



Hamidah M, et al. 2011. *Botanical Gazetteer for Peninsular Malaysia*. FRIM Research Pamphlet no. 131. Free pdf-file: <http://www.chm.frim.gov.my/Resources/Publications/Books/Gazetteer.aspx>.

Any flora project depends on basic information which often is time consuming to be prepared, of which the enormous work, the expertise needed and the high value is usually well appreciated by practicing scientists, but never recorded in current citation indices. Gazetteers are such sources of information. It is therefore a great contribution towards Malesian botany that, after the Sabah and Sarawak Gazetteers, also a new Gazetteer for Peninsular Malaysia is available. Many botanist and other natural history scientist will greatly benefit from this searchable pdf-file.

MARCO ROOS

Hu Q-M, Wu D-L (eds-in-chief). 2011. *Flora of Hong Kong. Volume 4*. Agriculture, Fisheries and Conservation Department, Hong Kong Herbarium & South China Botanical Garden. 379 pp., 673 colour photographs, 271 line drawings. ISBN 978-988-9825-39-3. Price: HKD 150.

Before me lays the fourth and final volume of the Flora of Hong Kong. The series has been completed in four years time, and covers all seed plants (Gymnosperms and Angiosperms, 140 families) found native or naturalized in Hong Kong. A selection of introduced plants is included as well: ornamentals, landscape trees, and species used in afforestation or cultivation. The classification of the Gymnosperms follows that of Kubitzki (1990), whereas for the Angiosperms the classification of Cronquist (1988) is adopted. The family numbers used in the Flora are those used in the above mentioned publications. The text is in English, species names are given both in Latin and Chinese. Volume 4 covers the entire *Liliopsida* (or Monocotyledons), about 700 species in 40 families. *Poaceae* (227 spp.), *Cyperaceae* (143 spp.) and *Orchidaceae* (114 spp.) are by far the largest families. For each family, genus and species the morphology is described; for each species reference to the original description, other relevant literature, and regional synonyms are presented, as well as the species' indiginity, distribution (including reference to some herbarium specimens), ecology, and uses. Identification, starting with the Key to the families, will not always be easy since families, and within families genera, and within genera species, are keyed out only once, and keys follow higher level classifications. The keys are therefore not very user friendly, and for the layman they might be too difficult. Two examples might illustrate this. To choose between the families *Limnocharitaceae* and *Alismataceae* (page 1, lead 7) one has to look at ovules and fruit dehiscence, whereas for Hong Kong the colour of the flower tells enough: yellow for *Limnocharitaceae*, white to pink for *Alismataceae*. To key out the genus *Sphaerocaryum* within the *Poaceae*, one first has to choose for Spikelet with two florets or sometimes appears with 1 floret (page 120, lead 11), and later for Spikelet with 1 floret (lead 15). It is correct, but only grass specialists will understand this. More than half of the species are beautifully illustrated with a colour photograph or a line drawing. Although the line drawings are not always accurate (e.g. Figure 160-3: shape of lemmas and position of needles in *Lophatherum gracile*) and sometimes the photograph is a bit of a picture puzzle (Photo 326: which leaves belong to *Thuarea involuta*), they generally are very helpful for identification. For

anyone with an interest in the flora of Hong Kong the series is a must. I praise the editors-in-chief with the completion of this impressive series.

LENI DUISTERMAAT

References:

Cronquist A. 1988. The evolution and classification of flowering plants, 2nd ed. The New York Botanical Garden, New York.

Kubitzki K (ed). 1990. The families and genera of vascular plants. Volume I: Kramer KU, Green PS (eds), Pteridophytes and Gymnosperms. Springer-Verlag, Berlin-Heidelberg-New York-London-Paris-Tokyo-Hong Kong.

Kiew R, et al. 2011. *Flora of Peninsular Malaysia, Series II: Seed Plants, Volume 2*. Forest Research Institute Malaysia. 235 pp., colour plates, line illustrations, maps. ISBN 978-967-5221-53-8. Price: RM100.

Kiew R, et al. 2011. *Flora of Peninsular Malaysia, Series II: Seed Plants, Volume 3*. Forest Research Institute Malaysia. 385 pp., colour plates, line illustrations, maps. ISBN 978-967-5221-73-6. Price: RM100.

