

ical oceanography sections, material is generally referenced heavily; the author apparently knows this literature well. One can read for pages in the biology section, finding few or no references. Without a great deal of effort, I found several bibliographic inconsistencies.

The book generally reads well (except for the irrelevant details), but it can become almost a game finding the not terribly rare inane statements. Perhaps my favorite is: "Water deposited in the Atlantic by the Atomic Energy Company, for example, was trawled up by fishermen on the Coast of Oregon in the Pacific Ocean" (p. 304). Being a trusting soul, I assume King really meant something here; however I don't think she said it!

The book deserves to be considered by instructors looking for a thoughtful and fairly detailed descriptive oceanography text. The text is drier than others which might be considered, but some of the factual detail might be put to heuristic advantage. The short sections on exploitation and pollution, as well as the appendix on the law of the sea, provide a practical viewpoint which should generally be appreciated by today's student. However, as I watch U.S. gasoline prices creep upward with further oil shortages, an inevitable fact of life, my mind reels with the suggestion that petroleum be used as a source for protein (p. 309)!

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KING, C. A. M. 1975. **Introduction to marine geology and geomorphology**. Crane, Rusak & Co., Inc., New York. ix + 309 p. \$24.00 (paperback, \$12.00).

This book is an expansion and complete revision of the approximately 100 pages of marine geology and geomorphology included in King's 1962 book on *Oceanography for geographers* (titled in the United States—*Introduction to oceanography*). Updating of material is indicated by the 1965 median of her nearly 400 references; however, it is not as up-to-date as desirable in this rapidly changing field, because only eight references are later than 1970. This gap is particularly important because the book is written almost as a series of abstracts grouped within the various subheadings of the book, with little material beyond that already published. Moreover, at least 90 of the 95 illustrations were taken (with credit) from previous publications. The abstractlike style and the warmed-over illustrations accord with the absence of unique new contributions, insights, or generalizations by the author, except possibly in the section on coasts—her own area of research.

The book contains six main divisions: introduction, structure of ocean basins, continental margins, morphology of open-ocean floor, sediments (longest), and origin of ocean water and changes in sea level. Only passing reference is made to the main geophysical tools: seismic reflection, seismic refraction, geomagnetics, gravity, and heat flow. While sea-floor spreading is briefly described, it is not used as the framework into which many of the observations in the different divisions could have been fitted—almost as though sea-floor spreading had been added after the main part of the book was written.

The style and content of the book contribute little to the knowledge of an advanced student or active worker in marine geology, but the abstract-like organization is not very suitable or necessary for the beginning student or casual reader. Nevertheless, the title and level of content indicate that the book is intended for an initial course in marine geology. Previously existing textbooks leave something to be desired and so does this one, but it is currently the most up-to-date text available for an introductory course in marine geology.

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COLE, G. A. 1975. **Textbook of limnology**. Mosby, Saint Louis. 283 p. \$12.00.

This concise textbook, focused primarily on the fundamentals of physical and chemical limnology, makes enjoyable reading. The author's goal in writing it was to help students "understand certain areas of the discipline that many . . . find difficult." Professor Cole's treatment of the concepts of stability, heat budgets, the carbon cycle, and redox reactions indicates that he has successfully identified and clearly explained the basic concepts of the subject that give most undergraduate students the greatest difficulties. Some of my students have said that they find the book less intimidating and more fun than any of the other textbooks currently available. Cole's use of his own data in many of the calculations presented in the text gives the book a personal touch students appreciate. They get the feeling they are looking over the author's shoulder as he does his work on Montezuma Well and Tom Wallace Lake.

Unfortunately, this book is too limited in scope and coverage to be profitably used as a major text in most limnology courses, and a complementary work on aquatic ecology has yet to be written. University classes often contain students possessing divergent preparatory backgrounds and it is unlikely that this textbook would appeal to those expecting to be inspired and challenged. Biologists will probably be dismayed by the book

because many exciting developments in lake community ecology and experimental limnology are covered in a few short paragraphs. Phosphorus and its role in eutrophication is treated in a scant 3 pages!

The chapter entitled "Carbon dioxide, alkalinity and pH" is one of the best treatments of this complex subject currently available to undergraduates. Unlike the other textbooks of limnology, Cole's contains a straightforward discussion of ion activity coefficients.

This is not the long awaited replacement for Franz Ruttner's remarkable book which has faithfully served as a backbone of limnology courses worldwide for 35 years.

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