In spite of the improvements in the second edition of *Coastal Sedimentary Environments*, in spite of the well-known reputations of the authors and the editor, it appears that we must continue to await a representative synthesis of coastal sedimentary environments for some time to come.

Alan Carr
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This multi-authored publication, mostly in Spanish, brings together a great deal of information about the geomorphology and recent stratigraphy of the western Mediterranean coasts, notably the Balearic Islands and the Valencia section of the coast of Spain. One article summarizes the sea-level history of Bermuda. The book is a *Festschrift* in honor of Juan Cuerda, a distinguished naturalist and expert on the litoral shell deposits of the late Quaternary raised beaches that have become widely publicized through the work of K.W. Butzer. Cuerda, before retirement, was an army officer, who always “found time” to guide visiting scientists (including this reviewer) to the most interesting spots along the coastline of Mallorca. To the coastal specialists this region is particularly instructive because there is an interplay between eustatic shoreline deposits and calcareous eolian accumulations that built up during regressions. Furthermore, the island is near a rifted plate boundary, the site of sea-floor spreading in the Miocene, so that some neotectonics are also present.

Rhodes W. Fairbridge
New York, New York


This book presents the “principal results of a wave model intercomparison study conducted by the Sea Wave Modelling Project (SWAMP) and first presented at a symposium on Wave Dynamics and Radio Probing of the Ocean Surface, held May 13-20, 1981, in Miami, Florida.” The book is divided into two sections: the first gives the Principal Results and Conclusions of SWAMP (153p.), while the second section (94p.) contains chapters on the individual models.

Nine wave modelling groups from the United States, Japan and Europe, representing a comprehensive range of the available models, participated in SWAMP. Model intercomparison was achieved by running the models using seven hypothetical, idealised wind fields specially designed to expose the models to critical conditions. The results of each test case are presented in a separate chapter and then summarised.

Numerical wave models are routinely used to forecast ocean wave conditions or to generate wave data for areas of the globe where instrumental wave data are inadequate. Such models seek to predict the evolution of the surface wave field that would be generated by a given wind field. This is achieved by solving an energy balance equation which describes the evolution of the 2-dimensional wave spectra in terms of a net source function. The source function terms give the spectral energy transfers arising from input of wind energy, the nonlinear wave-wave interactions and dissipation. Models differ in the form assumed for the source function and the numerical methods used in integrating the spectral energy equation.

The test cases were designed to place severe conditions on the models, and as a result, strong divergences were found between the predictions of different models. “Major sources of uncertainty were found to be associated with the response to changing wind directions and the modelling of the transition region between windsea and swell. However, surprisingly large discrepancies were also found in the basic fetch- and duration-limited growth curves for a uniform wind field” (p. 20). For real wind fields the models would be expected to be in closer agreement.

The results of the tests reveal much about the differences between the models that was not previously clear. For anyone contemplating using modelling techniques or with a need to understand the workings of wave models, this book will be invaluable, as it contains a wealth of detail on the present wave models.

Third generation wave models are planned which will utilise more sophisticated methods of calculating the nonlinear transfer source function. With such developments on the horizon, the present volume provides a timely summary of the state reached by the present wave models.