

you might need the allied volumes on geochemistry, mineralogy and structural geology (etc.), an appreciable investment will be involved. The justification must be that they capture a wide ranging contemporary view of the earth sciences, and thus provide a comforting foundation of reference material for those needing quick access to a broad background knowledge. One for the library budget!

In reviewing this volume, I was drawn to reflect upon the status of petrology as a distinct branch of Earth Science. A book which seeks to give a concise review of igneous and metamorphic petrology must be governed by the acknowledged limits of its subject, which are historical in origin. There is indeed a strong sense of the evolution of the science, without over-indulging in speculations about future developments (perhaps wisely). Moreover, the encyclopedia deals strictly with topics which fall into the field of academic petrology, in terms largely drawn from within its own tradition. You will find tuffs but not bentonites, whole-rock analyses but no account of analytical techniques, metasomatism and a little on hydrothermal processes but fluid inclusions are found in another part of the series.

However, such carpings do not detract from the overall strength of the encyclopedia, which is the sheer abundance of useful information and the convenient manner in which it is arranged. I enjoyed delving into it, and look forward to using it in future.

N. J. FORTEY

Allaby, A. and Allaby M. (editors) *The Concise Oxford Dictionary of Earth Sciences*. Oxford and New York (Oxford University Press), 1990. xxii + 410 pp. Price £20.00.

*The Concise Oxford Dictionary of Earth Sciences* attempts to cover geology in all its aspects, together with (or are they now part of?) climatology, meteorology, oceanography, pedology, planetary geology, palaeontology and geomorphology as well as the philosophy and history of the Earth Sciences. This is a tall order and especially so when space is limited. The editors admit that they operated a 'rationing system' in selecting terms which were to be incorporated. That some sought-after information will be missing is to be expected: the field is so broad and the subjects are advancing so rapidly. This work tries to be all things to all men and in so doing it reveals its failings. We find reference to the Chemungian ['(Cohoktomian) See Senecan'] which some readers will be interested to know is part of the Devonian of Canada but will find

nothing on the Cimmerian and all that it implies in the evolution of the North Sea province. Yazoo stream is described yet there is no mention of the Yoredales. A number of 'second-spellings' of words are omitted -*laurvigite* is missing, only *larvikite* is described. *Geophysics* is defined while the word *geology* is not.

Such criticisms reflect some of the shortcomings of the work but on the positive side one must say that the definitions therein are full and clear with ample cross references. The work is certainly global in its approach and this reflects credit on the contributors and advisers used in its compilation, but sadly some more 'domestic' terms such as Red Crag will not be found.

There is a useful bibliography of some 400 titles but surprisingly there is no reference there to other geological dictionaries—for example to Fairbridge's series of dictionaries published a decade or so ago. At £20.00 it is an expensive addition to one's library and it is not going to give all the answers: clearly the editors had realized this when they wrote the preface. The specialist, I suspect, will use his own sources, the amateur may be better served by some of the cheaper dictionaries available or indeed by the glossaries provided in so many of the new text books with broad appeal. I suspect that some users will find the work irritating.

A. J. SMITH

Cooper, M. P. and Stanley, C. J. *Minerals of the English Lake District—Caldbeck Fells*. London (British Museum [Natural History]). 1990. vi + 160 pp., 32 figs., 69 colour photos, 11 maps, 3 tables. Price £14.95.

This book, the second in a series on the minerals of the British Isles to be produced by The Natural History Museum, describes the comparatively small but richly mineralized area of the Caldbeck Fells in the northern Lake District. Unless further volumes are to follow on the minerals of other parts of the Lake District the title chosen for the present book is rather misleading: 'Minerals of the Caldbeck Fells' would be much better.

Like its companion volume on the minerals of Devon and Cornwall the contents of this book fall into two parts. In the first the geological framework of the Caldbeck Fells is outlined briefly. There follows a section in which the main groups of mineral deposits are described and classified and their origins discussed in the context of the whole Lake District. Several distinctive major mineralizing episodes produced a variety of deposits for which the area has long been celebrated. A section is devoted to mining, one of