

There are plenty of small-scale location maps, but some more detailed plans would have helped explanations of, for example, the problems at Oregon Inlet and Currituck.

Overall this is an informative, well-written book at a reasonable price.

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Design and Construction of Mounds for Breakwaters and Coastal Protection, edited by Per Bruun, 1985, Elsevier, Amsterdam, The Netherlands, 938p. US\$ 92.50, ISBN 0-444-42391-5. (Developments in Geotechnical Engineering, 37).

This volume, number thirty-seven in the Elsevier geotechnical engineering series, was produced under the general editorship of Per Bruun, assisted in design and construction by M. Losada (Spain), Sv. Kjølstrup (Norway), and J.H. van Oorshot (The Netherlands). The twenty-four contributors were from fourteen countries providing an international scope to this major reference volume. This book, a compilation and summary of development in recent years, provides a wealth of information relating to design parameters, construction, and maintenance of breakwaters.

Introductory material covers the history of breakwaters as well as their function, stability, and classification of damages by knockouts, liftouts, slides of armour, general breakdown and fatigue, undermining, overwash, lift-up and through-washes, toe erosion, failure of substrate, and so on. The second chapter deals with basic parameters for design, viz. hydrodynamics, waves versus structures analysis, structural unit stability, geotechnical aspects, placement of armour, and ice action against rock mound structure slopes. Design considerations in chapter three focus on practical aspects such as construction and design of breakwaters, including the choice of optimum design, risk analyses, and economic design. Chapter four deals with actual methods of construction for small, medium, and large mound breakwaters. This chapter is most informative as it attempts to explain the advantages and disadvantages of different kinds of construction, maintenance, and cost. In Chapter 5 various examples are given for mound breakwaters the world over. Graphic photographs highlight various types of breakwaters and suggest possible causes of failures and remedial action. Chapter seven considers the

types and functions of coastal protective mounds and revetments. Also included in this chapter are discussions of methods of beach and dune nourishment and maintenance of beach fills by barging, bypassing, and scraping. The concluding eight chapters deal with alternative designs of mounds, particularly the application of bituminous mixtures and structures. The latter methods show ingenuity and possibilities for a wider range of mound structures that are durable under difficult conditions.

The volume contains an adequate subject index but an author citation index would have been helpful. The general quality of line drawings and halftones is good (some are not so good) but it was disappointing to find that the pages were just glossy reproductions of typewritten manuscript. Another minor irritation centers about the fact that it is generally not possible to determine which contributor should be charged with the responsibility for specific sections (There are a few exceptions where authors are indicated). In a multi-authored work such as this, many readers will probably want to know who wrote what.

No publication is perfect and the imperfections indicated here are minor compared to the overall value of this major contribution to understanding of mound breakwaters. Coastal engineers, coastal zone managers, academics, and politicians will find this book essential reading. Although not written for the layman, others besides coastal engineers will find that parts of this compendium will answer important if not critical questions that are relevant to many issues bordering on the socio-economic fringe. Those who are interested in geotechnical engineering will find this book indispensable and a worth while investment. My advice is to buy it, read it, and practice what it preaches!

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Collins Guide to the Sea Fishes of New Zealand, by Tony Ayling and Geoffrey J. Cox, 1982, William Collins Publishers Ltd., P.O. Box 1, Auckland, New Zealand (available in the US from: ISBS, P.O. Box 1632, Beaverton, Oregon 97075), 343p. US\$ 19.95, ISBN 0-00-216987-8.

Books which provide identification keys for animals or plants of specific geographical areas are valuable and often difficult to find. Consequently, the handy and reasonably priced *Collins Guide to*

the Sea Fishes of New Zealand, by Tony Ayling and Geoffrey J. Cox should be of interest to "a-fish-anados" in general and in particular to those living in New Zealand and Australia. Ayling and Cox have really covered the waterfront, describing all but a few of the species found within a 4.5 million square kilometer area around New Zealand. This area reaches to just south of the Kermadec Islands in the north to Macquarie Island in the south. The eastern border is a bit east of the Chatham Islands and the western edge lies approximately in the middle of the Tasman Sea. In all, 486 species are described, some found solely in these waters, others more widespread in distribution. Quite a tally for an area not noted for great faunal diversity.

The text, by Tony Ayling, is well organized and informative. Beginning with a brief introduction and tips on how best to use the book, a concise section on classification of fishes with simple line drawings of representative members of the 170 families found in the area, and proceeding to descriptions of the different species, in presumed evolutionary sequence (*i.e.* Agnatha, Chondrichthyes, Osteichthyes).

Ayling has attempted to standardize and update nomenclature through extensive research and lists the currently correct bi-nomial first with synonyms (if any) in parentheses. As some species have worldwide distribution in the temperate zones of both hemispheres and have been variously described and named at different locations, this was no small task. Synonymy is, and will continue to be, a plague on taxonomists thanks to the endless diversity within species. Efforts to eliminate confusion in the identification of beasts are always welcome.

Illustrations are essential to books of this sort and Geoffrey Cox has done a fine job in preparing the 180 color plates. Nearly all the color plates were painted from freshly-caught specimens and effort was made to present accurate morphology and coloration. The 475 line drawings by Ayling are clear and finely detailed.

The combination of descriptive text, clear illustrations, glossary, and species index should enable most readers to identify specimens easily. For the occasional difficult or unique find, the non-professional reader is directed to museums or universities with fish collections. Professional users are presumed to know the appropriate steps to take when confronted with an unreported genus or species.

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Les Plages de la Tunisie, by Roland Paskoff, 1985, Impressions EDITEC, Caen, 198p. US\$ 11.00, (available from the author: Professor R. Paskoff, 10, Square Saint-Florentin, F-78150 Le Chesnay, France).

This is a compilation of the author's publications on the beaches of Tunisia. The French seem particularly fond of this type of volume; on one hand one might take the somewhat cynical view that this is a way of improving one's CV, as well as duping the scientific public into purchasing another copy of old material. On the other hand perhaps it is just a more honest approach. . . .

However, there is merit in putting together a little volume like this, comprising sixteen papers from a variety of somewhat obscure (to Anglo-Saxons at least) journals — for example the *Revue Tunisienne de Geographie* (source of five articles) and *Bulletin de la Société Languedocienne de Geographie* (source of two).

The Tunisian coast borders the Mediterranean. It includes many coastal types, ranging from the sandy coastforms discussed in this book, to rock cliffs and extensive shallow lagoons. Paskoff's approach is essentially morphological, using conventional map and photo interpretation to delimit coastal changes. Only the simplest meteorological and geological data are included, and there is little discussion of process. Many concepts appear to have been taken 'off-the-shelf,' for example the Bruun Rule and coastal compartments and cells. Rising sea level is widely cited as a cause of shore erosion in Tunisia, yet as far as I can tell no actual data are presented on the subject. Paskoff is content to refer to earlier work elsewhere in the Mediterranean Sea, which may be a little dangerous, given sites like Venice. This lack of Tunisian data is obscured somewhat in individual articles by cross-citations to the author's previous papers. However, I appreciate only too well the difficulties in working in a country where there is no tradition in this type of work. It may be that 'second-hand' information is required to galvanize local authorities into collecting their own.

The book is in French, with occasional lapses into English. It would have been nice if the author had added an introductory chapter with a decent map of Tunisia. Perhaps the biggest drawback to the book is its style of production. The original articles have simply been xeroxed (?) and reduced to fit. Thus pages 95-103 are unreadable without