

XII. REVIEWS

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DRANSFIELD, S. 1992. *The bamboos of Sabah*. Sabah For. Rec. 14: xi, 94 pp, illus. Forestry Department, POB 311, 90-007 Sandakan, Sabah. ISBN 983-9554-03-4, ISSN 0128-6471. Mal\$ 40.00.

Bamboos have a great importance in many aspects of tropical life: they provide building material for houses, bridges, boats, pipes and flutes, cooking vessels, bottles, and cups, the young shoots are often regarded as a delicacy, the blades are used for basket-making, wrapping material, medicine, and some species are used for hedges or serve as desirable ornaments.

Possibly because the use is mainly local and have little importance as timber, while they are best known as secondary growths, Forestry Departments have neglected collections and so opportunities for study, which is further hampered by the fact that bamboos are considered to be 'difficult'. This is partly due undercollecting, and so on in the vicious circle, partly because collecting from these tall plants is often discouraged by the very hard culms, spines, and itching hairs, or impossible because of the long periods between flowering. Also, because they are grasses people are daunted by the spikelets, which are essential for identification to genus and species.

Dr. Dransfield's beautifully executed manual in which 10 genera and 35 species are treated should be a good incentive for a better knowledge of the species in Sabah and adjoining areas. She offers the present state of knowledge, not hesitating to include the presence of undescribed species and even a genus. How often does it not happen that authors refrain from publishing until these too are finally collected again so that others cannot snatch away this loot and thus delay the dissemination of knowledge? To me it seems better to do it Ms. Dransfield's way. Because there is apparently a lot of endemism in some genera the Manual will make it possible to distinguish between the common from the rare. The first are often widely spread and once known the rare and local ones are more easily detected now making them more apparent for a better-orientated collecting and subsequent study. The treatment therefore has a much wider application than for Sabah alone. With time the information thus obtained can be bundled in a second edition in which, no doubt, new problems can be pointed out and addressed.

There is a brief introduction on the general morphology. It would have been nice if directions had been summarized on what parts to collect and/or note on field labels. It is pointed out that sterile shoots with which herbaria are encumbered do not yield good characters for identification.

The keys appear clear and 'easy', the descriptions are brief and to the point, although in some cases they might have been made more complimentary, e.g. for *Bambusa nuldoides* no information is given on the inflorescences and spikelets. The species are well-illustrated by Mr. M. Molubin, Ms. M. Watt, and the author herself. — J.F. Veldkamp.

HYLAND, B.P.M. & T. WHIFFIN. 1993. *Australian tropical rain forest trees – an interactive identification system*. CSIRO Publications, POB 89, East Melbourne (Vict.), Australia, ISBN 0-643-05403-0, 2 volumes + software and *Leaf atlas of Australia rain forest trees*, together Au\$ 175.00. The latter alone is separately Au\$ 80.00 (ISBN 0-643-05420-2).

The books and software provide information on over 1,000 species of tropical rain forest trees in Australia and contains a computer-based interactive key (both IBM and Macintosh) with two manuals. Trees can be identified using features from the stem, leaves, flowers, fruits, seedlings, family, or geographic distribution. The first volume contains descriptions and illustrations available, a glossary, and list of species giving scientific names, common names, and standard trade names. The second volume contains a short description of each species, a series of additional diagnostic features to aid identification, and comments on the distribution and ecology of the species. The Leaf atlas provides life-sized X-ray photographs of the tree species covered. The venation detail allows visual confirmation of identifications made with the computer key. The Atlas is also designed as a stand-alone visual matching tool in situations where computer facilities are not available. All species are arranged alphabetically within families and genera to allow for ready use. The Atlas will provide an invaluable source book to botanists, students of evolutionary botany, and plant enthusiasts in general in related geographic regions outside Australia who wish approximate visual identifications for their living and fossil leaves. — J. West.

KELLER, R. 1992. Clef de terrain pour l'identification des familles des dicotyledons ligneuses tropicales (à l'aide des seuls caractères végétatifs. Première partie: clef des familles. (In French). 115 pp, illus.

