

increase the reference value of this text. Begging these minor quibbles, this reviewer finds Carter's *Coastal Environments* to be a major contribution to the advancement of the coastal sciences. A text of this sort has been needed for some time and now we finally have a versatile book that can fulfill many different requirements to advantage. I, for one, will be pleased to use this text at university as, no doubt, will others. Although the price of the book is disappointingly high, I am afraid that it is in line with books of similar size and quality of production. Students will have to dig deeper into their pockets to buy this book but the payback will be far greater for knowledge gained.

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The Hydrodynamic and Sedimentological Consequences of Sea-level Change, edited by R.W.G. Carter and R.J.N. Devoy, 1987. Pergamon Journals (*Progress in Oceanography* Vol. 18 Nos. 1-4), 358 \$149.00, ISSN 0079-6611. 358pp.

This volume of *Progress in Oceanography* is devoted to the International Geological Correlation Programme Project 200—*Sea-Level Correlations and Applications* and contains sixteen research papers based on presentations made at the conference "The Hydrodynamic and Sedimentary Consequences of Sea-Level Change" held in the University College, Cork, Ireland in March 1986.

A wide range of topics are covered, ranging from studies of global-scale factors to local-scale studies, and timescales dealt with range from over 100,000 years to one year or less. Given such a range of scales caution must be applied when reading about "long term trends in sea level," for in one paper this may mean 10 to 20 years, whereas in the following paper the same statement relates to 2 or 3 orders of magnitude greater. As the editors of this special volume state "The challenge for coastal scientists is to explore the causes and effects of sea-level change across a variety of scales, and to apply this knowledge to the future management of the world's low-lying coasts." Coastal scientists should be happy dealing with factors

which operate over a variety of scales and should have no problem with this volume. Readers not so familiar with the subject, perhaps looking at the volume for a statement regarding the status of fundamental and applied sea-level research, will need a more cautious approach. Perhaps some subdivision of the volume would have helped, along the four themes of the conference into: (i) recent sea-level changes, coastal processes-sediments, (ii) Quaternary-Holocene sea-level changes and sediments, (iii) the modelling and prediction of sea-level change and (iv) future sea-level changes and the problems of coastal management. This list, from the editorial, poses the interesting question, from comparing the first two Quaternary-Holocene scale of study.

Recent sea-level changes, monitoring and the detection of future sea-level rise are dealt with by Diamente *et al.* who discuss a space-based geodetic network for global measurement of sea-level change. Other papers dealing with recent sea-level changes concentrate on local-scale studies and coastal processes and sediments. Locations covered include Ireland; the south coast of England; Maryland, USA; the German Bight; and the Lagoon of Venice.

Quaternary-Holocene studies are reported from Corsica; the south coast of England; west Africa; Jersey and Wales. These papers discuss the various morphological, sedimentary and archaeological evidence for relative sea-level changes in each area and contrast with the paper by Newman and Baeteman who attempt to synthesize the available radiocarbon data related to Holocene sea-level changes in North-west Europe. Many points for debate arise from this paper, but need not be discussed here, except it is worth stressing their plea that it is necessary to collate all the relevant data in a central databank and thus be able "to produce a product rather more meaningful than a provincial sea-level curve" (p. 308).

Modelling and prediction of sea-level change are dealt with in two contrasting papers by Thomas and Denness, although similar forecasts of sea-level rise by 2050 AD are made.

The problems of coastal management arising from future sea-level rise are dealt with in papers by Devoy, who also considers the broader theme of applied sea-level research, and by Newman and Fairbridge who focus the

imagination on the regulation of future sea-level rise by major engineering schemes to divert water from the oceans into depressions on the continents.

Overall this volume reflects the rich mix of sea-level research, ranging from tried-and-tested approaches applied to new areas, to topics pointing the way for future research. Observation and data gathering remain dominant, rigorous hypothesis testing is sometimes less apparent.

As a final comment on the volume itself; it is likely to remain a library book, consulted for reference purposes rather than a key text on individuals bookshelves. This is not because of the quality of papers, but the price. Recent books on similar topics, aimed at the same audience, are available at about one third of the cost.

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Les déplacements des lignes de rivage en Méditerranée, edited by R. Paskof and P. Troussset 1987. Centre National de la Recherche Scientifique, Paris, no price given (Soft cover) 225 pp., ISBN 2-222-04074-4.

A partial proceedings of an international colloquium sponsored by C.N.R.S. and the Commission sur l'environnement côtier de l'Union géographique internationale (I.G.U.), this volume deals with shoreline displacement around the Mediterranean. The papers are in French but contain English summaries. Various lines of archaeological evidence are brought to bear on the problem of shoreline displacement and are evaluated along with interpretations from the physical sciences. The volume is divided into three main parts *viz.* (I) Spain, France, Africa, (II) Italy, and (III) Greece, Turkey, Cyprus, Israel, and the Persian Gulf area.

A wide range of field and laboratory techniques are discussed as they relate to interpretation of archaeological finds. The archaeological data (sometimes in the form of ancient inscriptions and texts) help provide a relative chronology and morphologic interpretation of ancient shorelines. In the case of the Ebro delta (Spain), for example, artifacts indicate that

both river and sea-ports were flourishing at Tortosa during Iberian times and still functioned after Roman conquest. Since the XVIth century, irrigation, deforestation, and bank protection against floods have accelerated the progradation of the shore. Other studies report on the submerged occurrence of monumental structures, often belonging to port engineering works.

Many readers will find interesting tidbits relating to early attempts to control coastal processes. One paper reports on the largely successful efforts of emperors Claudius (41-54) and Trajan (98-117) to build artificial ports in the Tiber delta. Other efforts elsewhere were not so successful.

Readers fluent in French will find this a fascinating work, packed full of historical vignettes about shoreline evolution. English-speaking readers can peruse the volume by reference to the English summaries. The book is handsomely produced in large format. For those interested in the application of archaeological data to the interpretation of shoreline history, this book will provide much useful information.

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An Introduction to Coastal Zone Economics: Concepts, Methods and Case Studies, by Steven F. Edwards, 1988. Taylor and Francis, New York. £13.50. 134pp. ISBN 0-8448-1530-6.

This slim volume is designed to explain economics to the uninitiated. It purports to define the concepts and methods of economics with sufficient simplicity to allow non-economists to not only grasp, but apply the materials presented. In a word: it fails. Not only does it not simplify the subject, it confounds the reader by presenting too much non-essential detail, skipping parts of essential calculations, and generally presenting the material in a condescending fashion using trite statements and truncated, fabricated cases. As well, the limitations of economics are touched only lightly and then ignored.

Too much detail is seen in a continuous stream of definitions that appear unnecessary and confusing to readers wishing only a "cook-book" to approximate the value of a resource.