



Biodiversity of
Tropical
Peat Swamp
Forests
of SARAWAK

EDITORS
JAYASILAN MOHD-AZLAN
INDRANEIL DAS

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Universiti Malaysia Sarawak
Kota Samarahan

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PREFACE

With the largest proportion of Malaysian peat swamp forest located in Sarawak, and their continued exploitation for a variety of purposes the need for substantial research on these threatened habitats and ecosystems has never been more urgent. Many of us here in Universiti Malaysia Sarawak continue to stride into peat swamp forests, especially the one within our campus, in our attempt to increase knowledge on its natural history. The results of some of these efforts have been compiled in the chapters of the volume that you hold in your hands.

As will be evident to the readership, a variety of approaches have been taken by the authors of the book. Jason Hon and J. Mohd-Azlan's essay extols the virtue of peat swamp forests, emphasizing their conservation importance. Siong Fong Sim presents results of her investigations of humic substances and the chemistry of humic substances of the tropical peat. Wong Sin Yeng provides a description of the Araceae portion of the peat swamp flora. Awang Ahmad Sallehin Awang Husaini, Mohd Hasnain Md Hussain and Hairul Azman Roslan propose the use of sago palm (*Metroxylon sagu*) as a starch, to bolster national food security. Within the zoological sciences, separate

contributions include investigations on endohelminth parasites of frogs at a degraded forest, by Ramlah Zainudin, Farliana Zulkifli and Fatimah Abang; ichthyological communities and their relationship with water quality in blackwater environments by Lee Nyanti, Ella Michael Dosi, Jongkar Grinang, Ling Teck-Yee and Khalid Haron; description of the avifaunal diversity of such forests by Mohamad Fizl Sidq Ramji, Mustafa Abdul Rahman, Andrew Alek Tuen, Bettycopa Amit and Khalid Haron and finally, an essay on wildlife conservation, with emphasis of its megafauna, by the editors.

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This modest volume commemorates the 23rd year of establishment of Sarawak's first university.

J. Mohd-Azlan and Indraneil Das

Kota Samarahan, 26 January 2016

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PEAT SWAMP FORESTS AND THEIR CONSERVATION IMPORTANCE

Jason Hon and J. Mohd-Azlan

INTRODUCTION

How well do we know about peat swamp forests? Arguably, the name combination itself has equated these forests to 'wet', 'smelly', 'dirty' and 'mosquito-infested' places that are unfit for humans. These are some of the common perceptions that are conceived by many, including researchers, and consequently, peat swamp forests are one of the least known of the lowland ecosystems in the tropics.

Globally, peatlands (areas with peat substance) cover an estimated 400 million hectares or three per cent of the earth's land surface (Strack, 2008). About 11 per cent of tropical peatlands are found in Malaysia, which is second to Indonesia that had till the recent past, 80 per cent coverage of tropical peatlands (Rieley *et al.*, 1996; Page *et al.*, 2006). In Malaysia, peat swamp forests form the largest of all wetland areas, accounting for 75 per cent of the total areas (UNDP, 2006). Within Malaysia, Sarawak comes out top with the largest peat

Biodiversity of Tropical Peat Swamp Forests of Sarawak



Peat swamps historically occupied vast areas of land and water in Sarawak State, East Malaysia. Yet, these environments remain poorly-known in terms of their biodiversity and potential for sustainable use. This volume is a compendium of papers on these topics, including the conservation importance of peat swamp forests; chemistry of humic substances of tropical peat, the Araceae of peat swamps; use of sago palm (*Metroxylon sagu*) to bolster national food security; assessment of infestation by endohelminth parasites of frogs at a degraded forest; the relationship between water quality and fish communities of blackwater environments; bird communities of peat swamp forests, and concludes a review of wildlife conservation, with emphasis of its megafauna, of this important habitat in Borneo.



Jayasilan Mohd-Azlan received his PhD from Charles Darwin University for his work on mangrove bird ecology. He is currently Head of the Department of Zoology, Universiti Malaysia Sarawak.



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