

Accompanying the book is a CD-ROM, prepared by H. P. Nooteboom, which reproduces all the species descriptions and many of the images, with the addition of some that are not printed. Crucially, it also includes the keys, adapted for LUCID PHOENIX. While this is not a multi-access key, it does allow many of the character states to be illustrated which will help readers who are unfamiliar with the Cucurbitaceae.

If I have a criticism, it relates to the Taxonomy section (p. 3) which explains that generic limits in the Cucurbitaceae are in a period of rapid change following molecular phylogenetic studies. One sentence in this section reads: 'Various genera to be sunk by Schaefer, Heibl & Renner (2009) and Schaefer & Renner (in press (for Kubitzki)) are maintained on the basis of flower- and fruit-morphology.' I should like to have seen a little more discussion of this question. If new generic limits become commonly accepted and new combinations are made, then this revision will be less useful in naming species correctly than it is now.

The volume also includes valuable contributions on wood anatomy by Pieter Baas and on pollen morphology by C. B. Mennes & R. W. J. M. van der Ham. They are shorter than in some of the earlier *Flora Malesiana* accounts but, by judicious reference to the literature, they allow readers who are interested to go into these subjects in more depth.

The authors have now revised most of the Cucurbitaceae of SE Asia to a very high standard and are to be congratulated. This is not the end of the story, of course; while this revision is very thorough, it is plain that certain districts and islands in Malesia need further exploration urgently. Collectors will want to use this valuable reference to improve herbarium holdings of specimens and to explore those taxa which remain insufficiently known, with the aim of maintaining all species extant in natural forest.

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Flora of Peninsular Malaysia, Series I: Ferns and Lycophytes, Volume 1 (Malayan Forest Records No. 48). B. S. Parris, R. Kiew, R. C. K. Chung, L. G. Saw & E. Soepadmo (eds). Kepong: Forest Research Institute Malaysia. 2010. ix + 250 pp., 12 black and white figures, 18 colour plates. ISBN 978 967 5221 24 8 (v.1). US\$60.

Flora of Peninsular Malaysia, Series II: Seed Plants, Volume 1 (Malayan Forest Records No. 49). R. Kiew, R. C. K. Chung, L. G. Saw, E. Soepadmo & P. C. Boyce (eds). Kepong: Forest Research Institute Malaysia. 2010. ix + 330 pp. ISBN 978 967 5221 32 3. US\$75.

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The *Flora of Peninsular Malaysia* is an initiative of the Malaysian government as part of its commitment to biodiversity conservation and to the training of a new generation of taxonomists. It is being produced in two series, Series I for the ferns

and lycophytes and Series II for the seed plants. These two volumes mark the first in each of these series. Detailed nomenclature, type information and descriptions are provided for all taxa, and keys are given for genera and species where necessary. Taxonomic notes and information on distribution, ecology, uses and vernacular names are also provided. What is particularly useful in the *Flora of Peninsular Malaysia* is that all species are mapped and provided with an IUCN Conservation Assessment. Many species are illustrated with high quality drawings and photographs.

The last published fern flora of Peninsular Malaysia was that of Holttum in 1968 (and this covered ferns but not fern allies). The first volume of the *Flora of Peninsular Malaysia, Series I: Ferns and Lycophytes* is the beginning of a comprehensive update of that work. It starts with a conspectus by Barbara Parris of orders, families and genera, to reflect the changes in classification of ferns and fern ‘allies’ that have emerged from recent phylogenies based on morphological and molecular data. The editors broadly follow the treatment of Smith *et al.* (2006) in placing Equisetaceae and Psilotaceae with the ferns, rather than with lycophytes, but have modified the treatment for ferns; for example, Pteridaceae is divided into five monophyletic families, Parkeriaceae, Adiantaceae, Cryptogrammeae, Sinopteridaceae and Pteridaceae; Polypodiaceae is divided into three families, Loxogrammeae, Polypodiaceae and Grammitidaceae. Justification for these changes is provided.