Field key to woody tropical dicots by vegetative characters; claimed to be usable pantropically; it is to be hoped that this can be elaborated and translated into English, where it would have a wide application; copy in L.

NG, F.S.P. 1991, 1992. Manual of Forest Fruits, Seeds and Seedlings. Malayan Forest Records 34/1: pp. (vii) + 1-400, 384 fig. (50 line drawings, 221 black-and-white and 113 colour photographs). ISBN 983-9592-05-X; 34/2: pp. (vi) + 401-997, 574 fig. (81 line-drawings, 117 black-and-white and 187 colour photographs). ISBN 967-99915-4-7. Forest Research Institute Malaysia, Kepong, 52109 Kuala Lumpur, Malaysia. Price Mal\$ 200.00 for the 2 volumes if collected personally from FRIM, otherwise US\$ 200.00.

Studies on seedlings are very rare and the appearance of these two volumes on Malayan seedlings, which are based on the study of almost a quarter of the total of 2830 species occurring in the Malay Peninsula, is a very happy occasion.

This work is intended primarily for the identification of tree seedlings in the field. However, almost 3.7 kg is rather heavy for a field guide and the reviewer would hesitate to expose these very nicely produced books to the hardships of field work.

A preface describes shortly the history of the project. The introduction states among others the objectives of the project, a justification of the generalization of the descriptions presented to family and genus level, a detailed description of the method of photography, and a short characterization of the terms used to describe the germination types. A glossary explains the meaning of terms used. A short bibliography refers to some works on trees, seeds, seedlings, floras, and silviculture. In the descriptive part the families, and the genera under the families, are arranged alphabetically. In total about 640 species were studied representing about 310 genera. Per family the number of existing genera is recorded, per genus the number of species. A concise description is presented of the fruits and the seeds, of the latter the time required for germination is indicated. More detailed data on the germination

of seeds or fruits of these species were published in Ng & Sanah, Germination and seedling records, Res. Pamphlet 108 (1991) 1–191. For seedlings the morphology is shortly described, generalized from the studied species. Reference is made to other seedling works in which representatives of genera treated in this work are described or illustrated. Line drawings of the fruit and seed(s) as well as sections are given for one species per genus, and often a photograph of the fruits and seeds of a species is also presented.

The main part of the 2 volumes consists of photographs of seedlings, many of which are in colour. These are only a selection, maybe some 20% of all photographs available and stored in KEP. Due to a mysterious loss of some 300 black-and-white negatives back-up colour slides had to be used for publication, which make the books even prettier. Live seedlings were flattened by pressing them between two sheets of glass, with some leaves turned to show both sides. The black-and-white photographs were exposed twice, once with transmitted illumination to bring out the details of the venation, a second time illuminated from above to bring out features of the surface. Recent advances in computerized printing technology made it possible to enhance picture quality. This brings out neatly the features necessary for identification and produces nice photographs which come close to line drawings in usefulness. The colour photographs were only illuminated from above with a coloured background for contrast.

The work concludes with a discussion in which some interesting thoughts are offered for further study, a copy of a memo from Foxworthy with a plea for the study of seedling morphology written in 1923, and corrigenda.

The first volume does not contain an index. Since the second volume contains the family and genus descriptions as well as the accompanying seedling photographs it would have been more user-friendly to have concluded volume 1 also with an index. Two indexes are present in volume 2, one to Malay names, the other to the Latin names of species. Both indexes only refer to the descriptions, not to the figures, which is an unfortunate omission. One must now know to which family a genus belongs in order to find it easily, otherwise one has to look up the family name in the general descriptive part first, and for vol. 1 one has to use both books.

These hardcover books are well produced. They contain a wealth of information on seedling morphology which is linked to fruit and seed morphology. It deserves its place in the libraries of seedling morphologists, forest botanists, silviculturists as well as foresters.
— E.F. de Vogel.

