BOOK REVIEWS

Smart, P., and Tovey, N. K. *Electron Microscopy of Soils and Sediments: Examples.* Oxford (Clarendon Press: Oxford University Press), 1981. viii + 177 pp., 167 figs. Price £30·00.

The compilers of this collection of SEM and TEM photographs have a very wide experience of electron microscopy and this is reflected in the somewhat eclectic subject-matter. There are seventeen sections in all ranging from descriptions of individual particle types to consolidation and deformation fabrics, and in each case striking examples are chosen. It is with this latter point that I must first take issue slightly with the authors. Any user of an electron microscope will know the temptation always to record the most spectacular or best-defined features. These are not necessarily the most typical, however, and in some ways it might be more useful for a text to illustrate the more common, poorly defined examples, with comments on their interpretation.

My second reservation concerns the actual purpose of the volume. The short introduction does not make this clear; is it intended as a laboratory manual or an introductory text? Several of the topics included have been covered in much more detail in previously published monographs or review papers (e.g. on authigenic clays or sand grains), and so research workers might be better advised to refer to these where available.

The book is attractively presented with a short explanatory caption accompanying each micrograph (on matt paper). The text is largely free from errors, but it is not always easy to elucidate magnifications. It is difficult to recommend any volume costing £30 and consisting mostly of about 240 photographs as good value for money, and without a clearly defined market it is also difficult to identify potential customers. The same authors' companion volume on techniques is likely to prove of much more general appeal.

ANDREW PARKER

Fleischer, M. *Glossary of Mineral Species 1980.* Tucson (Mineralogical Record), 1980. vi + 192 pp. Price $6.00 (available, + 50c. postage and packing, from Mineralogical Record, PO Box 35565, Tucson, Arizona 85740, USA). Additions and Corrections to the above, 1981 (*Min. Rec.* **12**, 61–3). 50c.

This 1980 edition, with the names, symmetry, and chemical composition of mineral species, supersedes the 1975 edition which itself superseded the first edition (1971). This new edition of what has become a vital tool for all mineralogists is particularly welcome due to the unprecedented research activity in mineralogy since the 1975 edition was prepared. The widespread use of new techniques, such as the electron microprobe, has resulted in a flood of descriptions of new minerals. Thus of the nearly 3200 entries in the main section, more than 400 are new entries and 728 entries have been changed significantly. That this flood of new data is continuing is shown by the need to publish a supplement; in less than a year, thirty-eight new minerals had been described together with abundant new data on established minerals. It is hoped to publish such new lists annually. For updating the consolidated Glossary in this new edition Dr Fleischer deserves all our thanks.

R. A. HOWIE

Sinkankas, J. *Gemstone and Mineral Data Book.* New York and London (Van Nostrand Reinhold), 1981. xii + 352 pp. Price £5·90.

This is a reissue of the 1972 edition which brought together information of relevance and interest to mineralogists, lapidaries, and collectors. There are chapters on abrasives, metals in jewellery, chemicals, adhesives, physical properties of minerals, and methods of cleaning specimens. While the book is succinct and economical, the chapter 'Mineralogical Miscellany' is stimulating reading and echoes smaller sections elsewhere. Inevitably there have been advances in the treatment of diamonds and other gemstones and in our understanding of colour in minerals, and the coverage of these topics needs updating. But this is minor criticism of an extremely useful reference book.

R. R. HARDING

Gill, J. B. *Orogenic Andesites and Plate Tectonics.* Berlin, Heidelberg, and New York (Springer-Verlag), 1981. xiv + 390 pp., 109 figs. Price DM 98.00.

This is essentially a book-length review article, bringing together all the modern information and ideas about andesites, and only incidentally mentioning plate tectonics. It is based on a very extensive literature survey, with a reference list running to over 1100 entries, mostly later than 1970. The first seven chapters are a critical discussion of this large mass of data, organized into sections on occurrence, magma properties, geochemistry, mineralogy, and variations in magma