

Nudibranchs of Southern Africa: a guide to opisthobranch molluscs of southern Africa by Terrence Gosliner, 1987. Sea Challengers, Monterey, and Jeff Hamann, El Cajon, 136p. Paper, \$34.95, ISBN 0-930118-13-8.

Southern Africa, whose east coast originates in tropical waters and whose west coast is cooled by upwelling and the north-flowing Benguela current, may be expected to have a rich and complex benthic marine fauna. This expectation though does not adequately prepare one for the diversity of species, color, and form encountered in Terrence Gosliner's guide to the opisthobranch molluscs of southern Africa. This book—the first comprehensive guide to the sea-slugs of the region—is a visual feast. Two hundred and sixty eight species are represented, each with a stunning color photograph from life as well as thoroughly researched summaries of taxonomy, natural history, and distribution. Using simple morphology and color to distinguish the species, this guide is intended for anyone interested in identifying members of this visually flamboyant group of animals. However, the authoritative text, broad distribution of many of the species, and diversity of families and genera will especially interest students of the opisthobranchia, professional malacologists, and marine biologists.

Of the three parts, the well-written introduction provides a concise account of the evolution, biology, and systematics of opisthobranch molluscs, advice on finding and observing these often cryptic animals, and a particularly interesting discussion of the biogeography of the species from southern Africa. The last, however, would have profited from the juxtaposition of a map of the major collecting localities and other regions mentioned in the text. The bar graphs (labelled as Table 2) illustrating the geographic transition of a primarily Indo-Pacific and circumtropical fauna to one dominated by Atlantic and endemic species are useful, but should have included the number of species in each faunal component along with the percentages—how much of this wonderful diversity is circumtropical, endemic, etc., and how many species have been found in a particular locality?

The second part of the book includes a list of all species of opisthobranchs reported from southern Africa (not just those pictured in the

book) and some aids for identification: a glossary of morphological terms, line drawings of representative animals and significant morphological features (additional labelling would make some of these more useful), and a key to the species described in the guide. The key relies on external morphology and color of living animals, but, as modestly implied in the text, the original identifications were based on Dr. Gosliner's extensive anatomical studies, familiarity with the world literature, and research throughout the world.

The color plates and species descriptions comprise the third and major part. The plates are exquisitely printed (no doubt explaining much of this book's cost), the layout is clear, and the text is again lucid, informative, and free of obvious errors. For each animal the author points out taxonomically important characteristics (specialists will appreciate the inclusion of traits used to distinguish genera), summarizes knowledge of natural history and distribution, and, if applicable, provides a synonymy (the sizes of the animals pictured are unfortunately not given until the last page of the book). While much work remains to be done on this fauna—approximately 100 of the species illustrated are formally undescribed or of uncertain taxonomic status, and little is known about the biology and distribution of many—Gosliner has expanded our knowledge of these animals immensely with this solid and well researched book. From both aesthetic and scientific points of view *Nudibranchs of Southern Africa* is one of the best general guides yet produced for this exquisite group of animals.

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The Geomorphology of Rock Coasts, A.S. Trenhaile 1987, Clarendon Press, Oxford, no price given (Hardcover) 384 pp., ISBN 0-19-823279-9.

This book, another in the "Oxford Research Studies in Geography," deals with rock coasts as interpreted in a geomorphological sense. Although there is a great literature on rock coasts, this book is especially welcome because

it distills much data that is scattered in various disciplines and because it brings to us some important topics that have not been discussed in any detail in the English literature. The author states that the book was written as a convenient reference for researchers and senior students. Ancillary to the primary goal, Trenhaile wanted to identify deficiencies in our knowledge, and to encourage and facilitate new investigation. Both objectives have been achieved in this new and important work.

Although the subject of this book may seem specialized, it is useful to recall that a large proportion of the world's coasts are rocky. In fact, many 'soft' shores are backed by rock cliffs or underlain by rock platforms. Thus, rock coasts are actually more common than might be initially suspected putting this book on equal footing with works that deal primarily with depositional coastal landforms.

The book, organized into two main parts (I. Processes and II. Landforms) is further divided into eleven chapters that cover Mechanical Wave Erosion, Chemical and Salt Weathering, The Solution of Limestones, Bioerosion and Other Biological Influences, Frost and Related Mechanisms, Mass Movement, Changes in Relative Sea Level, Coastal Cliffs, Shore Platforms, Limestone Coasts, and Some Aspects of Coastal Scenery. Each chapter is well illustrated and documented. It might have been useful if references were listed at the end of each chapter but this probably would have resulted in some redundancy in the citations from chapter to chapter. The bibliography is impressive with more than 1300 references cited. Further, the references are completely cited in proper format making for a truly valuable research volume. The index lists subject and geographical references. Significant discussions of topics are indented in boldface type providing a means for rapid look-up.

This book is recommended to coastal specialists with interest in hard and soft rock coasts. It will no doubt find its way into senior and graduate-level courses at many universities. With its vast reference list and detailed discussions, many researchers will find it difficult to get along without this new and important text.

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Proceedings of Workshop on Berm Breakwaters (Ottawa, 1987), American Society of Civil Engineers, 278 p, \$36.50.

The book includes 13 papers on the design and function of berm breakwaters. Berm breakwaters are mound structures where the outside straight slope has been replaced by a broken line berm slope above M.S.L. The berm is built of material of uniform size and is supposed to adjust itself to the occurring wave action without hurting the general integrity of the structure. Where large rock is hard to get such structure has proven to be economical. The most prominent examples are Helguvik, Iceland, and St. George, Alaska. A few lightly armored mounds were built in Australia.

The papers present various concepts of the berm breakwater including related problems of wave action, some model results, field surveys and practical experiences. There is no example of rational design theory based on hydraulic or wave mechanics principles.

When practitioners, including the PIANC 1976 report, have demonstrated reluctance in accepting the berm design this is mainly a result of uneasiness about letting nature handle the final design. The PIANC "2nd Waves Commission" expresses itself as follows in paragraph 7 of its 1976 published report:

The Commission has also noted the new ideas that aim at reducing the strength (hence the cost) of rubble mound breakwaters, by letting the waves gradually establish an equilibrium profile of the outer shell, starting from slopes purposely kept too steep at first. The Commission has acknowledged the principle value of these ideas, uniformly distributed (thus obviating the need to sort them out) and the fact that these ideas are valid for seas with limited tide action, where the periods of strongest storms recur without wide variation, from one storm to another, these breakwaters being stable only within a narrow range of periods. It may however, sometimes be advantageous to initially construct a berm profile and vary rock size in accordance with the slope. Moreover, the Commission fears that it would be difficult to use this type of breakwater in some regions, for aesthetic reasons.

Designers principally always tend to avoid any kind of risk involved in a non-conventional concept which they feel has not been thoroughly