

## Review of Marine Ecology: Concepts and Applications

**Marine Ecology: Concepts and Applications.** By M. Speight (University of Oxford) and P. Henderson (PISCES Conservation Ltd). Wiley-Blackwell, Chichester, U.K. 2010. ix + 276 pp. 22 × 27.5 cm. \$89.95. ISBN 978-1-4443-3545-3 (paperback).

A textbook on marine ecology has at least two possible functions for a natural product chemist. It may (1) serve as a modern synthesis of knowledge providing background information for conducting our own science and (2) deliver insight regarding the role of natural products within the field of marine ecology, for example in regulating interactions of marine organisms with cascading effects on marine communities and ecosystems. This book fulfills the first of these functions, teaching the fundamentals of modern marine ecology with exceptional use of recent (post-2000) literature on basic processes as well as topical issues such as climate change, changing biodiversity, marine conservation, and fisheries.

*Marine Ecology* opens with basic facts about the physical environment of the world's oceans, helpful to a chemist who may have little background in marine science. Many of the questions discussed (e.g., how salty is the ocean? why do currents flow the way they do?) could be readily answered with an Internet search; however, this book provides added value with data-rich figures, tables, schematics, color photos, citations, and a highly readable text to represent a single source for what you did not realize you wanted to know.

Beyond the early chapters on physical environment and biodiversity, the book is organized by increasing levels of ecological complexity, from ecophysiology to interactions among species to ecosystem-level processes. There is a substantial dedication to herbivory, predation, parasitism, and competition, topics of high relevance to chemists studying the roles of natural products in ecological interactions. There is less emphasis on positive ecological interactions (e.g., mutualism, cooperative behavior) or indirect effects such as how cues from predators alter prey behavior and impact their own food source. These are hot topics in marine ecology that could present opportunities for chemical ecology research. Although this text does not focus directly on chemical ecology (despite the importance of chemical cues in marine systems), it functions very well as an introduction aimed at midstage undergraduate biology students or postgraduate non-ecologists interested in complementing their expertise in another area with a solid grounding in marine ecology.

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