

ternary shorelines around the coastline of Africa, assessing reasons for differences in the records and their significance for crustal history. Pirazzoli next presents analysis of recent sea-level trends based upon tide gauge evidence for the North Atlantic region, concluding that if any current regional trend can be discerned it is one of a steady or even dropping relative sea level, not a rising one.

Shifting to the Indian subcontinent, Bruckner discusses mid Quaternary to Holocene shoreline evidence from around the coastline of India, particularly from the Kathiawar coast of northwest India. Conclusions are drawn about interglacial high stands of sea level and their registration upon an assumed stable continental surface. Smith next examines sea-level change in the southwest Pacific region, as both possible cause and inhibitor to the dispersal of people, in analysing the problems of human migration and colonisation of present land surfaces in the region. The concluding paper by Newman *et al.* returns the reader to basics and to a review of conceptual changes in the plotting of sea-level data and their subsequent interpretation, presented from a North American viewpoint.

As so often happens with collections of papers the work suffers from the Curate's Egg Syndrome, good only in parts. Many of the papers are, in present sea-level research terms, still topical and present useful summaries of aspects of Quaternary sea-level methodology and history. Although there is a preponderance of contributions from North America and Europe, the inclusion of work upon Africa and India is refreshing and useful. As the editors state in relation to work upon India, relatively little information from these continents finds its way into either the international or English speaking forum. Further, many of the papers are informative, concise and well written.

Yet, apart from their topicality and the advantage of having a series of such reviews under a single cover, one might reasonably ask the question, why produce such a collection of papers? Would it not have been more appropriate to have published the papers in otherwise relevant international journals?

One may surmise that the *raison d'être* for the collection stems more from the needs of the symposium to have a published outcome than to disseminate fresh information. Although some

papers do contain new ideas and data, many are more a synthesis of information published previously by the authors. The collection as such has no uniform house style, or even language, with papers presented in a range of type faces, prepared presumably from authors' camera-ready copies; although it took till 1989 for the publication to appear. No integrating rationale is given by the editors, nor either a clear spatial or thematic organisation of papers. Despite the collection's title, discussion of sea-level applications is sparse. At a technical production level obvious typographical errors are irritating by their occurrence, whilst diagrams though generally appropriate are of variable quality, with the black and white photographs appearing in many instances with poor contrast and fuzzy.

Despite the integrative nature of sea-level studies, the collection here indicates at times a still yawning gap in communication between the sea-level worlds of continental Europe, Britain and North America. This is exemplified in relation to the use and understanding of terminology such as "transgression and regression," and in the origin, development and acceptance of sea-level concepts and methodologies. The collection indicates that there is still some way to go before an integrated and common understanding of a worldwide phenomenon, sea-level change, is achieved. At £42.00 the work is a volume largely for the specialist.

Robery J. Devoy
University College
Cork, Ireland

Catastrophic Coastal Storms, D.R. Godschalk; D.J. Brower, and T. Betley, 1989. Duke University Press, 275p. \$47.50. ISBN 0-8223-0855-X.

On the face of it, this work invites comparison with Fergus Wood's monumental *Strategic Role of Perigean Spring Tides*. However, there is a subtitle which better explains the thrust of the book "Hazard Mitigation and Development Management."

The thesis of the work is simply stated: that hazard management is most effective if incorporated into subdivision and development controls.

The book has little to say about high intensity coastal storms *per se* (the adjective "catastrophic" is correctly applied only in a specific and *post facto* sense), merely introducing some of the fundamental processes in Chapter 1 as context for defining the policy problem of the rise in urban growth in coastal hazard areas. Alternative approaches to mitigating hurricane and coastal storm hazards are reviewed briefly in Chapter 2. To illustrate the evolution of U.S. mitigation policy and practice, and its remaining gaps, case studies of redevelopment following three major hurricanes during two decades are presented in Chapter 3. U.S. federal mitigation programs and policies current at the time of writing are discussed in Chapter 4, and Chapter 5 describes mitigation programs and policies at the state level, with emphasis on the coastal management programs of two states: North Carolina and Florida. Mitigation instruments which may be applied at the local government level, presented as the elements of an integrated development management and hazard mitigation strategy, are covered in Chapter 6. Mitigation practices extant in some U.S. coastal localities subject to severe coastal storms, as revealed by a survey conducted by the authors, are analysed in Chapter 7. Causal influences on respondents' perceived effectiveness and subsequent adoption of mitigation measures are identified in Chapter 8. Finally, Chapter 9 summarises the conclusions of the study and presents recommendations for changes in coastal storm hazard mitigation policy and practice in the U.S.A. at local, state, and federal government levels.

Natural hazard management practitioners will learn little from Chapters 1 and 2, and the counterintuitive behaviour of social systems, which has led to *increases* in risk exposure at many hazardous locations, as noted by the authors in Chapter 3, has been known for some time.

The principal thrust of the work lies in the identification of obstacles to the implementation of national coastal storm hazard mitigation plans in the U.S.A., and in the discussion of the possibilities for future integration of (U.S.) hazard mitigation and development management strategies.

D.M. Chapman
University of Sydney

Sydney, New South Wales
Australia

Coastal Dune Vegetation of New South Wales, Peter J. Clarke, 1989. University of Sydney, Coastal Studies Unit, Technical Report No. 89/1. \$10.00, 105p. ISBN 0-909764-29-8.

Coastal Dune Database, Peter J. Clarke and David M. Chapman, 1989. University of Sydney, C.S., T.R. No. 89/2. \$5.00, 25p. ISBN 0-909764-30-1.

Coastal Dunes of New South Wales. Status and Management, David M. Chapman, 1989. University of Sydney, C.S.U., T.R. No. 89/3. \$20.00, 228p. ISBN 0-909764-31-X.

Coastal Dune Plants of New South Wales, Peter J. Clarke, 1989. University of Sydney, C.S.U., T.R. No. 89/4. \$20.00, 140p. plus app. ISBN 0-909764-32-8.

[Reports to be obtained from: Coastal Studies Unit, The University of Sydney, Sydney 2006, Australia; and Soil Conservation Service of NSW, P.O. Box 198, Chatswood 2067, Australia.]

The University of Sydney–Soil Conservation Service of New South Wales joint research project on the coastal dunes of NSW and their management started in 1987 as an effort to face the increasing ecological and morphological damage caused by heavy human use. The investigators evaluated both the physical ecological status of the coastal dunes and the requirements/expectations of the users from the resource, in order to develop a model for 'proactive' management.

The third report gives all general information, on geology, geomorphology, vegetation, use and status of all 247 coastal dune sites and describes the concept and application of the predictive management model. This report is the most interesting of the series, although the author did not bother too much about the reader (or reviewer), giving no proper summary or conclusions. But if one is interested in the problems dealt with (problems occurring all over the world's occupied coastline), the backgrounds and criteria of the model the volume includes some original ideas on how to deal with land use planning, buffer zone concepts, management