

XIV. REVIEWS

(continued from page 76)

BOURDY, G. Une approche de la médecine traditionnelle à Bukittinggi (Sumatra Ouest). D.E.A. d'écologie U.S.T.L. Montpellier. 1984. 55 pp.

The results presented in this paper are based on some field work conducted in the Minangkabau region of Bukittinggi (Western Sumatra) during February and March 1984. Traditional medicine is approached through the description of medicinal plants, the way they are utilized, and the people who gather and prescribe them. Data have been collected while interviewing the 'dukuns' (native doctors). For each medicinal plant synonyms, vernacular names in Bahasa and Minangkabau are given. Voucher specimens of 69 specimens of such medicinal plants were collected and are deposited at MPU. — G. Bourdy.

BURBIDGE, N.T.: Australian Grasses, revised by S.W.L. JACOBS. Angus & Robertson Publishers, London, Sydney, Melbourne. Oct. 8, 1984. x + 283 pp., 14 fig., 119 pl. £ 15.00. ISBN 0 207 14839 2.

Some years ago the well-known Australian botanist, Nancy T. Burbidge, published a delightful series of three books on the most commonly encountered genera of grasses of some regions of Australia. Especially because of the pictorial keys based on the structure of the inflorescence (reminiscent of the former treatment of the grasses in the Heukels' Flora of the Netherlands) and the usually rather clean line drawings, these were a very good introduction to the family both for the layman and the specialist. Perhaps 50 % or more of the genera are not found outside Australia (a few of these have crossed over to neighbouring areas in New Guinea, the Moluccas and the Lesser Sunda Isles) and this illustrative reference to the Australian grasses is therefore most useful.

These books have now been brought together in a single volume; some species have been deleted, but 13 more genera have been added whereby about half the number of Australian genera have been treated.

The structure of grasses is briefly discussed, perhaps too much so, and someone interested will have to find a more thorough introduction to the family elsewhere, for instance in Wheeler, Jacobs and Norton's excellent Grasses of New South Wales (1982). Fortunately this is the only work I know where the awful term 'seedhead' is employed for what everyone calls 'inflorescence'. This seems an unnecessary bow to ignorance and the introduction of a technical term (not found in English dictionaries) through a backdoor. Similarly the terms 'glumes', 'lemmas', and 'paleas' should have been used instead of 'husks'.

Each genus is represented by a drawing and description of one of its representatives. When more occur the others are sometimes mentioned. It would then be nice to have known how it differs from the example given. A remark as 'a species used in lawns in cooler areas' to distinguish *Agropyron repens* from *A. scabrum* is not very helpful to distinguish this troublesome, common weed.

Still, this is a fine book to be recommended for those interested in grasses in general and the Australian ones in particular. This review also appeared in the Acta Bot. Neerl. 34 (1985) 250. — J.F. Veldkamp.

CHUDNOFF, M. Tropical timbers of the world. U.S. Dept. Agric., For. Serv., Agric. Handb. 607. 1984. v + 464 pp., ill. Available from the Superintendent of Docu-

ments, U.S. Gov. Printing Off., 710 N. Capitol St., Washington (D.C.) - 20402, U.S.A. US\$ 16.00.

This voluminous book offers good value for little money. It compiles information on over 370 tropical timbers and will be of interest to anyone who has to answer questions about properties and uses of tropical woods.

For each timber information (if available in the literature) is provided on the following topics: botanical name (often several or all species of a genus are grouped and sometimes species belonging to more than one genus are dealt with together), family, vernacular names, geographical distribution, tree stature, general wood characteristics (colour, lustre, grain, texture, odour, taste, allergenic or toxic properties, etc.), weight, mechanical properties, drying and shrinkage, working properties, durability, preservation and uses. References to relevant literature are coded at the end of each description. There are separate sections for timbers from tropical America, Africa and Southeast Asia and Oceania. Extensive tables on properties and end uses at the end of the book facilitate comparison of the tropical timbers with each other and with eight of the most common commercial species from the U.S.A. In addition there are appendices with references to comprehensive standard texts, with generic synonyms and groupings, and with a derivation of toughness values and kiln schedules.

