minifer to areas of scarce sedimentation, such as the outer platform in front of the Caribbean reefs that produce carbonate sediments. In the Puerto Rican outer platform these foraminifers are found in Pleistocene sediments, also implying a low rate of Recent sedimentation.

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RECENT BOOKS

INTRODUCTION TO PALEOLIMNOLOGY, by C. C. Reeves Jr. Published by Elsevier Publishing Company, Amsterdam, London and New York, 1968, xii + 228 pp., $18.00

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THE PRESERVATION OF NATURAL HISTORY SPECIMENS: Volume Two, edited and compiled by Reginald Wagstaffe and J. Havelock Fidler. Published by Philosophical Library, New York, 1968, xvi + 404 pp., $17.50

The second and concluding volume of this work is concerned with the preservation of all types of vertebrate animals, botanical and geological specimens. Preparation of casts of reptiles and amphibians and modeling of large vertebrates and relief maps are definitively treated. Extensive appendices include information on instruments, microscopy, preservatives, methods of labelling, storing and maintenance of collections.

OPTICAL OCEANOGRAPHY, by N. G. Jerlov. Published by Elsevier Publishing Company, Amsterdam, London and New York, 1968, xvi + 194 pp., $13.50

This book is a review of current knowledge about the optics of the sea. The physical aspects and the relationship of optics to oceanography are emphasized. Thermodynamics, underwater photography and underwater television have been excluded from consideration. In part I, inherent optical properties of sea water are described; part II deals with underwater radiant energy; and, in part III, applications of optical methods to physical oceanography and to marine biology are discussed. —H.C.S.

PROCEEDINGS OF THE SYMPOSIUM ON TIDAL INSTRUMENTATION AND PREDICTIONS OF TIDES; published by l'Association internationale d'oceanographie physique and UNESCO. Symposium was May 3–7, 1965 in Paris, France. Publication date 1967. This is Scientific Publ. # 27 of the AIOP, 243 pp., $8.50.

The papers contained within this symposium volume are almost equally divided between the two topics, i.e., fifteen on tidal instrumentation and thirteen on analysis and prediction of tides. Authors of papers came from France, United States, Finland, Canada, Japan, Italy, Germany, and England but English and French must have been the official languages for the presidential address and eight of the technical papers are in French, with the remainder in English. They constitute a distinguished group, with most of the men prominent in this field represented here.

The book, although softbound, is printed on a good quality paper and the illustrations, dominantly line drawings but including many half-tone photographs, are well done. The diversity of devices and techniques precludes any detailed review—but also guarantees something of value to people working in this area of knowledge. Such symposia, and the reports which result from them, as well as the personal contacts between scientists at the meetings, aid greatly in speeding the spread of information. —H.M.J.

ENGINEERING PROPERTIES OF ROCKS; by I. W. Farmer. Published by E. & F. N. Spon, Ltd., London and distributed in the United States by Barnes & Noble, Inc., 105 Fifth Avenue, New York City. Nov. 19, 1968, x + 180 pp., 76 figs., selected biblio., refs., index, $5.75.

In his preface, the author says, "The book is intended primarily for civil and mining engineers familiar with the processes of design and construction in rock . . . and for students of engineering and engineering geology. I have attempted to present a simple, concise and reasonably comprehensive introduction to some of the theoretical and empirical criteria which may be used to define rock as a structural material."

He has accomplished his purpose ably. In addition, his chapter on "elastic properties of rocks" should be helpful to any seismologist interested in more than just coloring lines on records and his chapter on "stress and strain," with its excellent discussion of the Mohr diagrams, should be of value to the structural geologist.

For current use it is unfortunate that the author used metric units throughout, for the English-speaking engineer invariably works in English units. However, the author is to be congratulated for his use of a theoretical approach (where possible) but also in using an empirical approach where theory is not mathematical; as he says, "it is better to arrive rhetorically at a 10% error than theoretically at a 50% error—such is the nature of rock." A definite contribution to our knowledge of rock behavior, well indexed and referenced, and it will be of value in every research library. —H.M.J.