The Heart of Borneo Series 20

Monocotyledons Series 5

Monocotyledon Plants of

of Sarawak

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Published by
FOREST DEPARTMENT SARAWAK
Level 13, Left Wing, Bangunan Baitulmakmur II, Medan Raya
Petra Jaya, 93050, Kuching, Sarawak

The Heart of Borneo Series 20: Monocotyledons Series 5 - Monocotyledon Plants of Peat Swamp Forest of Sarawak

ISBN: 978-629-99294-4-4First Published 2024

Meekiong, K., Teo, S.P. & Nahrawi, H. (2024). *The Heart of Borneo Series 20: Monocotyledons Series 5 - Monocotyledon Plants of Peat Swamp Forest of Sarawak*. Forest Department of Sarawak, Kuching.

Printed in Malaysia by
CL Ting Corporate Sdn Bhd

Cover: *Cryptocoryne longicauda,* in its natural habitat, peat swamp forest in Samarahan.

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FOREWORD

The Heart of Borneo (HoB) Initiative is a voluntary transboundary conservation project that spans three nations (Malaysia, Brunei, and Indonesia) and covers approximately 220,000 square kilometers. The conservation of Borneo's unique biodiversity is a vital component of the HoB Initiative effort, as the region is home to numerous habitats and native species that are rare and often indigenous to the region. Among the habitats that depict the rich biodiversity in Sarawak are peat swamp forests. The peat swamp forests are one of the most threatened and vulnerable ecosystems which are poorly studied and least understood. Peat swamp forests which thrive on tropical peatlands store huge amounts of carbon as soil organic matter. Their stability is crucial for climate change being the largest near-surface reserves of terrestrial organic carbon.

The plant species richness of the peat swamp forests within the HoB area is reflected in the diversity of the numerous plant species depicted in this magnificent work, which is vital for conservation. The preliminary documentation recorded a total of 28 families, 90 genera, and more than 130 species have been documented in the peat swamp forests in Sarawak. I believe that with more work, the number of plant families and species in the peat swamp forests might be higher.

Special appreciation to the authors. They deserve much credit for the time and effort put into the success of this book published.

YBhg Datu Haji Hamden Bin Haji Mohammad
Director of Forests
Forest Department Sarawak

PREFACE

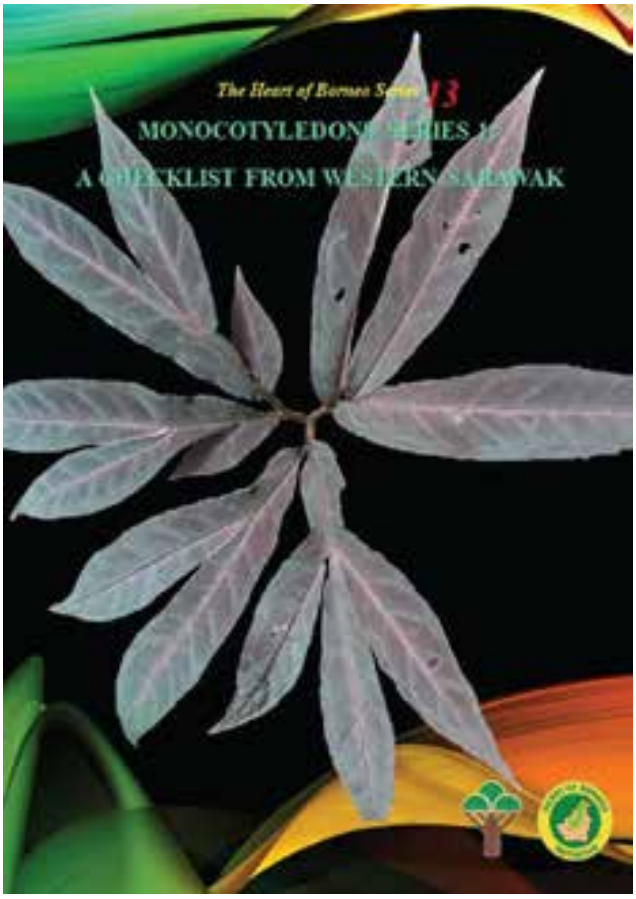
This is the fifth book in The Sarawak's Monocotyledon Plant Series publication under the Monocotyledon Plant Project. The Monocotyledon Plants of Peat Swamp Forests is a book that specifically on the selected common monocot plants found in the peat swamp forests of Sarawak, particularly in the Heat of Borneo areas. Other books in this Monocotyledons Series are, (1) A Checklist From Western Sarawak, (2) Gingers of Sarawak's Heart of Borneo, (3) The Genus Zingiber, and (4) Palms of Sarawak.