PRICE, I.A. & F.J. SCOTT. 1992. The turf algal flora of the Great Barrier Reef, Part 1. Rhodophyta. xii, 266 pp, illus. James Cook University, Townsville Qld.—4811, Australia. Au\$ 61.95 (surface mail).

This volume deals with the turf-forming species of red algae occurring in the Great Barrier Reef. The publication provides detailed descriptions and illustrations of the 74 species recorded, with emphasis on vegetative features. In addition data on nomenclature, type material, voucher specimens, habitat, seasonality and geographical distribution are given. Genus descriptions, keys to genera and species, a glossary and taxonomic index are also included. This is the first detailed treatment of the taxonomy and distribution of turf algae which occur on coral reefs, where they are of major importance in trophodynamics. Although written for Australia's Great Barrier Reef, the work should prove useful throughout the tropical Indo-Pacific region.

Cheques should be made payable to James Cook University Bookshop. For credit card payment please specify whether Bankcard, MasterCard, or Visa, give card number, date of expiration, and name of card-holder, and include your signature. — (Text from the publisher's circular.)

SEGERBÄCK, L.B. Orchids of Malaya. Description of more than 130 species with 229 black-and-white and 26 colour photographs. Including a comprehensive botanic glossary. vii + 168 pp., 229 phot., (i) + 5 col. pl. ISBN 90-6191-700-X. Balkema, POB 1675, NL-3000 BR Rotterdam, The Netherlands. Dfl. 120.00.

This book is not a taxonomic work but intended to let readers share the author's enthusiasm for Malayan orchids. For that purpose it is lavishly illustrated with photographs. The introduction gives a short survey about the morphology, biotopes, climates, and vegetations of Malaya.

Fifty genera and more than 130 species, are treated in this book, many of which are common species. The key to the genera includes only those that have been treated. The descriptive part lists them according to subfamily, both parts are provided with some notes. Each species is provided with a more or less lengthy description which includes detailed colour notes. The distribution outside the area is given, but not for all species. The book is concluded by a Botanical glossary with special reference to orchids, a short list of references, and an index.

The key to the genera seems workable and leads either to a whole genus or to a species. But a key in a work like this seems pointless: a total of 144 genera occurs in Malaya and when naming a species of one of the 94 genera not present in this work one arrives at a wrong name. The names of the species are not always concurrent with the latest revisions. The black and white photographs, which feature so prominently, are a bit disappointing. The contrast is rather low and especially in the habitat photographs and whitish flowers details are sometimes wanting. The 26 colour photographs are of excellent quality. — E.F. de Vogel.

SEIDENFADEN, G. 1992. The Orchids of Indochina. Opera Botanica 114: 502 pp., 306 fig., 32 plates with 128 colour phot. ISBN 87-88702-61-8. Price unknown.

In accordance with the format of his treatments of various subfamilies, tribes and genera of Orchidaceae in Thailand during the last 10 years, Seidenfaden has now produced a major taxonomic study of the Indochinese orchids.

Seidenfaden's recent work covers the Malay Peninsula and Singapore (together with J.J. Wood, see review below), Thailand, Cambodia, Laos, and Vietnam, together a massive part of mainland Southeast Asia. It is excellent to have all orchids of such a vast area treated within a single taxonomic concept.

For Indochina 6 subfamilies of Orchidaceae are recorded, with some 800 species in 140 genera. Where appropriate a key to the genera is given under each subfamily. Most genera are described with a few lines, the estimated total number of species is given as well as the number occurring in Indochina with more or less lengthy notes where required. For each species the literature and synonymy is listed, as well as the occurrence in Indochina and the distribution outside the area, and notes are provided where necessary. Three hundred and six species are provided with a figure with analytical line drawings, in general excluding those of which a figure is given in Seidenfaden's work on Thailand. A hundred and twenty eight species are depicted with a colour photograph, 31 of these are from coloured plates by

Simond and Eberhardt kept in the holdings of the Paris Herbarium which are here published for the first time. All familiar with Seidenfaden's work will agree that his species concept is sound, and where variation exists or doubt about a taxonomic conclusion this is elucidated in extensive notes.

