

may be found of occasional use by numerate advanced undergraduates specializing in geochemistry or hard rock petrology and by teachers and researchers in these fields.

W. J. FRENCH

Greg (R. P.) and Lettsom (W. G.). *Manual of the Mineralogy of Great Britain and Ireland*. A facsimile reprint with Supplementary Lists of British Minerals by L. J. Spencer and a Fourth Supplementary List (1977) together with a foreword by P. G. Embrey. Broadstairs, Kent (Lapidary Publications), 1977. xxxiii + 483 pp., illus. Price £10.00 (postage and packing 50p; available from Lapidary Publications, 84 High Street, Broadstairs, Kent).

For more than a century, 'Greg & Lettsom' has remained the only comprehensive mineralogy of the British Isles. Heddle's coverage of Scotland and Collins's of Cornwall and Devon have been valuable contributions but Greg & Lettsom's work is the only single volume to describe the whole of Britain.

Published in one edition in 1858, 'Greg & Lettsom' has long been a collector's item and with the renewed interest in topographical mineralogy apparent in recent years, a reprinting was inevitable. This facsimile reprint, augmented by a historical introduction by Peter Embrey, L. J. Spencer's Supplementary Lists, and a fourth Supplementary List compiled by Peter Embrey brings together a complete record of British mineral species up to 1977.

A complete revision of 'Greg & Lettsom' would have been very welcome but the work and expense involved would, clearly, have been prohibitive. Meanwhile, the present reprint has a great deal in its favour; it retains the full nineteenth-century flavour and provides a valuable insight into the state of the art at that time.

The bonus of the subsequent lists of British minerals is a good reason to further congratulate Messrs. Embrey and Lambert but I would suggest that Spencer's lists of 1898 and 1931 could have been improved by filling them out with localities and more complete references. However, the work is done and very welcome it is.

ROGER S. HARKER

Augustithis (S. S.). *Atlas of the Textural Patterns of Basalts and their Genetic Significance*. Amsterdam and New York (Elsevier Scientific Publ. Co.), 1978. x + 323 pp., 604 figs. Price Dfl. 170.00 (\$73.95).

The large-scale petrological studies of lunar rocks and ocean-floor lavas have led to such rapid

progress in our understanding of many aspects of basalt textures that an atlas of photomicrographs would seem to be a very timely publication. Presumably, most readers would prefer such a work to give a comprehensive survey of the textures and a balanced account of the genetic interpretations of various workers in this field, together with a statement of the author's own views. Unfortunately, Augustithis has adopted a different approach.

The author's ideas as to the meaning of various textural features in basic rocks may strike many readers as idiosyncratic, to say the least. For instance, although an origin by exsolution is generally accepted for the diopside lamellae within the orthopyroxene of Iherzolite xenoliths in basalts, Augustithis interprets this relationship as one of later diopsidic infiltration and replacement of bronzite. He totally rejects the concept of skeletal olivine, augite, or plagioclase phenocrysts and appears to interpret virtually all megacrysts in basalts that enclose pockets of groundmass as late-stage porphyroblasts (some originating as blobs of colloidal gel). He insists that the characteristic ophitic texture of poikilitic augites enclosing numerous plagioclase laths is generated by solid-state replacement of the augite by later-crystallizing plagioclase.

The atlas contains 100 pages of text and 600 plates. These are devoted to photomicrographs supporting the author's concepts and to illustrating his work on the little-known basalts of Ethiopia. There is virtually no attempt to recognize, discuss, and illustrate the work of other current specialists in textural relationships. The result is as overlaid in some fields as it is deficient in others. Thus, the selection of photographs of field features of basalts is very poor compared with those in other volcanological publications. The textures of peridotite inclusions in basalts (mostly Ethiopian) are treated at length without any mention, for instance, of Nicholas and his co-workers. No other inclusion types are illustrated. There are no pictures of fresh vitreous basalts, the only variant in which phenocryst-groundmass relationships are entirely unambiguous. All reference is omitted to modern experimental studies of crystallization kinetics and the light they throw on crystal morphology and zoning. Leucites are included in order for the author to argue that their leucite megacrysts are post-groundmass porphyroblasts. Nephelinites and melilitites, however, are excluded. Amygdale fillings and metamorphism of basalts are illustrated but spilites are not mentioned at all.

The text is partly connected with the plates but digresses for thirty pages (Chs. 25-34) into a general exposition of Augustithis's philosophy for igneous