The Flora of Peninsular Malaysia Series II provides revisions for seed plant families that occur in Peninsular Malaysia. Some years after the publication of his impressive volume on *Apocynaceae* in the Flora Malesiana, David Middleton has treated the subfamilies *Apocynoideae* with 21 genera and 55 species and *Rauvolfioideae* with 14 genera and 57 species for volume 2 of the present flora. Both subfamilies include indigenous species that are important ornamental plants. Volume 3 covers 10 families comprising 123 indigenous species. It includes revisions of one gymnosperm family (*Cycadaceae*) and the angiosperm families *Chrysobalanaceae*, *Cleomaceae*, *Cucurbitaceae*, *Juglandaceae*, *Lecythidaceae*, *Magnoliaceae*, *Nepenthaceae*, *Ochnaceae*, and *Olacaceae*. Some of these also benefit from the knowledge base already provided by published Flora Malesiana treatments. In all cases are keys for the genera and species provided, as well as conservation status and distribution maps of the species. Representative species and morphological structures are illustrated by detailed line drawings and colour photographs. Both additions to our knowledge of the plants diversity of Malaysia are applauded.

MARCO ROOS

Koshy KC. 2010. *Bamboos at TBGRI*. Tropical Botanic Garden and Research Institute, Kerala, India. 104 pp. ISBN: 978-819-2009-80-3 (Pb). Price: USD 30.

Bamboos are a notorious group for herbarium taxonomists because of their size. The need for living material to map the diversity and to be able to make sound species hypotheses, usually hampers progress in revision work. It is most helpful if botanic gardens built up well-documented collections of living plants accompanied by voucher specimens. This very useful book provides an excellent example of such an initiative. Apart from giving a detailed overview of the specimens and taxa present, it also goes into general notions how this collection was built up. I think this will be a valuable overview for people interested in this impressive group of plants.

MARCO ROOS

McPherson S. 2011. *New Nepenthes – Volume 1*. Redfern. 596 pp., 491 figures. ISBN 978-095-5891-89-2. Price: GBP 34.99 (unsigned), GBP 36.99 (signed).

Stewart McPherson is renowned for his work on all kinds of carnivorous plants all over the world and the resulting series of magnificently illustrated and voluminous books. The present book again is beautifully illustrated and counts almost 600 pages. It provides an update on the genus *Nepenthes*, covering all new species and discoveries made since the publication of *Pitcher Plants of the Old World* in 2009. The book is structured in different chapters describing new discoveries in Borneo, Indochina, the Philippines, Sulawesi, and in New Guinea respectively. Highlights include the description of 7 new *Nepenthes* species – including two from Borneo, two from Sulawesi, one from New Guinea, two from the Philippines, emended descriptions of *N. lamii* and *N. thorelii* (both plants were previously wrongly identified), an account of a newly discovered population of *N. pitopangii* (with spectacular colouration), an account of new understanding of the diversity of *N. philippinensis* and related species, detailed expedition reports and a comparison of all highland *Nepenthes* of Palawan (many of the most spectacular *Nepenthes* known), and complete descriptions and a comparison of all recently described Indochinese taxa. The full diversity, wild ecology and distribution of each new *Nepenthes* is accounted in full detail, along with a report of the discovery of each plant, written by its discoverers. Like his former publication, this volume is well recommended for the many people interested in carnivorous plants.

MARCO ROOS

Lemmens RHMJ, Louppe D, Oteng-Amoako AA (eds). 2012. *Plant Resources of Tropical Africa 7 (2). Timbers 2*. PROTA Foundation, Wageningen. 804 pp., line illustrations, maps. ISBN 978-929-0814-95-5 (book only), ISBN 978-929-0814-96-2 (book + CD-Rom). Price: USD 52 (book only), USD 65 (book + CD-Rom). In English and French.

Timbers 2 is the second of PROTAs two volumes on trees of tropical Africa used in the first place for their timber. Compiled by a large number of contributors, including many from African countries, this publication will be very useful for anyone working with or interested in African hardwoods. The book includes detailed botanical descriptions of 150 wild and cultivated timber species, with distribution maps, wood properties, wood anatomical descriptions and small, but clear line drawings. For 164 minor timber species, more simplified accounts are provided, while another 379 species with scanty information are listed under the descriptions of their relatives. Species are listed alphabetically under their genus name. Additional information on the ecology and traditional (incl. medicinal) uses of the species makes the book useful for (ethno-)botanists, ecologists and lay people interested in African botanical diversity.