Altogether Seidenfaden describes 2 new monotypic genera, *Deceptor* and *Cleisostomopsis*, the species of which were both first described under *Saccolabium*. Twelve species are new in *Anoectochilus*, *Biermannia*, *Bulbophyllum*, *Cleisostoma*, *Epipactis*, *Eria*, *Flickingeria*, *Habenaria*, *Malaxis*, *Pomatocalpa*, and *Schoenorchis*. Seven new combinations are proposed, and one new name. Some 20% of the species are endemic to Indochina.

Orchids of Indochina is not the final word, as Seidenfaden states. Knowledge is based on less than 4400 collections, a collecting density of slightly more than 0.6 plant per 100 square kilometers. In addition, the collecting density is very uneven. In Vietnam, with 75% of the collections from c. 47% of the total area, c. 700 species are listed; the collecting density is there about 1. Experience in Flora writing learns that a flora is only well-known when the collecting density is nearing 100. For Laos c. 336 species are recorded, for Cambodia only 163. It is evident that many new records for the area can still be expected as well as new species. New collecting activities in the area are urgently needed. — E. F. de Vogel.

SEIDENFADEN, G. & J.J. WOOD. 1992. *The Orchids of Peninsular Malaysia and Singapore*. A revision of R.E. Holttum: Orchids of Malaya. 779 pp, 316 composite line drawing plates, 48 composite colour plates, 1 coloured map. Olsen & Olsen, Helstedsvej 10, DK-3480 Fredensborg, Denmark. ISBN 87-85215-24-4. UK£ 64.00.

This taxonomically sound and thorough Orchid flora is an update of Holttum's Orchids of Malaya, which for 40 years and with two almost unchanged reprints served orchidologists as well as interested amateurs in naming the orchids of the Malay Peninsula and Singapore. But this book had a broader use: for a long time it was the only widely available publication with which many orchids from the surrounding countries could be identified. Seidenfaden & Smitinand's work, *The Orchids of Thailand*, published from 1958 to 1965, filled the gap in orchid knowledge to the North; later publications by Seidenfaden made the orchid flora of Thailand the best known in the area. The *Orchidaceae* in Backer & Bakhuizen f.'s *Flora of Java* (1968) and Comber's *Orchids of Java* (1991) updated the orchids for that island to the Southeast of the Malay Peninsula. After 40 years a revision of the orchids of the Malay Peninsula and Singapore was urgently needed to reflect the increase in orchid knowledge. The authors succeeded very well in producing a most valuable book, a worthy successor of Holttum's work, which brings the orchid knowledge at the same high standard as in Thailand and Java.

The two authors are the right persons to undertake a revision of the Orchids of Malaya and Singapore. Seidenfaden is the only taxonomist with a vast knowledge of the orchids of Thailand and surrounding countries, where many Malay species or their relatives occur. His knowledge is supplemented by that of Wood who is familiar with Bornean orchids and also studied Sumatran orchid collections.

Orchids of Peninsular Malaya and Singapore mainly follows the lines of Holttum's work, except that the chapters on cultivation, hybridizing and propagation of orchids are excluded, biographical notes on collectors and a glossary of orchid terminology are added, and the chapters on distribution and classification are rewritten. The revised book contains about 850 species, only some 50 more than in Holttum's treatment, which is mainly caused by the fact that only a very limited number of new collections was added since Holttum's

studies. That probably accounts partly for the fact that Thailand and Sumatra have a distinctly higher number of species, resp. about 1000 and 1200. Concerning collections of orchids the Malay Peninsula is now probably more in need of collecting activities than Sarawak and Sabah.