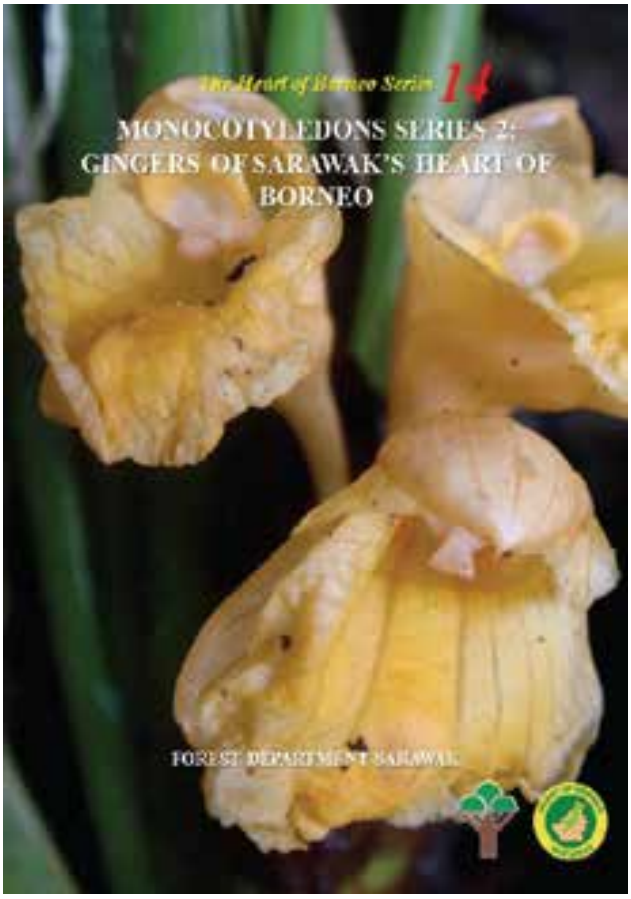
Preliminary documentation recorded a total of 28 families, 90 genera, and more than 130 species have been recorded in the peat swamp forests in Sarawak. The families Orchidaceae, Arecaceae, Araceae, Zingiberaceae, and Cyperaceae are very dominant.

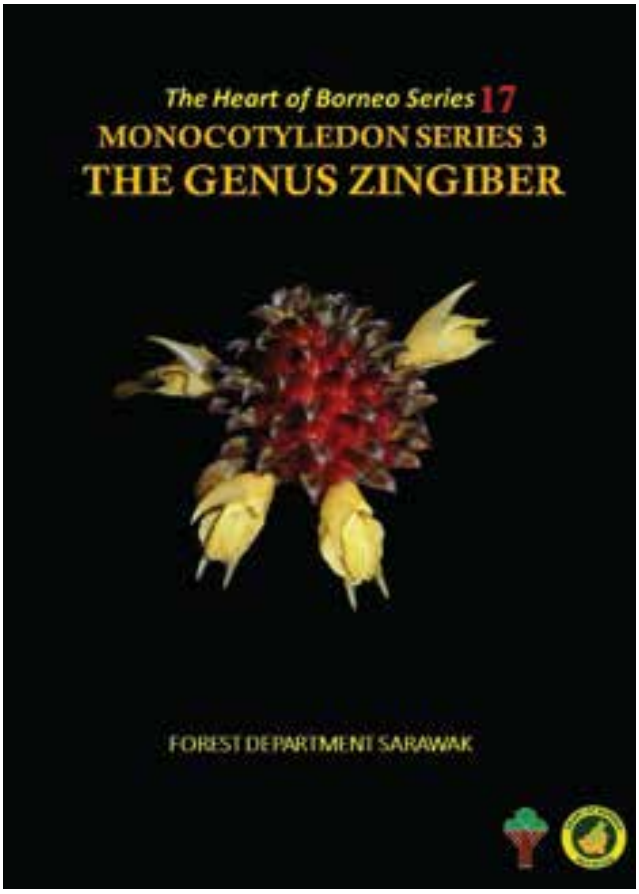
Our documentation on the Monocotyledon plants in Sarawak is beyond complete. Many works are needed, especially on the field excursions and sample collections.