As the author points out in his introduction, this compilation is specifically aimed at filling a need in the U.S.A where import of a great variety of tropical timbers dates from fairly recently. On the other hand, he can be confident that this concisely presented information will be welcomed by users of tropical timbers all over the world. (This review also appeared in the IAWA Bulletin). — P. Baas.

GRIERSON, A.J.C. & D.G. LONG. Flora of Bhutan, including a record of plants from Sikkim, Vol 1, Part 2, pp. 189—462, figs. 17—33, 1 map (1984, Royal Botanic Gardens, Edinburgh, U.K.), ISBN 0-9504270-2-0. Price not given.

(Continued from p. 64). In this volume the families 25 (Phytolaccaceae) to 64 (Moringaceae) of the Englerian system have been treated. The criticisms previously given still stand, see for instance the treatment of Silene, Stellaria and many other genera. Otherwise again a fine book. — J.F. Veldkamp.

JERMY, A.C. (Ed.). Studies on the Flora of Gunung Mulu National Park Sarawak. xv + 233 pp., 2 maps, 2 figs. (1984, Forest Department Headquarters, Kuching, Sarawak). Price unknown.

An important book edited by the coordinator of the Gunung Mulu exploration 1977/1978 became available just when this issue was in preparation. Besides an introduction by the editor it contains concise accounts of several groups of plants: an annotated checklist to the Orchidaceae with a glossary and a key to and brief descriptions of the genera by Dr. J.J. WOOD (K), an account of the Palmae with a discussion of their role in the major forest types, their ethnobotany, a key to the species, and specific diagnoses by J. DRANSFIELD (K), a field key to and an enumeration of the species of the Pandanaceae by B.C. STONE (PH), a key to the genera and species of the Zingiberaceae with diagnoses of the genera by R.M. SMITH (E), a key to but no diagnoses of the Bornean (!) genera and the species of the G. Mulu of the Gesneriaceae by B.L. BURTT (E), an account of the Melastomataceae with brief notes on their morphology, variation, distribution,

ecology, a multiple access key to selected species and a good old-fashioned one to the genera and species, all with diagnoses, by C. HANSEN (C), a preliminary survey of the Rutaceae with a generic key and brief notes on some species by B.C. STONE (PH), and an account of the Pteridophyta by Ms. B.S. PARRIS (K), Mr. A.C. JERMY, Ms. J.M. CAMUS and Mr. A.M. PAUL (BM) with notes on the previous history of fern collecting in the area, ecology, glossary, keys to and brief notes on genera and species. It is a most useful work on these families with an importance reaching far out of the area treated, it is to be hoped accounts of other families will appear in the future. Especially reassuring is that whenever doubtful or unidentified material was treated, no new taxa have been described but that further research is awaited and implicitly invited. May the book stay out of the hands of pirates! — J.F. Veldkamp, C.G.G.J. van Steenis.

KNOX, G.A. & T. MIYABARA. Coastal zone resource development and conservation in Southeast Asia. (1984, UNESCO/Rostsea, Jalan Thamrin 14, Jakarta, Indonesia, ISBN 92-3-102250-4). Mimeogr., 181 pp., maps, tables.

This book has chapters on the tropical coastal zone systems, their current resource uses, the human impact on them, the influence of transmigration and settlement in Indonesia, resource use interactions and conflicts, requirements for the integrated ecological resource management of tropical coastal swamplands, and appendices on mangrove productivity, uses of mangrove plant species, research and development programs, etc.

A field study affording an overview of transmigration sites was made, otherwise the book is mainly a compilation of existing, recent literature on the subject and, giving 19 pages of references, very useful for students of the subject and government planners. — H.P. Nooteboom.

KUO, CHENG-MENG. Pteridophytes of Taiwan. 138 pp., 155 col. fotogr. (1982, Wu-Fung, Tai-chung; Taiwan Provincial Department of Education). Paperback, probably inexpensive.

Apart from the scientific names the text of this attractive booklet is entirely in Chinese. The good pictures, however, form the main dish. They illustrate virtually all genera of Pteridophytes occurring naturally in Taiwan, some with common, others with rare or local representatives. Some have been pictured in close-up, others in their natural habitat. The narrow family and genus concepts are in the prevailing East Asiatic tradition. The printing of the coloured plates is quite good. — K.U. Kramer.