In the world of international trade, tropical hardwoods are mostly listed under their commercial names, which are often derived from vernacular names used in some African countries. The taxonomic information given by commercial traders on the particular species is often lacking or unreliable. This makes it very difficult for scientists, conservationists and policy makers to calculate volumes of traded hardwoods and control the trade of CITES-listed or otherwise vulnerable species. The two Timber volumes of PROTA fill this gap in knowledge by providing accurate scientific information on African timbers. Commercial trade names are listed for their corresponding species, sometimes in the paragraph 'production and international trade', or, confusingly, in the paragraphs 'uses' or 'botany'. Unfortunately, these commercial names are not alphabetically listed in the Index of vernacular plant names at the end. The reader cannot search for trade names anywhere in the book, and that is a serious omission. I spent quite some time looking for the species that had yielded our hardwood kitchen table, which we bought under

the name 'bubinga' in Cameroon. Luckily, the online PROTA database (<http://www.prota4u.org>) allows for better queries on trade and vernacular names, so I discovered my table could be made of four different *Fabaceae*. Back to the PROTA Timber 2 volume, my best guess is now *Guibourtia tessmannii*. I will still need a wood anatomist for a final judgment.

TINDE VAN ANDEL

Ong PT, et al. 2011. *Wild orchids of Peninsular Malaysia*. Forest Research Institute Malaysia. 196 pp., colour photos. ISBN 978-967-5221-66-8. Price: SGD 79.

Orchids belong to the most popular plant taxa and many are regarded to be very esthetic and photogenic. The present book proves this once more, and accentuates this moreover thanks to a very nice lay out. It is a comprehensive, richly illustrated book of the diversity of the orchid flora. Apart from showcasing a kaleidoscopic morphological and taxonomic representation of species, it also provides information on several aspects of the biology of the group. One chapter deals with floristics and habitats, another with pollination, whereas there is also a chapter on research and conservation, including the cultivation. Especially in the case of orchids, it is a most valuable aspect of such a coffee table book to include discussions on sustainable conservation. More than 450 accurately named indigenous species (c. 50 % of the total orchid flora in Peninsular Malaysia) are illustrated in high quality and full colour.

MARCO ROOS

Parnell J, Curtis T. 2012. *Webb's An Irish Flora, Edition 8*. Cork University Press. lvi, 504 pp., 118 colour + b/w illustrations (by Elaine Cullen). ISBN: 978-185-9184-78-3 (Hb). Price: GBP 29.99.

This handbook provides a clear means of identifying the higher plants that grow wild and which are commonly naturalized or otherwise encountered in Ireland. The present edition is ordered according to APG III and is illustrated throughout with hand-coloured drawings. Trees, shrubs and climbers in winter are now covered for the first time. Background information on plant morphology, distribution and rarity is presented. Also included is a list of plants that have legal protection in Ireland. The keys are relatively simple to use, also for workers outside the specific field of study of plant identification – such as environmental consultants, the general public, students, professional and amateur botanists, etc. For sure it will be the standard for taxonomic information on the Irish flora for the coming years. Two critical remarks: I regard diagnostic line-drawings more informative than the colour drawings included in this edition, and I doubt whether the quality of the paper and the thick, stiff cover are practical and field-proof.

MARCO ROOS

Wilson A (ed). 2011. *Flora of Australia Volume 39 – Alismatales to Arales*. 301 pp., colour plates, b/w line drawings, distribution maps. ISBN 978-064-3104-23-5 (Hb); 978-064-3104-24-2 (Pb). Price: AUD 130 (Hb); AUD 110 (Pb).

