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Book reviews

EINAV R. — *Seaweeds of the eastern Mediterranean coast.* Dehradun (India): A.R.G. Gantner Verlag K.G., 2007, 266 p. (hardcover, ISBN 978-3-906166-36-0, EUR 110, www.gantner-verlag.com).

Mediterranean civilizations have used seaweeds for millennia. However, very little information is available on seaweed diversity in this region. The book *Seaweeds of the eastern Mediterranean coast* partially fills this gap by presenting a description, largely illustrated by photographs, of the more common species occurring in the eastern Mediterranean basin.

The book begins with a 60-page Introduction on algal biology, ecology and taxonomy. This material would have been more useful had it contained a comprehensive compilation of classical and recent literature; furthermore, many concepts in the Introduction are not up to date. Particularly, we regret that the author considers that the "current taxonomy of the Thallophyta […] was compiled in the 1930s and 1950s" (p. 6). We consider the term "Thallophyta" – which refers to a polyphyletic group of non-motile organisms traditionally described as "lower plants" – incorrect in the current understanding of algal and plant taxonomy. Although the author mentions that traditional classifications have been challenged by recent phylogenies inferred from molecular data, she mainly follows the classification presented in Lee's textbook (first published in 1980, prior to the widespread use of molecular tools). Furthermore, we notice discrepancies between the classification presented in the introduction and the taxonomy indicated for each documented species. For example, the Dictyotaceae are considered part of the Sphacelariales in the Introduction (p. 46) but are correctly assigned to the Dictyotales in the species descriptions (p. 210). The Introduction finishes with a key to the three macro-algal divisions, followed by keys to genera – improperly called key to species! The key to divisions presents three classic and simple tests (alcohol, iodine and warm water) making it possible to distinguish between red, green and brown algae. The keys to genera are mainly based on morphological characters, but also include some information on distribution and ecology which may be useful for identifying genera.

The main work is the field guide, which covers 177 of the 265 pages of the book. A total of 79 species or species complexes are described (36 red, 25 green, and 18 brown algae). Each species is presented on two facing pages and illustrated by several colour photographs taken underwater in its natural habitat. The name of the illustrated species is given on the top of both pages within a colour-coded banner to distinguish between red, green and brown algae. This layout and the excellent quality of the images are very pleasant, nevertheless the absence of scale bars on photographs and legends on the line drawings is regrettable. The text accompanying the illustrations of each species is separated into ten sections: i) taxonomy; ii) etymology; iii) description; iv) size; v) colour; vi) special features; vii) habitat; viii) biology and reproduction; ix) seasonality and distribution; x) additional species. All this information, together with the many illustrations presented in this book, is useful for recognizing seaweeds and, in most cases, will lead to the correct identification.

The book ends with five appendices. The Glossary provides a useful summary of terms commonly encountered in algal keys and descriptions. Some remarks on underwater photography highlight the difficulties encountered while photographing seaweeds in their natural habitat. The instructions for collecting and preserving algae are excellent. A number of informative photographs clearly

illustrate how to press and preserve seaweeds at home. The Literature list contains 336 references of which, unfortunately, only six were published after 2000. Finally, there is a useful index to all the species mentioned in the book.

In summary, while this book is a good starting point to present the diversity of marine macroalgae to the general public for identifying the plants accurately, we feel that many of the concepts and references presented are out of date and the taxonomy at times incorrect.

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ENTWISLE T.J., SKINNER S., LEWIS S.H., FOARD H.J. — Algae of Australia: Batrachospermales, Thoreales, Oedogoniales and Zygnemaceae. Canberra: Australian biological resources study; Melbourne: CSIRO Publishing, 2007, vi+191 p. (Hardback, ISBN: 9780643094314, AU $90.00, www. Publish.csiro.au).

For readers who are not aware of the genesis of the series *Algae of Australia*, the series was announced in 1995 as separate from the *Flora of Australia*, the latter having been in production since the 1980s. The layout of the treatments has, up to the publication of this volume in the *Algae of Australia* series, paralleled that of the *Flora of Australia* in that: synonymy is only listed for Australian records; descriptions are to a maximum of 100 words; a maximum of five collections other than the type can be cited; a small distribution map is given for each species (and lower ranks) and; a selection of taxa is illustrated by line drawing or photographs.

