



**Late Quaternary Sea-level Correlation and Applications**, edited by D. B. Scott, P.A. Pirazzoli, and C. A. Honig, 1989. NATO ASI Series. Kluwer Academic Publishers, Dordrecht/Boston/London, 229p. STG. £42.00. ISBN 0-7923-0016-5.

This collection of papers upon aspects of sea-level change in various parts of the world, is the outcome of a symposium held at Halifax, Canada, in July 1987 under the auspices of the NATO Advanced Study Institute. It represents the concluding meeting in the International Geological Correlation Programme's Project No. 200 'Sea-level,' from which the book's title is drawn and the volume is dedicated to the memory of Walter S. Newman. The collection is based upon keynote addresses given at the meeting from participants drawn from NATO members, although the spatial coverage of sea-level information is wider than this grouping might otherwise suggest, with topics drawn from places as separate as Spain and New Guinea. Although no specific indication is given by the editors as to the aims or audience, the collection is clearly intended for the sea-level enthusiast, together with others with relevant interests from the geosciences.

Eleven papers are presented, drawing upon information from Europe, North America, Africa, India and the Southwest Pacific. The work opens with discussion by Shennan of pub-

lished Holocene sea-level data from the North Sea region. This is set in the context of a methodology for the comparison of sea-level data sets and the drawing of inferences from this comparison for earth crustal movements and sea-level behaviour. Next Zazo and Goy present stratigraphic information upon mid to late Quaternary shorelines from Spain with conclusions as to earth crustal movements in Iberia. Returning to northern Europe, van de Plassche and Roep re-examine, in the light of new evidence from coastal palaeotidal information, the Holocene sea-level data base in the Netherlands: does it represent msl, mtl or hwm?

Leatherman moves the focus of papers to North America, reviewing the factors and related methodologies for assessing coastal retreat on sandy shores, in the context of the forcing mechanism of sea-level rise and the necessary coastal management implications.

The next two papers concentrate upon a discussion of late Quaternary sea-level information from the continental shelf of Nova Scotia, eastern Canada. Fader presents geological and geotechnical evidence used to support a low sea-level stand of between -110 to -120 m ps1 at c. 15 ka, whilst Scott *et al.* discuss results of individual deep borehole information.

A shift in space again takes the reader now to Africa. Giresse reviews evidence upon the sedimentary record, age and correlation of Qua-

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.

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**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.