A further chapter by Barbara Parris and Ruth Kiew covers the history of the collecting of ferns and lycophytes in Peninsular Malaysia, and a chapter on species assessment and conservation has been contributed by Lilian Chua of the Forest Research Institute Malaysia.

Volume 1 of Series I covers nine families, 21 genera and 100 species, and includes Selaginellaceae, Psilotaceae, Equisetaceae, Osmundaceae, Matoniaceae, Schizaceae, Cibotiaceae, Loxogrammeae and Grammitidaceae.

The last complete account of the seed plants was Ridley’s *Flora of the Malay Peninsula* which was published in five volumes between 1922 and 1925. The first volume of the *Flora of Peninsular Malaysia, Series II: Seed Plants* includes information on the family concepts adopted and notes that the task is to document a total of approximately 7834 species in 1564 genera and 220 families. A table of these families, with numbers of genera and species, is given. The family concepts largely follow APG II although the editors have chosen to maintain a few, for reasons they set out, that are now mostly sunk into synonymy.

Further chapters are provided on the vegetation of Peninsular Malaysia, and the conservation chapter from the fern and lycophyte volume is reprinted almost verbatim here.

Volume 1 of Series II covers 26 families, 35 genera and 81 species and includes Ancistrocladaceae, Araucariaceae, Balanophoraceae, Bonnetiaceae, Casuarinaceae, Chloranthaceae, Clethraceae, Cruciferae, Ctenolophonaceae, Daphniphyllaceae, Datisceae, Erythroxylaceae, Illiciaceae, Myricaceae, Nelumbonaceae, Pedaliaceae, Pentaphylacaceae, Pittosporaceae, Podocarpaceae, Portulacaceae, Schisandraceae,

Symplocaceae, Tetrameristaceae, Torricelliaceae, Trigoniaceae and Turneraceae. Most of these are very small with four or fewer species in Peninsular Malaysia, and several with only one species. The larger accounts include the Balanophoraceae, Podocarpaceae and Symplocaceae.

The authors and editors are to be congratulated on two beautiful, scholarly and very valuable works.

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Natural and Cultural History of the Golfo Dulce Region, Costa Rica. Anton Weissenhofer, Werner Huber, Veronika Mayer, Susanne Pamperl, Anton Weber & Gerhard Aubrecht (scientific editors). *Stapfia* 88, also *Kataloge der Oberösterreichischen Landesmuseen* N.S. 80. Freistadt, Austria: Plöchl-Druck. 2008. 768 pp. ISBN 978 3 85474 195 4 (hardback). £80.

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This is an excellent book, with high quality printing, and contains 64 scientific papers touching on many aspects of plant and animal research carried out at, or around, the La Gamba tropical research station in the Piedras Blancas National Park, Golfo Dulce region, Costa Rica. The park was only established in 1991, and the tropical field station in 1993. The introduction provides a background to the region, the people and national parks, as well as to the scientific work which is being conducted.

The book as a whole is divided into five parts: *Abiotic Aspects*, *Plant Biology*, *Animal Biology*, *Plant–Animal Interactions* and *Human Aspects*. Each part is then divided into papers by specialist authors.

Abiotic Aspects includes contributions on *Geography*, *Geology* and *Climate*, while *Plant Biology* covers *Ecosystems and vegetation*, *Plant diversity*, *Life forms*, *Ecophysiology* and *Fungi and lichens*. This part includes contributions on ecosystems studied using long-term research plots; introduces the diversity and biogeography; deals with alien plants and invasion patterns; provides a survey of life forms and of Rubiaceae in the Golfo Dulce region; and gives examples of medicinal plants. One paper lists a surprising number of terrestrial litter trappers, covering 10 plant families. A survey on fungi and one on lichens end the *Plant Biology* part. Many excellent photographs are provided, including a human toenail destroyed by a *Fusarium* sp.