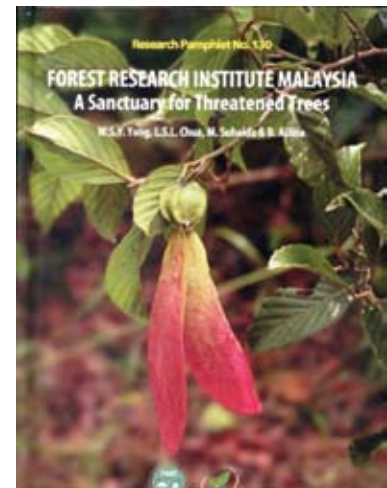


BOOK REVIEW

Forest Research Institute Malaysia: A Sanctuary for Threatened Trees. WSY Yong, LSL Chua, M Suhaida & B Aslina. Research Pamphlet No. 130. Forest Research Institute Malaysia. 2011. 91 pp. ISBN 978-967-5221-56-9. RM50/USD38.

The Forest Research Institute Malaysia (FRIM) is renowned as Malaysia's premier repository of live native plants by the botanical world. It is heartening to know that this book has been published recently showcasing the conservation and botanical work of FRIM and a selection of the threatened trees that is currently thriving there. This publication will be a convenient summary checklist of the endangered native collection, namely, the Dipterocarpaceae collection, held at FRIM for botanical researchers as well as for general visitors to this large botanical park.

The introduction chapter comprehensively summarises the history of FRIM which is now over 85 years old. The authors made references to a couple of its important projects, developments and outcomes in its conservation effort of Malaysian native flora. Since the formation of FRIM in 1925, this institution has continued to conserve its botanical research work which forms a strong indispensable support to other research thrusts, such as silvicultural research, ethnobotanical research, ecological and conservation biology. The book highlighted the continued botanical inventories and expeditions that had been carried out by staff over the years which include amassing both indigenous and exotic species in a concerted effort to fulfil Malaysia's commitment to the Convention on Biological Diversity (CBD) and the Global Strategy for Plant Conservation (GSPC) targets. The expansion of the arboreta since 1925 to include other defined collection areas besides the Dipterocarp and Non-Dipterocarp Arboreta, such as the Monocot Garden, Fruit Tree Arboretum, Coniferatum, Bambusetum, Ethnobotanical Garden and the Kepong Botanic Garden, is useful information to allude to the various growing sections of FRIM's land for *ex situ* conservation. It was unfortunate that the authors had not given an estimated hectareage of the FRIM property to



provide readers with a sense of its size and collection held, as this would have been useful to encapsulate FRIM's holding capacity and surmise its current and potential collection as a sanctuary of native flora.

The book also provides location maps of FRIM's Arboreta (Map 1) and its Botanic Garden (Map 2) but regrettably the reproduction of the maps were too small in size and made reading and locating items difficult. Map 1 is an aerial image and this is not informative if the reader intends to use this map to navigate around FRIM grounds to locate the various arboreta. A simple outlined map similar to Map 2 would have been more appropriate and useful. In the introduction, Table 2 showing the number of threatened tree taxa conserved at FRIM and the various IUCN category ratings was handy in giving readers a brief summary of the threatened trees which totalled 73 species. On further scrutinising the figures, one would notice that the majority of the threatened genera highlighted in the FRIM collection were that of the Dipterocarpaceae with a smattering of other genera belonging to seven other families. It was surprising that other important families in the Malaysian native flora such as Myristicaceae, Myrtaceae, Euphorbiaceae, Burseraceae, Rutaceae and Leguminosae seemed to be missing in FRIM's living collection of threatened species. Many of the species from these mentioned families are of economic and commercial importance. Hence, it would have been appropriate for authors to mention future work or plans on conserving specific threatened species belonging to other families besides the Dipterocarpaceae that are currently not in the FRIM's collection. The authors should also have tried to explain the rather bias collection figures towards the Dipterocarpaceae in FRIM's list of threatened species and help

readers to understand the hurdles and causes of the specificity of FRIM's *ex situ* conservation collection. The concerted efforts in early 2000 to build the collection mentioned by the authors fall short of actually documenting the rare and/or threatened plants that are said to be currently in the nursery awaiting planting into the various arboreta. A listing of some of the rare and/or threatened species in the nursery would have been excellent to showcase the extensive conservation efforts of FRIM staff in recent years.

The next chapter entitled The Species highlights all 73 threatened species (66 Dipterocarpaceae and 7 non-Dipterocarpaceae) which are arranged alphabetically according to the genera. The write-up on each species included accepted scientific name, a short description, location of tree(s) at FRIM, the distribution range map in Malaysia, the vernacular names, the family, and the conservation status along with relevant photographs. The layout of the write-up is well organised and it is easy to decipher and glean important information rapidly. The descriptive text of each species is brief and not too lengthy to lose reader's interest. It was probably the intention of the authors to use the photographs to act as a quick visual identification kit rather than using mere words. As the saying goes, "A picture is worth a thousand words". However, the only drawback of this is when some of the photographs were not sharp or did not provide enough details for identification of the species. Some of the obvious poor phototgraphs were as follows:

- p 48, *Shorea bentongensis* Foxw (Dipterocarpaceae)
- p 54, *Shorea gratissima* (Wall. ex Kurz) Dyer (Dipterocarpaceae)
- p 74, *Shorea stenoptera* Burck (Dipterocarpaceae)

Another noted minor inaccuracy is the taxonomic families quoted for some of the species which are no longer considered suitable with the wider acceptance of the Angiosperm Phylogeny Group III (APG III) classification. Although granted in the text, the authors did not state the classification system they had opted to use. For instance, under APG III classification, *Hydnocarpus filipes* Symington ex Sluemer would be placed under Achariaceae rather than Flacourtiaceae (a 'defunct' family) and *Kostermansia malayana* Soegeng is placed in the subfamily Bombacoideae under Malvaceae rather than in Bombacaceae.

Barring all the minor flaws, on the whole, this book will be an easy-to-understand and user-friendly reference guide for the laymen and researchers interested in endangered Malaysian native species particularly those belonging to the Dipterocarpaceae. The indices of scientific and vernacular names at the end of the book are useful for the readers to hone in on species of interest found at FRIM. The collection of photographs should be applauded as this is not an easy task to accumulate due to the rarity of the plants and height of the trees. Having numerous species photographs of the important timber family, the Dipterocarpaceae, definitely enhances this book as a handy general reference and pictorial guide to threatened Malaysian dipterocarps held in FRIM.

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