B.J.D. MEEUSE & S. MORRIS. The sex life of flowers. 1984. Facts on File Publications, 460 Park Avenue South, New York (NY) 10016. ISBN 0-571-11909-3. 152 pp. with a colour photo on nearly every one. US\$ 19.95.

If you have not seen the TV film 'Sexual encounters of the floral kind', an Oxford Scientific Film Production, you should try to do so. It is superb camera work accompanied by a very dry, humorous comment of which apparently only the British are capable. This text embellished with the many beautiful pictures made by Sean Morris and others is the base for the present work, an armchair companion to the film, and thus easier to return to to refresh the memory. It is full of surprising facts and very up-to-date. A delight to read. Highly recommended to both amateurs and scientists alike. — J.F. Veldkamp.

MORAT, Ph., J.M. VEILLON & H.S. MACKEE. Floristic relationships of New Caledonia - a rain forest Phanerogams, in RADOWSKY, RAVEN & SOHMER (Eds.), *Biogeography of the tropical Pacific*, Bern. P. Bish. Mus., Spec. Publ. 72 (1984) 71—128.

This is a very interesting paper, in which the floristic relationships of the forest flora of New Caledonia (incl. the Loyalty Islands and the Isle of Pines) is analyzed. Rainforest covers 400.000 ha (22 % of the land area) and grows on various substrates: basalts, limestone, ultrabasic, etc. Geographic regions, distribution types with the genus as taxonomic unit follows Van Balgooy's 'Plant geography of the Pacific' (1971). The Phanerogam flora of New Caledonia consists of 3256 species (76% of which are endemic!) in 787 genera (13.7 % endemic) of which not less than 1511 species (89.8 % endemic) in 365 genera (22.4 % endemic) occur in the rainforest. Clear floristic links exist with Australia and New Guinea, with which the island shares an old Gondwanic stock. Ever since the Permian New Caledonia has formed part of an island arc, the Norfolk Island Ridge, which had partial connections with Australia and New Guinea. When Australia moved northward this arc was left behind; intense tectonic movements followed, but not a complete submergence. Since this rupture of land connections new elements could only arrive by crossing sea barriers. The old stock in New Caledonia evolved thus in isolation, leading to the high percentage of endemism of the present day. On account of their toxic properties peridotites induced an impoverishment of the flora rather than contributing to its enrichment, neither did they play an important role in the preservation of archaic forms. — M.M.J. van Balgooy.

MYERS, N. The primary source. Tropical forests and our future. (1984, W.W. Norton & Co., New York & London, ISBN 0-393-01795-8). 399 pp.

This book is undoubtedly the most up to date statement of why we need to conserve tropical forests and how we can do that. It is based on Myers' work for the National Academy of Sciences in the U.S. and very well researched as can be expected from him. It contains an incredible array of facts and stories relating to the values of the tropical rainforests for mankind. It is amazing that he remains optimistic that something can be done to save them. As he is one of the very few real experts on the subject, he rightly stated 'We shall have to recognize that the strategies we have developed in temperate zones, whether for exploitation, or for management, or for preservation, do not work nearly so well, if at all, in tropical forests ... How much better we might understand tropical forests, if we gave them a new name, indicating that they are a fundamentally different state of affairs from the forests with which we are more familiar.' The book contains a wealth of information with parts on bioecological background, the impact of modern man, contributions to our background and what we can do. Each part contains several chapters. In an appendix a country by country review of conversion rates is given. This book is a must for all those concerned with tropical forests in the broad sense and its conservation in particular. — H.P. Nooteboom.

ROTH, I. Stratification of tropical forests as seen in leaf structures. Tasks in Vegetation Science 6. viii + 522 pp. (1984, Dr. W. Junk Publishers, The Hague, Boston, Lancaster). Cloth, Hfl. 300.00, US\$ 115.00, £ 54.00. ISBN 90.6193.946.1.

