

## BOOK REVIEWS

**Trees of the Balikpapan-Samarinda Area, East Kalimantan, Indonesia. A manual to 280 selected species.** P. J. A. Kessler & K. Sidiyasa. Tropenbos Series 7. Wageningen, The Netherlands: The Tropenbos Foundation. 1994. 448pp, incl. 200 full-page line drawings. ISBN 90 5113 019 8. Dutch Guilders 95 (paperback).

This is a well-produced local flora of 280 tree species which will be an invaluable introduction to many of the trees of East Kalimantan (Eastern Borneo). It is essentially modest in its aims and is targeted chiefly at foresters, allowing them to name to species level most of the economically important trees in the area designated. It further allows identification to generic level of many of the other trees.

The keys are the best feature of the book, a synoptic key to families allowing easy access using the most convenient characters of purely vegetative parts — a real gift to ecologists and those doing inventory work. This is followed by a dichotomous key to genera (rather than to families) which is a useful first breakdown into what are probably the most recognizable units. The genera are all then dichotomously keyed at the start of each family and many of the species at the start of the genera. The emphasis throughout is on the use of vegetative characters and distils the authors' considerable experience of the East Kalimantan forests, and will be invaluable to foresters with a good command of English.

Nearly half the book consists of very clearly executed line drawings which are mostly good and lifelike, although one can occasionally fault the artist for not bringing out important characters such as the prominent persistent styles of *Ilex cymosa* (Fig. 17) or the twist on the fruits of *Koompassia malaccensis* (which are wrongly shown as erect, rather than pendent). It is good to have nearly 200 species illustrated, but a pity that there is so much wasted space. The species are not all drawn to the same scale and several of the plates could easily have been amalgamated. Fig. 82 *Vatica rassak*, for instance, occupies less than half the page and could have been fitted in with *V. pauciflora* with just a little juggling. Saving space is important in a book which should be taken into the field and a more compact, pocket-sized, format need not have lost anything in content or clarity.

The glossary is rather less than adequate. As many terms as possible should have been illustrated to demonstrate diagnostic characters, or at least cross-referenced to features illustrated in one of the plates. This might have shown up some shortcomings in the existing figures as, for example, nowhere is a ruminant structure illustrated. Some of the definitions are strange if not totally misleading: to define lanceolate as a length:width ratio of 5:1 without any description of the shape for instance. Of the 100 terms defined I could fault the

definitions of 33 in some way, which is not a good recommendation for beginners and suggests that the glossary was not a carefully prepared part of the book. For workers in the field, who might only have one book, the glossary can be vitally important in allowing them to work alone successfully. One does not expect to have terms defined using other technical terms which are not themselves defined, e.g. follicle by carpel.

In the selected literature it is a pity that P. S. Ashton's *Manual of Non-Dipterocarp Trees of Sarawak Vol. II* (Forest Dept Sarawak, 1988) is not recorded; this is a much more useful book than many of those listed. It is also regrettable that the abbreviations in Brummitt and Powell's *Authors of Plant Names* (Royal Botanic Gardens, Kew, 1992) have not always been followed, but this will not be noticeable in the forest! It would have been nice to have had a little more discussion about species in the manner of E. J. H. Corner's *Wayside Trees of Malaya* (3rd ed., Malayan Nature Society, 1988) which can bring the species alive for people reading the book. The very formal description of the common species *Pometia pinnata*, for instance, fails to note such conspicuous characters as the highly plicate leaflets, or the continuous pink flushing of the leaves which usually makes the tree easy to pick out in the forest. The most frustrating aspect of the book is, inevitably, its incompleteness for which the authors can hardly be criticised, but one hopes that accounts of further species might be produced for a supplementary volume. This is undoubtedly a welcome step forward in our knowledge and understanding of the trees of Borneo.

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**Paleobotany: Plants of the Past, their Evolution, Paleoenvironment and Application in Exploration of Fossil Fuels.** Shripad N. Agashe. Lebanon, New Hampshire: Science Publishers Inc. 1995. vii + 359pp. ISBN 1 886106 08 8. US\$55.00 (hardback).

Four contrasting palaeobotany texts have been released during the last decade (for a comparative review see Bateman, 1994). Of these, two are relatively expensive and either densely detailed (Taylor & Taylor, 1992) or technically challenging (Meyen, 1987). Thus, the student market relies more heavily on the often interesting but incompletely integrated text of Thomas & Spicer (1987) and the balanced, well-illustrated synthesis of Stewart & Rothwell (1993). To these is now added Shripad N. Agashe's attempt to remedy 'the dwindling [student] interest in Paleobotany' (page v).

As its cumbersome title suggests, this book spans an astonishing range of topics in 359 pages. Six introductory chapters cover basic geological information such as dating methods and modes of plant preservation, together with a brief account of the history of palaeobotanical research and an outline classification. The following 14 chapters each give a brief account of the fossil