

perhaps any reader inspired by some aspect of the text would explore his or her interest in bookshops or track it down in libraries via the topic or the personalities listed throughout the text. These are, however, but minor quibbles about a splendidly produced book which will enable a large proportion of the public to understand, appreciate and support highly specialized endeavours at present largely obscured by technical language.

R. R. HARDING

Nancollas, G. N., ed. *Biological Mineralization and Demineralization*. Berlin, Heidelberg, and New York (Springer-Verlag): Life Sciences Report 23, 1982. viii + 417 pp., 105 figs. Price DM 52.00 (US \$23.10).

Although the title of this book suggests matters of interest to Earth Scientists, there are in reality only two papers of marginal interest, except perhaps for very specialized applications (e.g. studies on bone collagen). One is concerned with problems of crystal growth and dissolution which is an interesting theoretical study, some of which is relevant to aspects of diagenesis. The other, concerned in part with the organic matrix of the molluscan shell, is of limited interest to palaeontologists.

J. FERGUSON

Bates, R. L. and Jackson, J. A. *Our Modern Stone Age*. Oxford (W. H. Freeman), 1982. viii + 136 pp., 134 figs. Price £13.30.

Those who know Bob Bates as the author of the only student textbook on Industrial Minerals, and as the witty author of the back page of *Geotimes*, will not be surprised that he has combined these talents to produce a readable and informative book on his favourite subject. It is also a much-needed book; industrial minerals do not have the glamour of gems, nor the metallic attraction of ores, but our whole industrial society is dependent upon them. This needed saying, and Professor Bates and Julia Jackson have said it effectively and forcefully.

The book begins with a startling demonstration of the dependence of everyone in the industrial world on minerals by pointing out that consumption averages 11 tons annually for each US citizen. He introduces his subject by showing which of those minerals preponderates. Then follows a series of sections on individual mineral substances, starting with limestone, through salt, sand, clays, to diamonds. In doing so there are sections on transport ('Rocks en route') and mineral processing ('The Disassembly Line'), and the reader is introduced to these matters with great skill. The variety of uses to which each mineral is put is also spelt out. In the

process of this description, we are introduced to a wide range of topics—thus in describing silica sand we are given a brief summary of the palaeogeography of the North American Ordovician; even palaeontology gets a showing (in relation to Devonian limestones and diatomites).

When we reach Florida Phosphates and Canadian Asbestos ('Two Industries with Problems') the serious purpose of the book is revealed, and we begin a careful and well-balanced discussion of the environmental problems of the minerals industry—and in 'Blast it Out and Break it Up (But Not in My Neighbourhood)' the theme is developed. The fundamental conflict between the citizen who needs minerals to live, and that same citizen who does not want to be inconvenienced by their extraction, transport or processing is illustrated by a wealth of examples. The tone of the discussion is always moderate and reasoned; but the message is clear and forceful—a proper balance needs to be struck, and the means to achieve that balance are so far a notable failure.

This is a 'popular' book, in the sense that it could be read with pleasure and profit by any intelligent 12-year-old; but I would like to make it required reading for any cabinet minister, chief executive or chief planning officer who is concerned with minerals. From this side of the Atlantic, the fact that the majority of the examples are North American is a disadvantage. But if some are tempted to say that we order things better here, then any one in the industry could rapidly disillusion them.

In addition to the single purpose of the book, it is remarkable for the amount of information, on an enormous range of subjects, that is contained within a mere 135 pages. Add to that a series of informative, clear diagrams and photographs which properly illustrate the text, and you have a book which is indeed a triumph.

J. E. PRENTICE

Best, M. G. *Igneous and Metamorphic Petrology*. San Francisco and Oxford (W. H. Freeman), 1982. xx + 630 pp., 453 figs. Price £20.95.

For many years now those of us involved in the teaching of petrology have been acutely aware of the lack of a really good modern textbook on igneous and metamorphic petrology suitable for senior undergraduate courses. Most existing texts were either introductory and suitable only for first-year students or so advanced as to be of use only to postgraduates. The last few years have seen the publication of a number of textbooks on igneous and/or metamorphic petrology in attempts to rectify this situation, but the various authors, approaches adopted, and degrees of success have