In this book Dr. Roth tackles a most interesting problem: leaf structural diversity in tropical forests viewed from an ecological perspective. Rather than to review the extensive literature on the subject, the author has chosen to present her views on the basis of a study of leaves from about 200 adult trees and 100 juvenile ones, collected during a forest inventory in a seasonal rainforest in Venezuelan Guiana. Following 4 general introductory chapters, the bulk of the book is taken up by chapter 5 consisting of 321 pages of tables listing 23 different character states for each leaf and tree studied. Chapter 6 summarizes in words the information for each individual family. The remaining 5 chapters dealing with developmental, ecological, taxonomic and phylogenetic aspects, and one discussing the most important results cover a modest 49 pages. The main conclusion of Dr. Roth is that the xeromorphic leathery leaf of the humid tropical forest is nothing more than an adaptation of the evergreen leaf to drought occurring periodically in the higher levels of the forest. She bases this conclusion on the fact that the leaves of low, young trees are less xeromorphic than those of adult trees. To my surprise she does not use information on the different size classes of the adult trees contained in the tables to back this conclusion.

Despite the appreciation one must have for the industrious achievement of studying the leaf anatomy of so many species, the main reaction to this book is a negative one. There is hardly any major aspect of it which one cannot criticize severely. First of all the data base: apparently no information was available to the author about the position of the crown at which the leaves were sampled; yet she freely draws far-reaching conclusions with respect to sun- and shade-leaf syndromes. Moreover, for many species the anatomical data are not complete. In the interpretative parts the author puts too much emphasis on direct environmental control and often ignores the possibility of genotypic variation. Adaptive interpretations are all purely intuitive, going back to the Haberlandt era (there is nothing wrong with this, as long as the reader is warned that hypotheses are of a speculative nature and are not presented as gospel truths). Modern ecophysiological research is largely ignored, as well as the vast body of comparative anatomical information of the older literature. Dr. Roth's obsession with adaptive interpretations even goes so far that she has marked the individual leaves as showing a 'very good', 'good', 'medium', or 'poor' adaptation to their actual environment. One is very relieved to find that most species appear to be well-adapted in Venezuela and pities those unfortunate ones which will lose the struggle for survival. For Diploptropis, which has a variable length/width ratio of palisade cells Dr. Roth even proclaims the formation of new structures, mysteriously adding that this taxon belongs to a gene pool family.

In many chapters there is a high degree of repetition of the same statements. However, at times the text is contradictory, e.g. on stomatal size which is shown to be unaffected by the position in the forest (p. 430) but heralded to show an ecological trend on p. 439.

The very high price of this book must be largely due to the 320 pages of tables which contain so little information that a collective table of at most 10 pages would have sufficed. Add to this the 40 pages of ill-assorted illustrations (fig. 31 duplicates fig. 77, and why show us so many SEM pictures of papillae?), plus the superfluous repetitive discussions, and one arrives at the conclusion that this study should have appeared in the form of a concise research paper of

at most 30 pages and be available free of charge to the botanical community. — P. Baas (This review also appeared in the *Acta Botanica Neerlandica* 34, 1985).

SILVIUS, M.J., H.W. SIMONS & W.J.M. VERHEUGT. Soils, vegetation, fauna, and nature conservation of the Berbak Game Reserve, Sumatra, Indonesia. (1984, RIN Contributions to Research on Management of Natural Resources 1984-3, Research Institute for Nature Management, POB 9201, 6800 HB Arnhem, The Netherlands). Mimeogr., xv + 146 pp., 46 fotogr., glossary, 14 app., tables, maps.

This publication is the result of an 18-month's field (see p. 20) and desk study by the authors, students at the University of Utrecht. The study was hampered by the lack of adequate air photographs and one of the aims, to make a detailed photo interpretation map, had to be abandoned. Nevertheless the output of their work is very valuable, the book containing chapters on geomorphology and soils, vegetation, fauna, human activities (although a game reserve, 16,700 ha of the coastal area is occupied by settlers), nature conservation and management, management options and recommendations for further research. Because of logistical problems the survey had to be restricted to the Eastern part of the reserve. A fine work despite its shortcomings, one of them the dearth of sufficient botanical collections (in L). Because only few species flowered, many of the collections were sterile. But even then representative material should have been collected, not watershoots, etc. The field work was carried out from February to November, a period in which a lot of plants are supposed to flower. As making good botanical collections is intensive and often difficult work, I think it is advisable that from a team of three one should specialize in that subject to make this kind of field work also botanically more worthwhile. — H.P. Nooteboom.

SIVARAJAN, V.V. Introduction to principles of plant taxonomy. 1984. Oxford & IGH Publishing Co., New Delhi, Bombay, Calcutta. 295 pp., several fig. Paperback. Rp. 15.50 (= appr. US\$ 1.50!).

