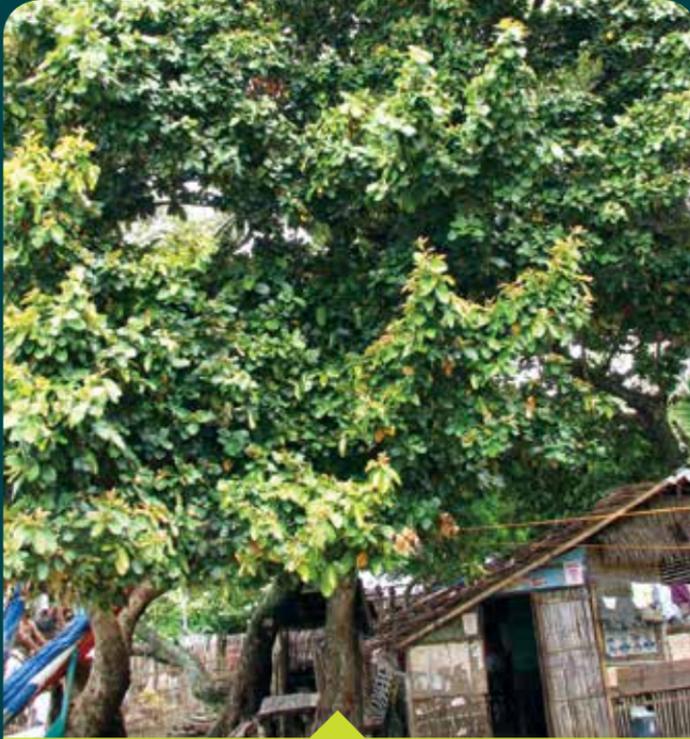
Fruits



Female flowers

Heritiera littoralis

FAMILY STERCULIACEAE



Heritiera littoralis
Local name: dungon



Leaves with light underside



Photo by: M. J. H. Lebata

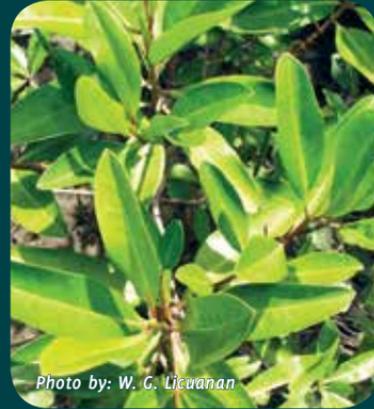


Kandelia candel

FAMILY RHIZOPHORACEAE

Kandelia candel

Found only in Baler and Casiguran Bay, Aurora



Lumnitzera

FAMILY COMBRETACEAE

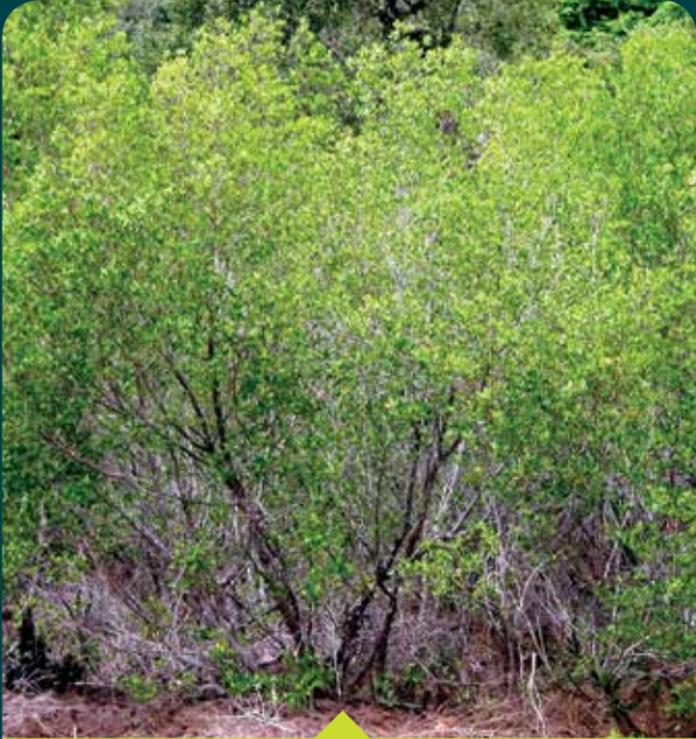
Lumnitzera littorea
Local names: tabao, culasi



