the unity and clarity of presentation achieved by Bowen and the original will still be a classic when this is outdated.

P. E. BROWN

Reading (H. G.), Editor. *Sedimentary environments and facies.* Oxford (Blackwell Sci. Publications), 1978. xii + 557 pp., 495 figs. Price (paper) £13·00.

This excellent textbook includes chapters by ten prominent sedimentologists: John D. Collinson, Marc B. Edwards, Trevor Elliott, Hugh C. Jenkyns, Howard D. Johnson, Andrew H. G. Mitchell, Nicholas A. Rupke, Bruce W. Sellwood, Roger Till, and Harold G. Reading (M.A. 80-1208). Each chapter, excluding introduction and final analysis, is written to a common formula. Present day environments and processes are described together with the sediments that characterize them. Examples of ancient sedimentary rocks of the same association are then considered in considerable detail. Literature references are collected together in a single, comprehensive list at the end of the text with only a few suggestions for further reading included with each chapter.

The second chapter (Reading) is devoted to a discussion of the facies concept: construction, interpretation, and environmental controls. The succeeding chapters describe specific environmental situations: alluvial sediments in Chapter 3, lakes in Chapter 4, and deserts in Chapter 5; all three being contributed by Collinson. Chapter 6 deals with deltas and deltaic sediments (Elliott), Chapter 7 with clastic shorelines (Elliott), and Chapter 8 with arid shorelines and evaporites (Till). Shallow marine environments are considered in Chapters 9 and 10, the former (Johnson) devoted to siliciclastic seas, the latter (Sellwood) to carbonate environments. Deep clastic seas (I am not quite sure about some of the terminology here) are described in Chapter 12 by Rupke and glacial environments by Edwards in Chapter 13. Reading then combines with Mitchell in a useful discussion of sedimentation and tectonics before a finel summary titled 'Problems and Perspectives'.

The authors are quite clear about their objectives: 'The purpose of this book is to show how ancient environments may be reconstructed by interpreting first the process or processes which gave rise to facies and then the environment in which the process operated'—p. 2. I am sure these have been admirably achieved. I should have liked, however, to see more references to compaction (especially differential compaction) which seems to me to be one very important aspect of environmental reconstruction.

The great strength of this textbook lies in the fact that it is a text and not just a collection of papers contributed by experts on their specialities. The editor must be congratulated on achieving such homogeneity of approach. The book is profusely and excellently illustrated and produced to the high standards we have come to expect from Blackwell. It covers a smaller part of the total field of sedimentology than competitor texts, but I would (and do) recommend it wholeheartedly not only to sedimentologists but to any geologist who wishes to catch up with the tremendous advances that have been made in the last 15 years.

C. D. CURTIS

Bischoff (J. L.) and Piper (D. Z.), Editors. *Marine Geology and Oceanography of the Pacific Manganese Nodule Province* (Marine Science, vol. 9). New York and London (Plenum Press), 1979. xii + 842 pp., 297 figs., 6 microfiche cards (in pocket on inside back cover). Price $49.50.

This book provides a welcome addition to the literature on marine geology and oceanography in that it provides an up to date detailed analysis of geological and oceanographic factors pertinent to the exploitation of manganese nodules in the northeastern equatorial Pacific, the area from which they will first be mined. No previous publication has dealt in such detail with the environment of ore grade nodule formation, and editors Bischoff and Piper are to be congratulated on drawing together the diverse information important in this regard.

Somewhat over half of the book [M.A. 80-1201] is devoted to studies in the DOMES (Deep Ocean Mining Environmental Study) area in the northeastern equatorial Pacific, where integrated studies on the water column, the biomass, sediments, and nodules, have been carried out under the auspices of the US National Oceanic and Atmospheric Administration. This study points the way to how non-engineering problems related to nodule mining should be approached, and will serve as a model for future investigations. The latter part of the book deals with a more diverse collection of topics, some, but not all, of which are also specific to the northeastern equatorial Pacific. These include sections on sea-floor geology, nodule chemistry, and nodule growth rates. Most of these describe studies carried out in the northeastern equatorial Pacific other than the DOMES investigations, and include important chapters on sediment redistribution and manganese nodule resources in the region. The northeastern equatorial Pacific papers are balanced by a selection on nodules and sediments from other regions, including aspects of the French, German, Russian, New Zealand, and Japanese nodule programmes