

I. M. Struthers and D. Rissik (eds): Plankton: A guide to their ecology and monitoring for water quality

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This book is intended to provide non-specialist readers with a guide to plankton biology and ecology, focusing on the use of planktonic organisms in environmental monitoring and water quality assessment. Targeted readers include environmental managers and consultants, water resource engineers and students taking courses in freshwater biology and marine ecology.

The book comprises nine chapters, a glossary of terms and an index. The text is written in simple and straightforward language, and sentence structure is uncomplicated. There are, however, a few cases of imprecise phraseology and use of colloquial expressions that may disconcert some readers. Nevertheless, despite some foibles with language use, concepts are described in sufficient detail, and the presentation of concepts and the descriptions of practical methods are reasonably clear; although there is some use of jargon this is neither excessive nor unduly intrusive. The net result is a book that is relatively easy to read. Adopting a critical note; the presentation could have been improved by the inclusion of a few, key closing statements at the end of each chapter, i.e., giving readers a clear take-home message for each chapter.

Most of the text is devoted to descriptions of the major groups of freshwater and coastal marine phytoplankton and zooplankton, giving coverage of systematics, environmental requirements and ecological interactions. The main focus of the book is on applied aspects of plankton biology and ecology, so not unexpectedly there is frequent mention of harmful algal blooms, and there is also discussion of nuisance species and indicator organisms. The book includes chapters devoted to sampling methods and the design of monitoring programmes, including brief descriptions of data collection and analysis, model building and interpretation and the implications for environmental management. Each chapter is accompanied by a reference list and suggestions for further reading. There are also numerous special topic boxes; most provide pertinent and useful information but a few are limited in content, making them much less interesting.

The book is illustrated with numerous line drawings, black-and-white photographs and colour plates. In general, the illustrations provide a useful complement to the text, and most

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are adequately captioned. The colour plates are presented *en bloc*, and separated from the relevant text, so flipping to-and-fro is required when reading some chapters; this can be distracting. The book also contains a number of tables. These vary quite widely in quality and information content, and table headings are sometimes vague and insufficiently informative.

Several chapters give practical examples of monitoring and assessment illustrated using case studies; most of the case studies are based upon work carried out in Oceania. In addition, many of the planktonic organisms and communities described in the text and illustrated in the line drawings and photographs are native to inland and coastal waters of Australia. Use of many examples from a limited geographic area may deter readers from outside Oceania.

There are a few printing errors, some of which could confuse or mislead readers lacking a background in natural sciences. For example, on pages 2, 4, 5 and 18 the name of the element phosphorus is confused with the adjectival phosphorous, and in Fig. 2.6 a medusa is called a mudusa. In addition, definitions of terms are sometimes imprecise, and there is not always concordance between the definition given in the glossary and usage in the text. For example, a larva is defined as being the young of an invertebrate, usually differing in form from the adult, but in the text there is frequent mention of fish larvae and larval fish.

Despite some shortcomings, the book generally fulfils the editors' hopes that it will provide an introduction to the biology and ecology of planktonic organisms that is readily accessible to a non-specialist audience. The book should be of interest to shellfish farmers, people who monitor planktonic communities in aquaculture ponds and impoundments, and those interested in assessing the impacts of the wastes from aquaculture and agriculture operations on recipient water bodies. The book contains descriptions of sampling methods and the use of plankton in monitoring and assessment work that are not usually found in textbooks covering marine and freshwater biology. As such, the book may also be used as a source of supplementary information by undergraduate college and university students taking degree courses in aquatic biosciences.