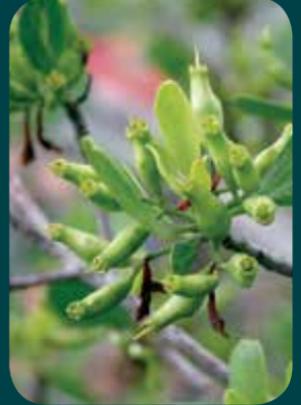
Lumnitzera

FAMILY COMBRETACEAE

FIELD GUIDE TO PHILIPPINE MANGROVES / *Lumnitzera*



Lumnitzera racemosa
Local names: tabao, culasi



Nypa fruticans

FAMILY ARECACEAE

Nypa fruticans
Local names: nipa, sasa



Osbornia octodonta

FAMILY MYRTACEAE



Osbornia octodonta
Local names: tawalis, bunot-bunot



Pemphis acidula

FAMILY LYTHRACEAE



Pemphis acidula
Local name: bantigi



Rhizophora

FAMILY RHIZOPHORACEAE



Rhizophora apiculata

Local name: bakhaw lalaki



Rhizophora

FAMILY RHIZOPHORACEAE



Rhizophora mucronata
Local name: bakhaw babae



Rhizophora

FAMILY RHIZOPHORACEAE



Rhizophora stylosa
Local name: bakhaw bato



Scyphiphora hydrophyllacea
FAMILY RUBIACEAE



Scyphiphora hydrophyllacea
Local name: nilad



Sonneratia

FAMILY SONNERATIACEAE

FIELD GUIDE TO PHILIPPINE MANGROVES / *Sonneratia*



Sonneratia alba
Local name: pagatpat



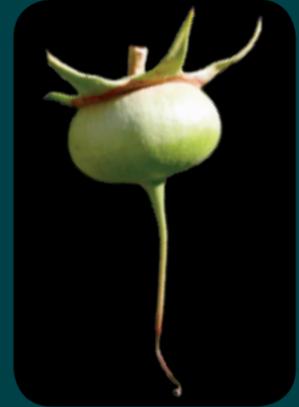
Sonneratia

FAMILY SONNERATIACEAE



Sonneratia caseolaris

Local name: pedada



Sonneratia

FAMILY SONNERATIACEAE

FIELD GUIDE TO PHILIPPINE MANGROVES / *Sonneratia*



Sonneratia ovata
Local name: pedada



Xylocarpus

FAMILY MELIACEAE



Xylocarpus granatum
Local name: tabigi



Xylocarpus

FAMILY MELIACEAE



Xylocarpus moluccensis
Local name: piag-ao



PTFCF'S FOREST AND COMMUNITY REHABILITATION PROGRAM

On November 8, 2013, Super Typhoon Yolanda (International name: Haiyan) hit the Philippines. It was the strongest and most destructive typhoon the country has experienced in recent history. It destroyed infrastructure, human habitations and livelihoods. To date, government authorities continue to validate the total death toll.

Super Typhoon Yolanda also left various ecosystems, such as mangrove and beach forests damaged.

In response to calls for support towards ecosystems rehabilitation, the Philippine Tropical Forest Conservation Foundation, Inc. (PTFCF) implemented its Forest and Community Rehabilitation Program. This program aspires to support efforts in the Yolanda-affected provinces of Capiz, Iloilo, Leyte, Eastern Samar and Northern Palawan by providing grants and technical assistance to people's organizations (POs) and non-government organizations (NGOs) for ecosystems assessment, capacity building, actual forest protection and rehabilitation activities, and advocacy campaigns, among others.

It was observed from assessments and field visits after Yolanda that many organizations are taking part in mangrove rehabilitation. The unfortunate truth however, is that some of these projects were against the natural growth and survival of mangroves. This prompted the PTFCF to partner with Zoological Society of London (ZSL)-Philippines and Foundation for Communication Initiatives, Inc. (FOCI) to implement a strategic communications project that aspires to disseminate the right information to the right people through proper knowledge management. Part of the project is this updated and enhanced Field Guide to Philippine Mangroves by J.H. Primavera, PhD.

This field guide is based on the original material, "Field Guide to Philippine Mangroves," developed with support from the Pew Fellows Program in Marine Conservation and SEAFDEC Aquaculture Department, and published by the Zoological Society of London.

This field guide, together with Community-based *Mangrove Rehabilitation Training Manual* and posters will be distributed in Capiz, Iloilo, Eastern Samar, Northern Palawan, and other Yolanda-affected areas.



Philippine Tropical
Forest Conservation
Foundation, Inc.

The Philippine Tropical Forest Conservation Foundation, Inc. (PTFCF) was established under two bilateral agreements between the governments of the United States of America and the Republic of the Philippines under the U.S. Tropical Forest Conservation Act (TFCA). PTFCF works towards biologically diverse Philippine forests that are sustainably managed and equitably accessible to responsible stakeholders by working with non-governmental organizations and community groups in forest protection, natural resource management, capacity building, research, livelihood support, coastal forest resource management, as well as sustainable use of diverse animals and plants.

From 2005 to 2014, PTFCF was able to support 383 projects, which effectively improved the management of approximately 1.5 million hectares of forest lands, restored approximately 4,200 hectares of forests through the re-introduction of appropriate native tree species, established over 40 community conserved areas in key biodiversity areas and critical watersheds, instituted over 60 community-level sustainable enterprises that provide additional income to community members, and increased awareness of forest conservation issues particularly the ecosystem services provided by the forests.

2/F Valderrama Building, 107 Esteban Street, Legaspi Village, Makati City 1223
Phone: +63 2 891-0595; email: admin@ptfcf.org; website: www.ptfcf.org



THE ZOOLOGICAL SOCIETY OF LONDON

The Zoological Society of London (ZSL), a charity founded in 1826, is a world-renowned centre of excellence for conservation science and applied conservation. ZSL's mission is to promote and achieve the worldwide conservation of animals and their habitats. This is realized by carrying out field conservation and research in over 50 countries across the globe and through education and awareness at our two zoos, ZSL London Zoo and ZSL Whipsnade Zoo, inspiring people to take conservation action. We strive to achieve our mission by:

- Conducting world-leading conservation science
- Implementing effective field conservation projects globally
- Providing decision-makers with the best possible conservation advice, and
- Building conservation capacity and inspiring people to connect with the natural world.

The Country Manager, Zoological Society of London-Philippines
48 Burgos St. La Paz, 5000 Iloilo City
Phone: +63 33 330-0929
website: www.zsl.org