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Book Reviews

N. E STORK, J. ADIS & R. K DIDHAM. (eds). *Canopy arthropods*. 1997. Chapman & Hall, London, UK. xvi + 567 pp. ISBN 0 412 74900 9. Price £85.00 (hardback)

Canopy Arthropods is a collection of 27 chapters contributed by 48 authors, written for the scientific community it will be particularly useful as a basis for discussion among graduate students. The contents of the chapters vary, but the main theme of the book is about the usefulness of canopy fogging. In 1975 and 1976 insects were sampled in the canopy of one species of Panamanian forest tree by Montgomery, Lubin and Boreham, using this technique. Since then fogging has taken off as a major method in the study of canopy arthropods, because of the large species-rich samples that can be obtained. The problem was, and to a certain extent is, what to do with such samples. The species collected could provide a major step forward in our knowledge of the extant insects and their evolutionary interrelationships, if only taxonomy were more popular in the eyes of funding agencies. Ecological questions also can only be properly studied if sufficient taxonomic knowledge is available to sort the samples, or part thereof, to at least morphospecies as sampling to the family or order level is next to useless. Now, after 20 years, *Canopy Arthropods* takes a hard look at the problems involved and puts canopy fogging and other canopy study techniques in perspective. The ecological take-home messages from canopy studies are not always clear, but comparing the various chapters produces useful ideas and the editors devote a good final chapter to this very subject. In summary, the book is superbly suitable for looking back at the studies of canopy arthropods done in the past and for pondering about the future.

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A. G. JOHNS. Cambridge University Press. xxi+225 pp. ISBN 0 521 57282 7. Price £40 (Hardback). *Timber production and biodiversity conservation in tropical rain forests*. 1997.

Johns quite rightly points out that when he began his work in the early 1980s the impact on its animals of logging a tropical rain forest was unknown. The heart of this book is an update of the results from his long-term studies in Peninsular Malaysia, interpreted jointly with work elsewhere by him and others. The overall thesis has become familiar: logging alone does not destroy the forest and most vertebrates survive, although in changed numbers and guild composition. The fewer results for invertebrates show that, for these too, conservation is compatible with a degree of timber harvesting. This corpus of work underpins the now widely accepted position that production forests can play a major role in biodiversity conservation. The book makes this case very lucidly.

This excellent review is set in context by chapters on contemporary human impact on tropical forests, the history and development of tropical forestry, and a summary of how logging alters the forest. It concludes with a consideration on measures of various kinds necessary to help conserve biodiversity in timber production forests.

Unfortunately, once away from the author's main expertise, the book suffers from the difficulty of keeping up-to-date that rain forest scientists now increasingly suffer. For example, the extent of various kinds of tropical moist forest and rates of deforestation rely on earlier sources than the latest global assessment (FAO 1993). Industrial tree plantations have become much more important in the 1990s than the author realises, e.g. in Indonesia. The account of climatic change makes no use of the important recent synthesis (Watson *et al*. 1996). The considerable demonstration of and serious interest in low impact harvesting, a phenomenon of the mid 1990s, is not mentioned. I suppose to a rival author these lapses should be considered good news, as readers will also need to refer to Whitmore (1998). However, I strongly

recommend this book for its measured, critical, account of what is known about animals in logged rain forest.

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FAO 1993. Forest resources assessment 1990. Tropical countries. *FAO Forestry Paper* 112.
WATSON, R. T., ZINYOWERA, M. C., MOSS, R. H. 1996. (eds.) *Climatic change 1995: impacts, adaptations and mitigation of climate change: scientific-technical analysis*. Cambridge University Press, Cambridge.
WHITMORE, T. C. 1998. *An introduction to tropical rain forests*. 2nd edition, Clarendon, Oxford.

M. M. J. VAN BALGOOY. Malesian seed plants. Volume 1 – Seed characters: An aid for identification of families and genera. Rijksherbarium/Hortus Botanicus, Leiden, The Netherlands. 154 pp. ISBN 90-71236-31-5. Price Dfl. 50.00 (softback).

Experts in the taxonomy of tropical plants are scarce and frequently overworked, so in naming their notoriously inadequate collections the herbarium provides the best hope to ecologists. But where to start when there may be hundreds of thousands of specimens to look through to find a match. Dr van Balgooy has spent much of his career at the Rijksherbarium in Leiden naming plant collections, mostly from Malesia. In this book, the first of three proposed volumes, he provides a list of suggestions of where to begin the herbarium search. His compendious crib-sheet lists 105 different character states (from cushion plants to ruminate endosperm) with genera or families of Malesian seed plants that exhibit each state. The characters chosen are ones discernible from herbarium specimens or collection notes – not proper field characters. The author does not provide any descriptions of taxa. Confirmation of identity is an exercise for the reader. Therefore this publication is not a major advance in plant identification for Malesia, but nevertheless it will be occasionally useful, and certainly all herbaria with Malesian material should have a copy available for reference. The production of this volume is of the high standard we have come to expect of the Rijksherbarium in-house publications, but the contents are not as yet error free. There are genera not listed that fit some of the characters e.g. *Leea* has multiply pinnate leaves, *Peltophorum* winged fruits and *Alsomitra* winged seeds. The explanatory text is so brief as sometimes to be ambiguous, for example, does the presence of stem and leaf emergences (prickles) make a plant armed? Are palmately lobed leaves included in the palmately compound category? The rare *Cannabis* with lobed leaves is included, but the ubiquitous *Manihot* with similar leaf form is not. Why sometimes *Eugenia* and other times *Syzygium*? Why *Symingtonia* and not *Exbucklandia*? Hopefully feedback from users will allow improvements to be made.

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