It is a deplorable situation that many practising plant taxonomists hardly care about the theoretical backgrounds of their métier even though the concept of species and taxa in general are complex with conflicting connotations. Theory is too often regarded as a set of prescriptions how piles of dried plants need to be handled in order to produce an acceptable revision. There is certainly no lack of such prescriptions; many larger floras contain them in the introductory parts or chapters. To my personal opinion this attitude discourages many intelligent students who tend to consider taxonomic zoology more attractive.

Dr. Sivaranjan's book fills a void and is more or less complimentary to C.A. Stace's 'Plant taxonomy and biosystematics' (E. Arnold, London, £ 9.25). It is less extensive on biosystematic subjects but more so on conceptual backgrounds. The only two more or less recent books covering these fields are out of sale: Davis & Heywood's 'Principles of plant taxonomy' (1963) is of course slightly outdated, and Löther's 'Beherrschung der Mannigfaltigkeit' (Jena, 1972) hardly received the attention it deserved: fortunately a new, English edition is in progress.

The present introduction is intended for students. It covers largely the essentials of Davis & Heywood's classical work and includes the phylogenetic ('cladistic') methodology as well. The complexity of the concept 'species', higher and lower taxa are very lucidly dealt with. The distinction between the

concepts 'taxon', 'category', and 'rank' is illustrated by a didactically ingenious model of a 'file cabinet' (p. 90), which becomes, however, slightly distorted if one tries to visualize the combination of it with the model of 'nested boxes' on the preceding page presented in order to demonstrate the inclusional relation of taxa of different levels. This difficulty demonstrates by the way exactly the problem of understanding the class-logic of taxa!

The book is subdivided into eight chapters each in turn subdivided into paragraphs. The first chapter inevitably deals with biological classification, the needs, importance, and aims of taxonomy, and ends with the distinction between 'taxonomy' and 'systematics'. The second chapter deals in eleven pages with philosophical backgrounds in general: essentialism, nominalism, empiricism, pre- and post-Darwinian taxonomy are summarized in a clear way. For some students (and teachers!) this stuff may be somewhat heady, and I'd advise to read chapter 5 first, where the same theories are illustrated by the differences between essentialistic, nominalistic, and other (empirical s.l.) species concepts. Chapter 3 treats problems in evolutionary taxonomy. The author keeps 'respectable distance' as he calls his attitude himself, when it comes to opinions. He demonstrates that he is following the present discussions attentively, and he has succeeded to make a wise selection of the innumerable contributions to the discussion on these 'hard topics'. I know from experience how difficult it is to make a sensible selection. I disagree with his conclusion by the way, but that does not effect my respect for his lucid presentation! Chapter 4 treats the history of botanical classification from Theophrastes to Dahlgren, and in between an example of 'pre-scientific' folk classification is elaborated. To my opinion this paragraph, together with the early evolutionary ideas of ancient Indian philosophers could have been treated much more extensively (a next edition?). Chapters 5 and 6 treat the concepts of taxa and characters, respectively. Chapter 7 deals with the sources of taxonomic characters ending with the conclusion that a sensible 'synthesis is unachieved', thereby wisely leaving open the question whether it is 'unachievable'. In chapter 8 the more important rules of botanical nomenclature are explained. The author follows the sequence of the articles in the Code, which may on one hand not be the most didactically optimal sequence, on the other hand it has the advantage that, with the Code in hand, its confusing structure may become clear.

For once the book is provided with numerous examples of tropical plants, fortunately mainly well-known and widely spread genera, which makes the book applicable in practically all tropical countries. The style is very easy and clear, and even often humoristic.

By tradition a review has to contain some critical remarks, and I will restrict these to the numerous printing errors. Most of these are of course self-explanatory, but are they that too for beginning students? Especially in the Western world with so many glossy text books it makes a grinding reading and distracts the attention. Some errors make the references inaccessible: to mention an egocentric example: *Portulaca* is mentioned as a genus where autogamy has led to the formation of many pure lines, which remark is followed by a reference to 'Greesink, 1971', which ought to have been 'Geesink, 1969', as is correctly cited in the references. Should I mention that the concepts 'monothetic' and 'polythetic' as characteristics of the set of characters defining a class-concept are too meagerly presented as more or less synonyms of 'artificial' and 'natural', res-

pectively? No, these and other items should be treated during discussion in courses.

