'MARINE GEOLOGY' By James Kennett, Prentice-Hall Inc.. Englewood Cliffs, N. J. 07632, pp. 813, Figs. 353.

The need for a 'single, modern, comprehensive text' on the Geology of the Oceans prompted the author, Professor James P. Kennett of the Graduate School of Oceanography, University of Rhode Island to undertake this stupendous task of synthesising the history of the oceans in the global evolutionary framework of the Earth.

A single common strand that runs through the entire book is the concept of the earth as an active, mobile and dynamic body. The interaction between its inner and outer parts compels the earth's surface layer into lateral and vertical motion determining its surface morphology and evolution, including that of the oceans that cover three fourths of the earth's surface.

The introductory chapter in which the succinct history and relevance of Marine Geology is sketched, is followed by the main body of the book, which is divided broadly into four parts. The first part concerns itself with the structural and oceanographic setting, and is further subdivided into eight chapters dealing with geophysics and ocean morphology, marine stratigraphy, correlation and chronology, continental drift and sea-floor spreading, plate-tectonics, tectonic history of the oceans, the oceanic crust and oceanic circulation. The second part devoted to the Ocean Margins covers sea-level history and seismic-stratigraphy, nearshore geological processes and continental shelf, continental margin types and divergent margins and convergent or active margins. The third part of the work deals with terrigenous deep-sea sediments, biogenic and authigenic oceanic sediments, geological effects of bottom currents and oceanic microfossils. The fourth and final part of the book narrates critical events in ocean history from the Palaeozoic to Quaternary.

A number of recent techniques in the correlation of marine sediments like magnetostratigraphy and oxygen and carbon isotopic stratigraphy are dealt with in a lucid fashion in the first part. Sediment sampling methods like piston-coring, deep-sea drilling are also touched upon. The chapters devoted to continental drift, sea-floor spreading and plate-tectonics are a superb introduction to these topics to be found anywhere. Present day aspects of volcanic marine sediments, metal-rich sediments, chert-formation and manganese nodules dealt with in part three, stimulate thoughts of any Economic Geologist on the environment of ore deposition in the geological past.

Even a cursory glance through the book convinces one to agree with Philip Kuenen's remark in 1958 that there can be 'No Geology without Marine Geology!' This is as much a compliment to Professor James Kennet's comprehensive exposition of the subject as much as it is to Philip Kuenen's conviction years ago.

A substantial body of information not otherwise easily available has been gathered, synthesized, and written in an absorbing and highly readable style. The 353 neatly drawn figures and the eleven hundred odd references on the subject appended, enchance the value of the book not only as a standard text to those interested in Marine Geology but also to all those who are interested in the history of evolution of the earth as a whole.

It would have been perhaps appropriate if Prof. Kennett included an epilogue on the geopolitical implications of Marine Geology as is reflected in the trials and tribulations of the law of sea treaty and emphasized the potential of the deep seas as a treasure-chest of the future for all mankind.

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