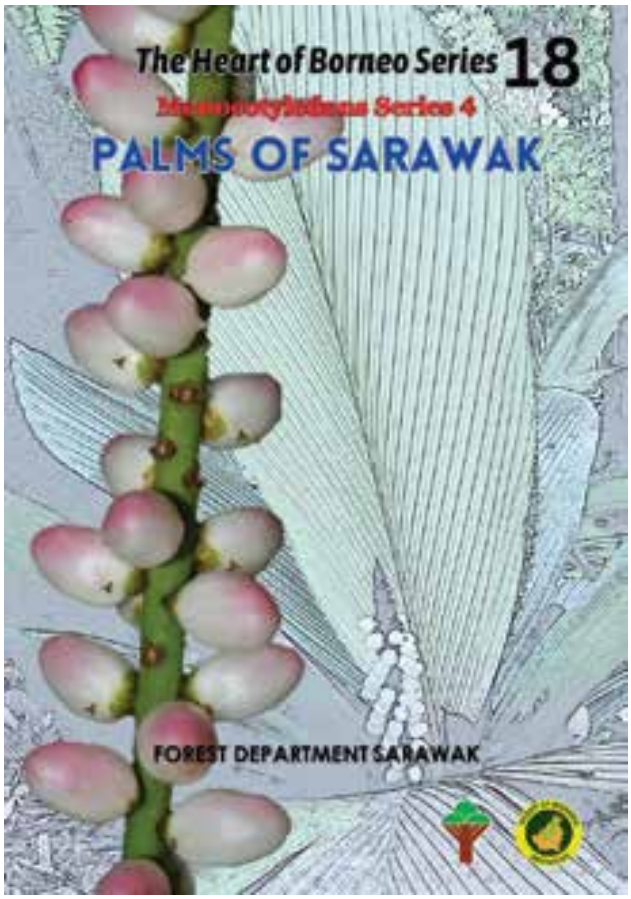
Authors.

The Heart of Borneo Series
(Monocotyledons Series)










HEART OF BORNEO SARAWAK
HEART OF BORNEO INITIATIVE
LEGEND
HOB BOUNDARY
DIVISION
BETONG
BINTULU
KAPIT
KUCHING
LIMBANG
MIRI
MUKAH
SAMARAHAN
SARIKEI
SERIAN
SIBU
SRI AMAN

What Is Heart of Borneo Initiative

Heart of Borneo (HoB) Initiative is a voluntary transboundary cooperation between Brunei Darussalam, Indonesia, and Malaysia to enable conservation and environmental protection while enhancing sustainable developments that improve the welfare of those living on the islands.

The three ASEAN nations cooperation was officially launched in Brazil on 27 March 2006. On 12 February 2007 the Minister of Natural Resources and Environment, Malaysia, Minister of Forestry, Republic of Indonesia, and the Minister of Industry and Primary Resources, Brunei Darussalam, signed and jointly issued a Declaration in Bali, Indonesia.

Because of the global concerns and controversy about tropical forest development, the long-term objectives of the HoB Initiative, as enshrined in the Bali Declaration are as follows:

“With one conservation vision and to promote peoples’ welfare, we will cooperate in ensuring the effective management of forest resources and conservation of the network of protected areas, productive forests, and other sustainable uses”.

FIVE PILLARS OF THE HEART OF BORNEO SARAWAK

1 Sustainable Forest Management

Focusing on maintaining the balance between forest and environmental protection

2 Ecotourism Based on Culture, Adventure & Nature

Focusing on developing the ecotourism living involving the local communities to promote conservation and enhance socio-economic well-being

3 Conservation of Biological Diversity

Focusing on the implementation of Conservation and Biological Diversity initiatives within the HoB areas

4 Sustainable Land Use/Agriculture

Focusing on sustainable development of rural communities through wise management of natural resources and agriculture

5 Community-Based/ Rural Poverty Eradication Program

Focusing on the welfare of rural communities through effective management of TPAs, production, forest and agriculture

ABOUT PEAT SWAMP FORESTS

The peatlands of Malaysia encompass around 2.6 million hectares (Mutalib et al. 2002). Sarawak has the largest peatland (65% organic matter by definition) in Malaysia, covering around 1.66 million hectares and accounting for 13% of the state's total geographical area (Wong, 1991; Ipor, 2006). They make up almost 70% of all the peatlands in Malaysia. The soil is spread coarse (basin peats) and poorly drained inner valleys (valley peats) in the lower stretches of the primary river and generally occurs between the lower courses of the main rivers such as Batang Saribas, Batang Lupar, Batang Baram, Batang Rajang, and its distributaries. The largest peat swamp forest areas are contributed by the Sibu Division, followed by Sri Aman, Miri, Kota Samarahan, Sarikei, and Bintulu. Kuching Division has the smallest peat area with a total of 23,049 ha.

Peat swamp forest is the most heavily exploited and least studied forest type in Sarawak (Whitmore, 1995), owing to its easy access and the presence of highly valuable timber species such as Ramin (*Gonystylus bancanus*), Alan (*Shorea albida*), Jongkong (*Dactylocladus stenostylus*), Meranti buaya (*Shorea uliginosa*), and many more (Lee, 1991; Ipor, 2006).

Distribution of lowland peatlands in Malaysia (Source: Department of Agriculture Malaysia, 2002; Department of Irrigation and Drainage Sarawak, 2014; Melling, 2016)

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