This book is an excellent base for the introduction of or more emphasis on the methodology of plant taxonomy, both for the benefit of students and teachers. The extremely low price (appr. US\$ 1.50) is in great contrast to the quality of its contents. Therefore, teachers: buy the book in many-fold and use it! — R. Geesink.

VALMAYOR, H.L. Orchidiana Philippiniana. Eugenio Lopez Foundation, Manila. 1984. Vol. 1: xiii + 360 pp.; vol. 2: ix + 377 pp. Folio in cassette. US\$ 200.00. ISBN 971-1005-52-2.

This huge, sumptuous and magnificent production certainly deserves a review. It is a complete account of Philippine orchids, describing 130 genera of native orchids (8 endemic), 944 species (74% endemic) and 66 varieties. The taxonomic treatment is preceded by some general chapters: history of knowledge, soils, climate, endemism, flowering seasons and a tabulated account of distribution for each species. The text is fairly critical, no doubt due to the fact that the author worked in the Oakes Ames Orchid Herbarium at Harvard, where she was lavishly assisted by Dr. L.A. GARAY. The descriptions are concise but clear, synonyms have been cited, without references, however. There are no keys to the genera and species. There are also no cross references to the numerous illustrations; these can only be found through the general index. The only nomenclatural flaw I found is the use of Cystopus, which should be Pristiglottis. The major attraction of this unique work is 420, mostly large-sized, coloured illustrations, many of which could be called gorgeous, made by D. BALDOVINO. A milestone not only in Malesian orchidology excellently reproduced on glossy paper. The price is of course prohibitive for the moderate orchid amateur. — C.G.G.J. van Steenis.

VOGELENZANG, L. Guide to the prices of antiquarian and secondhand botanical books (1979 — 1982). 1983. Boerhaave Press, POB 1051, 2302 BB, Leiden, The Netherlands. xii + 760 pp. ISBN 90-70153-17-3. Hfl. 85.00.

The well-known, industrious and expert librarian of the Rijksherbarium (L) has compiled an impressive list of over 8000 titles of botanical books, monographs, reprints, illustrated works, etc. In a clear, be it rather small print, a full bibliographical survey is given for each item and prices are quoted in DM and US dollars for which they were offered for sale in recent catalogues of 74 antiquarians from all over the world. It is therefore of great assistance for book collectors and sellers, librarians and assessors to estimate the present worth of botanical literature. I have also found it of great help in the relation to questions on publication dates in nomenclature for those authors not (yet) treated in TL-1 and TL-2. It becomes very obvious that while some prices are rather stable a careful scanning of dealers' catalogues and some patience can save you thousands of DM or \$ in the acquisition of rare, expensive works. That alone makes it a necessary buy, a must for all. Alas, no doubt all important antiquarians will have it in front of them now also when they prepare their new catalogues. — J.F. Veldkamp

WHITMORE, T.C. A vegetation map of Malesia at scale 1:5.000.000. A contribution to Global Environment Monitoring System United Nations Environment Programme. Published in J. Biogeogr. 11 (1984) 461—471, reprint obtainable from Unit of Tropical Silviculture, Commonwealth Forestry Institute, South Parks Road, Oxford OX1 3RB, U.K. £ 5.00.

The map depicts the vegetation of Malesia on a single sheet. In a bird's view the whereabouts of the main forest formations can be seen and how much forest there was left in the early 1980's be estimated. I am convinced that the blank areas (without natural forest cover) at the present moment are already much larger than shown. A continuous updating for this kind of map is necessary in view of the fast and vast destruction of the forest.

The legally constituted conservation areas of 200 km² or more have been indicated and a list is given. The different forest formations (with special attention to Pinus) are explained. The published sources and how they have been utilized are given.

Whitmore prudently admits to the flaws of the map, mainly due to its large scale, but hopes that although inaccurate and incomplete, it will prove to be useful and stimulating to local studies so that a better one may become possible. All criticism that I initially had turned out to have been anticipated in the text and I can only congratulate the author with his achievement. — H.P. Nootboom.