This volume is the third of the four volumes published thus far in the *Algae of Australia*. Unlike the *Flora of Australia*, we have not been provided with a preface or foreword in the first three volumes that supply the reader with guidance regarding the content of the series and the individual volumes. The reader is left to surmise why the first of the taxonomic treatments concerned an order of Rhodophyta, whereas this volume concerns taxonomic treatments of both Rhodophyta and Chlorophyta and the next volume has more of a regional flora about it. Of course, I may be totally incorrect and this volume represents a freshwater macroalgal flora (minus the Charophyta) which has been followed by a marine regional flora, thus the taxonomic treatment of the Nemaliales maybe the odd one out. The point is that without a 'mud map' from the sponsor we have no way of knowing what these volumes represent.

This volume includes four sections: the Batrachospermales, the Thoreales, both authored by Tim Entwisle, Royal Botanic Gardens Sydney and Helen Foard, World Wildlife Fund Australia ; the Oedogoniales by Stephen Skinner, Royal Botanic Garden Sydney and Tim Entwisle; and the Zygnemaceae by Simon Lewis, Beaumaris, Victoria and Tim Entwisle. This work represents years of research by the authors. There have been numerous recent publications that have indicated that work was proceeding on a comprehensive modern account of the Australian freshwater macroalgae, in international phycological journals and house journals and with various other authors (see references in the volume). Books published recently dealing with the Australian freshwater flora include Ling & Tyler (2000), on the microalgae of lakes and billabongs (see review by Skinner & Entwisle 2000) and McGregor (2007) on the Oscillatoriales of the north-east.

Entwisle (2007: 566) tells us that the Batrachospermales and the Characeae are the only two groups of freshwater macroalgae in Australia to have been

collected and studied sufficiently to allow any meaningful floristic interpretations to be made. In this volume the Batrachospermales section should be used in conjunction with Entwisle (2007). The Thoreales in Australia is known from the type locality[1] of *Thorea conturba* Entwisle *et* Foard, although Entwisle (2007) speculates it will be found further north. Of the Oedogoniales and Zygnemaceae, Entwisle (2007: 574) states these groups 'appear to include few endemics, but our taxonomic knowledge is currently poor'. I am sure he is not casting aspersions on the quality of the work that he and his coauthors have done in this volume of the *Algae of Australia*, but simply stating the fact that the organisms are opportunists and collectors are not necessarily present, nor in a mind to collect when these filamentous green algae are at their peak. I hope that this volume will encourage active collecting of the freshwater macroalgae in Australia.

I am not clear on the role of the glossary in the series. In Huisman & Entwisle (2007: 623) we are told that the glossary in the introductory volume 'contains terms likely to be used in volumes of the *Algae of Australia*… Specialised terms will be used in relevant volumes.' This indicates to me that terms commonly used in phycology would not reappear in subsequent volumes. Not so, many of the terms repeated in this glossary are in Huisman & Entwisle (2007) while terms such as 'lentic' and 'loric' (p. 112) are not in this glossary.

It should be noted that since this book was published the use of 'S.Skinner bis' for the authority of Stephen Skinner has been changed. According to the International Plant Name Index (IPNI) Stephen is now listed as S.Skinner, the first Stephen Skinner (1622-1667) having been removed from the database.

This volume and the other volumes in the series *Algae of Australia* are a bibliographer's nightmare. We are provided with citation formulations on the verso of the title page of the book for both the book and the book sections. I have a problem with the mandatory element in the statement 'this work should be cited as' when styles vary from publisher to publisher. For bibliographers and cataloguers, the problem is that the citations do not equate to the information provided in the CIP or the information above the recommended citations. In the CIP the indications are that there is a single author to the volume and just above the recommended citation we are told that two other persons are the editors of the volume. The information is different again on the title page of the book, which is where the library cataloguing rules demand the 'statement of responsibility' should be taken.

The dates of publication at the rear of the volume are problem. Mc Carthy & Orchard (2007: 698) state Huisman (2006) was published 20 November 2006 whereas Entwisle *et al.* (2007: 185) states the date as 21 October 2006. The date has been confirmed by Patrick McCarthy (Australian Biological Resources Study ABRS) as 20 November 2006.

I write this review in no way to put any person off purchasing a copy of the volume. The purchaser will receive a comprehensive and well researched flora of Australian freshwater macroalgal families for the purchase price. We can all look forward to future volumes on the remaining freshwater macroalgae and microalgae in the *Algae of Australia*.

1. 'a creek near Mullumbimby' (Entwisle 2007:570).

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