

published in 1964, on rocky shore studies in Britain. They also describe his career and explain why the book is presented to him by his ex-students and colleagues. Thereafter follow 23 essays by different authors, which start with descriptive surveys and zonation patterns and lead on to community dynamics and experimental manipulations. The essays may be divided into three types: background reviews, of which there are ten, limited reviews of specific aspects of rocky shore ecology, of which there are six, and original research papers of which there are seven.

The reviews, on the whole, are good and cover many aspects of rocky shore ecology, but with a strong bias towards the animal, rather than plant, components. Only chapter 2, on seaweed zonation by T.A. Norton, deals specifically with plants. Further, there is a strong bias towards temperate shores in general and British shores in particular. All of the original research papers deal with animal ecology on British shores and are therefore of limited general value. The partial reviews tend to be similar, discussing specific research on animals, mostly on British shores, and then going on to review the results and conclusions in a wider context.

The real value of the book to a wider audience (*i.e.* not just British rocky shore zoologists) thus lies in the general reviews. These cover seaweed zonation, epifauna and meiofauna, long term changes in rocky shore populations, mussels, limpets, reproductive strategies, the role of predation, the impact of bird predators, and the experimental approach to unravelling the importance of biological and physical factors controlling the distribution and abundance of rocky shore organisms. Author include such well-known names as J.H. Connell, G.M. Branch, R.N. Hughes, and A.J. Underwood.

Although all aspects of rocky shore ecology have not been covered (presumably a consequence of the availability of authors), for example there are no reviews on barnacles, wave action or aspects of algal ecology other than zonation, the book is nevertheless sufficiently comprehensive and up to date to make a valuable contribution to the literature on rocky shores. The editors and publishers are to be congratulated on an excellently produced volume. All illustrations are uniformly drawn, there is a single combined reference list and the general editing is good. Anyone with a particular or general interest in rocky shores will want a copy.

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Plants of the Texas Shore, by Mary M. Cannatella and Rita E. Arnold, Texas A&M University Press, College Station, Texas, 1985, 76p. \$5.95, ISBN 0-89096-214-6.

This short book provides a delightful introduction to the plants of the Texas coast. It is written with scientific skill and style for the interested layman.

Although plants are the focus of the book, great trouble is taken to ensure that the reader understands their ecological value and their place in the environment. In this context, the concepts of habitat and trophic levels are emphasized.

The main environments considered are barrier island, back barrier bay and wetlands, and the chenier plain of East Texas. In each case the habitat is described and the diagnostic flora introduced. Line drawings and photographs are used extensively to good effect, but are not drawn into the text particularly well. Some of the photographs are very sharp with amusingly understated captions. An example of this is a picture labelled 'Barrier Grasslands' which shows a developer's sign in the middle of a grass sward, while, Triffid-like, condominiums loom on the horizon. Such illustrations should make a major impact with casual readers, highlighting the heavy pressures of coastal development on such important ecosystems.

The book is nicely produced. It cries out for color illustrations, but these were probably too expensive to contemplate. One minor point concerns the lack of scale of many line drawings, often it is not easy to tell whether one is dealing with a tree or a daisy.

The book concludes with useful information on access to Texas coastal wildlife refuges and an appendix of common and Latin plant names. All-in-all, good value for under six dollars.

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Coastline Changes, by Eric C. F. Bird, 1985., John Wiley and Sons, New York, \$39.95, 219p. ISBN 0-471-90646-8.

As stated in the preface, *Coastline Changes* is based on a research project carried out by the International Geographical Union's Commission on the Coastal Environment whose chairman from 1972 to

1984, E.C.F. Bird, is the author of this small hard-cover book. It represents the outcome of a world-wide survey on shoreline advance and retreat during the past century, involving the contribution of over 200 correspondents representing 127 coastal countries.

Chapter 1 corresponds to the introduction and takes 11 pages. The aim of the book is to describe and to analyze documented coastal changes on the world's shorelines in recent decades, generally expressed in linear terms, but also, when available, in areal and volumetric terms, using mainly historical maps and hydrographic charts, and conventional aerial photographs of various dates.

Chapter 2, 145 pages long, deals with evidence of coastline change and is subdivided into almost 100 geographical areas. As expected, the treatment, which includes photographs, maps, and diagrams, is highly uneven; Argentina is reduced to half a page, whereas Uruguay is given two pages. In fact, this chapter is a catalog rich in useful information which can be complimented by material on coastline features that receives fuller treatment in *The World's Coastline* (Van Nostrand Reinhold, 1985) also edited by E.C.F. Bird in collaboration with M.L. Schwartz.

Chapter 3, less than 20 pages long, analyzes the various categories of coastal changes: cliffs, deltas, swamps, beaches, and others. Especially useful are

the pages devoted to the erosion of sandy shorelines. Of these, more than 70% have shown net erosion over the past few decades, and less than 10% sustained progradation, with the remaining 20-30% having been stable. Possible hypotheses explaining this modern prevalence of erosion are discussed: sea level rise (Bruun rule), increased storminess, depletion of the sea floor sand supply, man-made effects through artificial structures and beach mining. A reasonable conclusion is that no one factor can account for the prevalence of beach erosion given the variety of coastal environments around the world. Any explanation of erosion should be presented in terms of a ranking of these factors for each coastal sector.

The book includes a bibliography of about 400 entries. It will be of value to coastal researchers because it gives interesting information on shorelines for which little data are readily available, particularly in Central and South America, tropical Africa, and south-east Asia. It also provides a good background for further detailed local studies and an analytical framework for the elucidation of process and change in sea front environments.

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