The book follows the familiar concept of taxonomic publications, giving the name of a taxon, literature citations, a description, distribution and notes. Keys are provided to the subfamilies, under the subfamilies to genera, and under the genera to sections and/or species. A major difference with Holttum's work lies in the name changes of almost 200 species, which were necessary because of revised generic concepts, and reduction of species. The subdivision of a number of genera reflects the present standards in orchidology. Information per species is clear and concise. The literature citations per species are limited, mainly restricted to Malayan literature and recent taxonomic revisions; as synonyms in general only those names are given which were in use in Malaya. The species descriptions are short but adequate, most are taken from Holttum with few corrections and additions. Like Holttum the authors do not hesitate to point out where doubt exists concerning a decision they make, they point out gaps in existing knowledge and mention deviating specimens. A major improvement is the addition of line drawings of almost all species. These are partly specially prepared for this book, partly redrawn from earlier literature or unpublished drawings. They are a major aid in identification, and, since they are all produced in the same elegant style, give the book a well-balanced appearance. A hundred and ninety two colour photographs of excellent quality on 48 plates give the book a finishing touch.

The book is very well produced, bound in hard cover, printed on excellent paper, and almost 2.5 kg heavy. It is a must for all persons interested in Southeast Asian orchids, and at a price of UK£ 64.00 it is a very good buy which gives the owner a wealth of information. — E. F. de Vogel.

SUNARNO, B. & RUGAYAH (Eds.) 1992. *Flora Taman Nasional Gede Pangrango*. 375 pp. Herbarium Bogoriense. No ISBN. Price unknown. In Indonesian.

This book was published under the sponsorship of the National MAB Program of Indonesia, LIPI, and UNESCO, as a continuation of the *Flora von Tjibodas* by S.H. Koorders, articles by W.M. Docters van Leeuwen, W. Meijer, I. Yamada, and some unpublished notes by C.G.G.J. van Steenis deposited at the Herbarium Bogoriense. Inclusion of a species was based on C.A. Backer & R.C. Bakhuizen f.'s *Flora of Java and Van Steenis' Mountain flora of Java*. Additionally some species were included that had been collected by R. Abdulhadi during his study of the vegetation of this mountain complex.

The contents include a description of the locality, its physiography, soils and climate, phytography, a survey of previous collecting, flora and vegetation, and descriptions of the species. There are 178 tree species, 551 herbs and shrubs, and 115 lianas. — S.S. Tjitro-soedirdjo.

When receiving this book, I think the first flora made by Indonesians in Indonesian, I had great expectations. Alas, I was quite disappointed, and the work must be regarded as a missed chance. Although called a flora, keys are lacking. Another unhappy observation was that more or less recent literature surely available to the authors (*Blumea*, *Flora Malesiana*) was apparently often not consulted. Hence there are a number of omissions and errors that could easily have been avoided in all groups that I have a slight knowledge of, whereby I fear for the others.

As far as the 23 taxa of Gramineae are concerned, 5 are misnamed, while the endemic *Agrostis clemensorum* has not been included. I know of the occurrence of several other species in the Park, e. g. *Axonopus affinis* (only locality in Java!), and the common lawn grasses *A. compressus* and *Chrysopogon aciculatus*. *Oxalis intermedia* is *O. latifolia*, while the obnoxious weed *O. debilis* var. *corymbosa* is not mentioned. There are three species of *Mycetia* in Cibodas, not two, the third being *M. javanica* (Floribunda 1/5, 1988, 18). Absent also is *Rivinia humilis* (*Phytolaccaceae*), which I found along the path above Cibodas in 1987. Of the six species I collected then, 4 are not included: *Argostemma borragineum*, *Bulbophyllum triflorum*, *Callitriche 'verna'* (Flora Malesiana I, 4, 1951!, Flora Malesiana Bulletin 10/1, 1988, 28), and *Elatine triandra* (ibid., 29).

Nevertheless, I suppose most of the species occurring in the Park have been included and so this annotated checklist will be of use to the unspecialized visitors of it. The plates that end the book are very nice, Mr. Sunarno I am told made them, but modestly did not state so. — J.F. Veldkamp.