Volume 39 of the *Flora of Australia* describes 17 families of monocots in 76 genera and 256 species. Thirty authors, illustrators and photographers have contributed to this volume. Most of the families treated are aquatic and include the sea-grasses, pond weeds, and some major agricultural weed species. The aquatic families are all rather small sized in terms of species numbers. Two, *Juncaginaceae* (represented by 25 out of 29 species) and *Posidoniaceae* (8 out of 9), have their greatest diversity in Australia. *Lemnaceae* contains the world's smallest and most reduced flowering plants, some as tiny as 1 mm long. Here we see one of the problems of such huge and

long term flora projects: revisions concern families of which the taxonomic status has changed in recent classifications. In this case, in APG III former *Lemnaceae* are classified in *Araceae*. I fully understand the pragmatics to include the revision as it is, but it is a pity that these new views are not mentioned at all in the general text on the specific 'families'.

The four mainly terrestrial families, are all predominantly tropical, with their greatest diversity outside Australia, including major families with species of economic importance: *Areaceae*, *Pandanaceae*, and *Araceae*.

MARCO ROOS

Wilson A (ed). 2009. *Flora of Australia Volume 44A, Poaceae 2*. ABRS/CSIRO Publishing, Melbourne. xvi, 410 pp., illustrations. ISBN 978-064-3096-29-5 (Hb), 987-064-3096-30-1 (Pb). Price: AUD 130 (Hb), AUD 110 (Pb).

This is the third volume (of four with volume 44C with the centothecoids and panicoids yet to come) of the treatment of the grasses (*Gramineae / Poaceae*) of Australia and includes the BEPP clade (*Bambusoideae, Ehrhartoideae, Pharoideae, Pooideae*) with 80 genera and 405 species (c. 1 300 in Australia, 4 new ones in the Appendix). The area covered, as is usual in this series, is continental Australia (incl. Tasmania) and immediate offshore islands. Taxa occurring in other areas administrated by Australia have been treated in volumes 49 and 50.

The genera and species are arranged by supposed relationships; a consequent alphabetical sequence at least within the tribes would have made consultation much easier. In the *Stipeae* the genera are, but within them the species are not; the two genera of the *Meliceae* easily could have been alphabetised, etc. The delimitation of taxa is apparently based on the personal opinion of the various contributors (15 in all) and therefore in some instances is not consistent, e.g. *Bromus* is treated in the wide sense, but the various segregate genera (e.g. *Anisantha, Bromopsis, Bromus* s.s. (incl. *Serrafalcus*), *Ceratochloa, Genea*) are only mentioned in the synonymy of the species. On the other hand *Ehrharta, Microlaena*, and *Tetrarrhena* are kept separate, and *Anthoxanthum* and *Hierochloë* as well. *Austrostipa* (the Australian species formerly in *Stipa*) is

broken up into subgenera, each with its own key (these could easily have been merged into a single one), but *Bromus* is not.

The synonymy is (wisely) restricted to names mentioned in literature concerning Australia. Typification is given wherever possible, but only the few new ones officially designated in the Appendix are validly published.

The keys are the most important part of any flora. The one to the subfamilies and tribes is in another volume (43: inconveniently at the end of the volume: pp. 249–252, 263–277). As so many genera (40 %) and native species (83 %) are endemic to Australia and unfamiliar to outsiders, it will not always be clear where to look, a repeat here at the very beginning would have simplified matters avoiding another run to the library. The characters used are often few and not in a phytographical order. There is no such thing as a 'strong' or a 'weak' character. If the latter, it should not have been used. Curiously, characters used in the keys are often not repeated in the generic or specific descriptions, sometimes they are actually different, or even contradictory, see e.g. the pubescence of the lemma in *Achnatherum brachychaetum*. I had expected that keys and descriptions would have been identical having been derived from the same databases, whether AUSGRASS, DELTA, or LUCID.

Distribution maps and representative specimens, up to 7, are given for all taxa.

Putting these criticisms aside, this is a great contribution to agrostology and it may be expected to last at least as long as the first and last general treatment by Bentham in the *Flora of Australia* (1878).

J.F. VELDKAMP

Zhang X-C. 2012. *Lycophytes and Ferns of China*. Peking University Press. 711 pp., numerous colour photographs. ISBN 978-730-1209-73-8. Price: RMB 168. (In Chinese.)

You do not have to be able to decipher Chinese characters to really enjoy this magnificent book. Following modern insights in the classification it gives an annotated checklist of all Chinese representatives of Lycophytes and Monilophytes. Every species is illustrated with beautiful and clear colour photographs. Also the glossary is based on high quality and informative photos.

MARCO ROOS