WHITTEN, A.J., S.J. DAMANIK, J. ANWAR & N. HISYAM. The ecology of Sumatra. Gajah Mada University Press, Yogyakarta. 4°. xiv + 582 pp. (English edition), 652 pp (Indonesian edition), many pictures, some in colour, some maps. 26 February 1985. English edition US\$ 20.00, Indonesian US\$ 10.00. Copies will be sold to Indonesian students at a subsidized price.

This is an unexpected, enchanting book, easy to read and most pleasant by the profuse illustration with hundreds of figures and excellent photographs (quite a few in colour). It evolved from efforts of the Centre for Resource and Environmental Studies (CRES), University of North Sumatra, Indonesia.

'It is hoped that it will be useful to resource managers, ecologists, environmental scientists and local Government personnel and be enlightening to Sumatra's inhabitants and visitors.' I would like to add that it will also be very useful for the education of students, as the title could also easily have read 'The Natural History of Sumatra'. It provides information on soils, climate, vegetation, fauna, and all the main ecosystems represented in Sumatra, but occurring of course on Malaya and the other Sunda Isles as well. A merit is that each chapter is provided with a bibliography and these sources enable readers to dig into further information for a better understanding. Naturally a good deal of attention is given to part C, man-made ecosystems, effects of disturbance, agricultural ecosystems and urban ecology.

No book of this kind and scope exists. It summarizes a huge disparate array of published matter (about 1,200 references) and will be extremely informative to anybody dealing with Sumatra. It is astonishing that it could have been prepared in only a few years time, so it is not surprising that some errors and omissions are present. But the general impression is that it is a great asset and an excellent stimulant to make people aware of their precious heritage.

It is hoped that a similar Ecology of Sulawesi will be available by middle

1986 at the Centre for Environmental Studies, Hasanuddin University, Ujung Pandang. — C.G.G.J. van Steenis.

WIERSSUM, K.F. (Ed.). Strategies and designs for afforestation, reforestation and tree planting. Proceedings of an international symposium on the occasion of 100 years of forestry education and research in Wageningen, The Netherlands, 19—23 September 1983. (1984, PUDOC, Wageningen, hard cover ISBN 90-220-0840-1, cloth ISBN 90-220-0841-X) 432 pp., incl. photographs and tables.

(Re)forestation in all its aspects is, in a nutshell, what one can find in this book. The symposium was, and thus the book is, divided into 5 sections: 1) forestation and development: aims and objectives; 2) development of different forestation systems; 3) diagnostic methodologies for forestation; 4) analysis of specific design components of forestation; 5) national and international action for forestation. As many of the problems lay in the tropics the accent of many of the contributions is focussed on this area, e.g. 'Biological diversity and forestation in the tropics' (G. BUDOWSKI), 'Traditional forestation strategies of local farmers in the tropics' (R.B. PECK), 'Policies, strategies and designs of forest development on the island of Java' (H. WIRJOARMODJO & M. BRATAMIHARDJA). Very worthwhile is E.F. BRÜNIG's paper 'Designing ecologically stable plantations'. He criticizes classical forestation theories propagating a speedy optimization toward maximum volume or biomass yield which leads to ecologically unstable plantations, especially but not only in the tropics.

In general the book gives a wealth of information, the number of contributions is 25. It ends with a discussion and a final document, which gives a large number of recommendations. How bad the situation in the tropics is appears from the figures giving the total area of plantations and of annual deforestation of the tropics, 11,300,000 and 11,100,000 ha, respectively: each year an area nearly as large as all the existing plantations together is deforested! — H.P. Nooteboom.

YONG, HOI-SEN. Magnificent plants. Tropical Press, SDN BHD., 29 Jalan Riong, Kuala Lumpur 22-03, Malaysia. 4°, 252 pp, 278 large col. fotogr., 1981. US\$ 40.00.

