

REVIEWS

DAVID L. HAWKSWORTH & ALAN T. BULL (eds.): **Plant Conservation and Biodiversity**. Topics in Biodiversity and Conservation, Volume 6. Springer, Dordrecht, The Netherlands, 2007. viii + 420 pp., illus. ISBN 978-1-4020-6443-2. Price: EUR 119.95.

According to the introduction this volume contains a selection of studies submitted to 'Biodiversity and Conservation', or as it says at the French title page: 'Reprinted from Biodiversity and Conservation, volume 16 (2007)'. The book is called: Plant Conservation and Biodiversity. And the series seems to be part of Topics in Biodiversity and Conservation. In no way the introduction explains what is so important in this collection of papers that they should be reprinted as a book. The only reason for this book seems to be that this set of papers can be seen as case studies, which according to the introduction: "will complement the necessary less-detailed information available in textbooks and review articles".

All papers deal with biodiversity or conservation or both. Various kinds of human impact on either diversity or conservation are discussed often from a single species or a single (agri)cultural product (Tequila!) and restricted to regional or very local circumstances. It may help students to set up their own studies, however, a well-constructed search path in Google or similar programs will probably give better results.

FRITS ADEMA

GERALD T. KRAFT: **Algae of Australia. Marine benthic algae of Lord Howe Island and the southern Great Barrier Reef, 1. Green Algae**. ABRS, Canberra; CSIRO Publishing, Melbourne, 2007. 356 pp., 110 figures, 11 colour plates. ISBN 978-0-64-309432-1. Price: AUD 125.

The beautiful and interesting Algae of Australia series is planned to contain not only an extensive introduction (McCarthy & Orchard 2007) and nice monographs on groups of algae, but also volumes specialized on the algae of a local area, like in the present volume Lord Howe Island and the islands and reefs of the Capricorn group in the southern Great Barrier Reef. The author and his students and colleagues have been studying the marine flora of these islands from 1976 onwards, resulting in the present book with data and photographs on 135 species and infraspecific taxa of marine benthic green algae. Like in the other volumes of this series, the quality of the book is superb. It contains a key to the genera and, where necessary, also keys to the species that can be found in the delimited areas. For each species data on publication, types and references are given, together with a rather elaborate description, biogeographic data, a list of observed samples, and data on occurrence and ecology of the species occurring at Lord Howe Island and/or in the Capricorn group. In a special appendix, one new genus is described (*Botryodesmis* nov. gen.), together with 11 new species and one new form, as well as three new combinations and one new (substituting) name. In this appendix the English descriptions of the new taxa are the same as earlier in the book, or just a little shortened. There is, however, no cross-reference to the earlier treatment and figures of these taxa, although in the current text a cross-reference to the appendix is given. The notions in the glossary are in most cases different from the

elaborate glossary to be found in the introductory volume of the series, while many new terms are also included. Before the index two short chapters are included: a list of abbreviations and contractions and a short list of publication dates of previous volumes of *Algae of Australia*. Both contain important information, but will often be overlooked by browsing users because of their place in the book. I would expect some data of the former chapter in the introductory chapter, and the publication data on the cover or the back cover or the accessory pages. What do you get as an extra when you buy this *Algae of Australia* volume in case you do already have access to the earlier paper on benthic marine green algae of Lord Howe Island (Kraft 2000)? Well, of course one gets information on the green marine algae of the southern Great Barrier Reef, about which no comprehensive account had been published so far. Moreover, almost all illustrations are newly made or at least newly mounted, the nomenclature has been updated, and do not forget the coloured plates, containing photographs of more than 50 of the species. Despite the quality of most of the photographs, I regret that drawings of complex details are missing. Especially in the comparison of *Cladophoropsis vaucheriaeformis* and *C. planiuscula* these drawings could have been very helpful. Nevertheless, however, I am very content with this useful book which, although covering a limited area, contains information that is of use for everybody who tries to identify green marine algae from warmer waters. Recommended!

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References:

- Kraft, G.T. 2000. Marine and estuarine benthic Green Algae (Chlorophyta) of Lord Howe Island, South-western Pacific. *Australian Systematic Botany* 13: 509–648.
 McCarthy, P.M. & A.E. Orchard (eds.). 2007. *Algae of Australia*, Introduction. ABRS, Canberra; CSIRO Publishing, Melbourne.

ROBERT J. WHITTAKER & JOSÉ MARÍA FERNÁNDEZ-PALACIOS: **Island Biogeography. Ecology, Evolution, and Conservation**. 2nd rev. ed., Oxford University Press, Oxford, 2006. 401 pp. ISBN 0-19-856612-3. Price: EUR 56.40, paperback.

This much needed, distinctly elaborated second edition of *Island Biogeography* is divided into four parts, each comprising three chapters. Part 1 'Islands as natural laboratories' introduces types of islands, shows their laboratory status, discusses their origins, and shows several distributions and discusses species hot spots. Part 2 'Island ecology' introduces the Equilibrium Model of Island Biogeography (EMIB), based on MacArthur and Wilson's classic 'The theory of island biogeography'. The biodiversity of islands is considered as a dynamic equilibrium, new invaders or speciation will lead to the demise of other species. Subsequent chapters show the various problems with EMIB and this part ends with ideas for improvement of the ecological models. Part 3 'Island evolution' starts with microevolution, discusses speciation and combines all ideas in the chapter on macroevolution. The last part, part 4 'Islands and Conservation', shows the application of island theory in nature conservation on the main land (natural areas as islands in a developed countryside), shows the anthropogenic devastation on islands and discusses the conservation of island ecosystems.

The book is not a small book regarding its 400 pages in a rather small letter font. However, it is still extremely concise. Every text item is loaded with information and

this sometimes diminishes the pleasure of reading. It really tries to focus on all aspects of island biogeography. Many topics are discussed elaborately, others are only touched upon (with the species concept the outcome is rather disappointing, a discussion of the morphological species concept instead of only the biological species concept would have resulted in a much better conclusion than just ‘a species is what we consider a species’). The emphasis is on ecology and processes rather than systematics and patterns, the book deals with the distributions and dynamics of species on islands, whether these islands are flower heads, forest remnants or real volcanic islands. Of course, the emphasis is on the latter. I liked the idea of presenting ecological theory and models and then subsequently dealing with the problems and alternatives. Additionally, what I also liked is that in spite of the fact that models were often refuted, the authors showed that these models still have their value; it only matters how, when and where they are applied. The book has many illustrative figures, though more and simpler ones are welcome.

Throughout the book it is obvious that human influence is really a problem, anthropogenic influences (often disastrous and already dating back to the invasion of Melanesia) often play havoc with or prevent conclusions from ecological research in comparison to theoretic models. I appreciated the last three chapters on the conservation of species and their relationships. The picture painted is often bleak, many extinctions already happened and many more are to be expected. However, the book is also positive, it also shows routes to improvement and conservation, though this is unfortunately the shortest chapter.

The book is perhaps less valuable for people working on the islands in the Malesian Archipelago, because these islands are generally regarded as ‘continental islands’, islands breaking off from continents and carrying already a floral and faunal component. Helas, most large islands in Malesia form a non-discussed type of islands, they are continental in the sense that they broke off from continents, but most fragments ‘travelled’ submerged, only to emerge (and be barren) after collision and as such acting as true oceanic islands (of volcanic origin or atolls).

The book is magnificent in detail, information contents and a must to have and read for every researcher working remotely with some kind of island.

PETER VAN WELZEN