This is the most magnificently illustrated account of a fair number of Malaysian plants from the Malay Peninsular and several of Mt. Kinabalu in Sabah, printed in a similar fashion as those in 'Nature Malaysiana' and intended to confront the Malaysian people with their natural heritage. Scanning it one falls from one delight into another. Along with the plates the text is interspersed with all kinds of information on Malaysian vegetation and the role of Man and his cultivated plants. Though the major part deals with flowering plants, there are sections on Cryptogams (algae, ferns, fungi, mosses). Most plants treated are indigenous, and some are even very rare and of real botanical interest for the specialist. The plants are more or less arranged in families or groups, including carnivorous plants, pitcher plants, orchids, gingers, Rhododendrons, legumes, Rafflesia, passion flowers, mangroves, bamboos, aroids, bladderworts, etc. The names are almost all correct, but Burmannia longifolia seems B. disticha to me. As in several semi-popular colourphoto books on plants of Europe the flowers and fruits have sometimes been blown up to unrecognizable dimensions. I have nothing against this as details show up interestingly distinct, but the drawback for the

non-initiated is that he/she does not know the real size. For instance the berry of Pratia (= Lobelia) on p. 57 is shown as 6 cm in diameter, while the actual size is only about 1 cm. This would have been easy to repair when the enlargement had been given in the caption.

This work can be warmly recommended to visitors of Malaysia and to botanical institutes as well. The price is ridiculously low for this beautiful book. — C.G.G.J. van Steenis.

ECOLOGISTS OF SULAWESI WANTED

Dr. A.J. WHITTEN, Jl. Sangga Buana 2, Bogor, Indonesia, is engaged in the production of a work on the Ecology of Sulawesi to be published by middle 1986 at the Centre for Environmental Studies, Hasanuddin University, Ujung Pandang. It will have similar contents to his Ecology of Sumatra (see Reviews). Any copies of papers or reports which you may have written concerning Sulawesi will be most welcome, or a full reference to them with a permission to photocopy them. If you are still writing up work yourself, Dr. Whitten would like to have an idea of the contents of these future papers. Are there any ecologists who have worked in Sulawesi during the last three years or so who have not been contacted? Let them please write to the Hasanuddin University. Do you know of any papers on the lakes, caves and limestone flora and fauna of the island?

INLAND OCCURRENCE OF MANGROVES IN CHRISTMAS ISLAND (INDIAN OCEAN)

In Blumea 29 (1984, p. 395—397) I published a small paper on inland occurrence of some mangrove trees (Bruguiera, Heritiera) in Christmas Island (Indian Ocean). Unfortunately, I had not been aware that this particular ecology had been reported on earlier in a general review of the forest flora of the island by Mr. B.A. MITCHELL, at the time attached to the Kepong Forest Reserve Institute, Malaya. His paper (Commonw. For. Rev. 53, 1973, 19—29) had not been reviewed in Forestry Abstracts and the specimens he collected and would have sent as duplicates to Leiden (see Fl. Mal. 8, 1974, lxvii) never reached us. Anyway, I like to announce that Mr. Mitchell was the first who recognized the situation and alluded in his paper also to the cause: the uplift of the island. Mr. Mitchell's collection consisted of 52 numbers of trees; among them are a few of the endemics; identifications were made at Kepong. — C.G.G.J. van Steenis.

RATTAN CULTIVATION IN CENTRAL KALIMANTAN

In Central Kalimantan many Dayaks earn a lot of money from cultivating rattan. The rattan gardens ('kebun rotan') descend from the practice of shifting cultivation ('ladang'). All or part of the ladang is planted with rattan depending on the number of seedlings and seeds available and the work capacity of the farmers (usually a single family). The total number of seedlings may vary between 200 and 500/ha. At the time of production, 6 to 10 years later, this figure is much lower because in the absence of annual clearing many stalks die. With very

few exceptions no care is taken of the young plantation and the farmer rarely knows the success rate of his plantations before the first harvest. Frequently the number of stalks that survive is insufficient and in due time the ladang is cleared again to begin a new cycle. A total of 100 rattan stalks/ha is considered to be a good yield. The time for the first gathering depends on soil quality and the upkeep of the plantations. Subsequent harvests of fresh rattan growths from the same ladang reach the marketing stage every 3 to 4 years. Farmers using rattan as their chief money crop ideally should have 3 or 4 plantations in various stages of production. Once these have been set up the annual rotation of cuttings and income derived from it is more or less guaranteed. In the regions where rattan thus has become the main product the labour is imported from outside the village, rice is bought, and the income belongs to the highest for farmers in Indonesia. (Reconnaissance Survey for the selection of transmigration sites in Central Kalimantan, ORSTOM Transmigration project PTA-44, Jakarta 1981). —
H.P. Nooteboom.