

HATCH (F. H.), WELLS (A. K.), and WELLS (M. K.). *Petrology of the igneous rocks* (Textbook of Petrology, volume one): 13th edn. London (Thomas Murby & Co. George Allen & Unwin), 1973. 551 pp., 156 figs. Price £7.40 (hardback), £4.70 (paper).

Since the last edition of this standard textbook in 1961, fundamental advances have been made in understanding the nature of the major structural features of the Earth's crust. The significance of these concepts for petrology is recognized by the inclusion of a new chapter on the geological setting of igneous activity. Changes in ideas on the nature and origin of magmas are reflected in the discussions on the origins of andesites and trachytes and in the rewritten chapter dealing with the distribution and origin of basalts. The numerous excellent petrographic drawings and their detailed legends, which generations of students have come to know, are retained; the scheme of rock-classification used has, however, been slightly modified, particularly in regard to the quartz-bearing rocks, to make it compatible with the proposals made by a Commission of the International Union of Geological Sciences, following Streckeisen. These changes occur in the sections of the book dealing with modes of occurrence of igneous rocks and with their petrography and significance: the other two sections, the one dealing with the igneous rock-forming minerals and the unique chapters describing the igneous activity in the British Isles, remain essentially the same—perhaps they could be referred to as being unaltered, rather than fresh. This new edition of the authors' well-established text will be welcomed by all students and teachers of petrography; its availability in paper-back form will help to temper the inevitable rise in cost.

R. A. HOWIE

TANK (R. W.), Editor. *Focus on environmental geology; a collection of case histories and readings from original sources*. London and New York (Oxford Univ. Press), 1973. xii+474 pp., 119 figs., 3 pls. Price (soft-back) £2.25.

The specialized mineralogical interest of this book is limited; but it is nevertheless of paramount importance to all workers in geological fields. It selects, from papers ranging from 1928 onwards, a series of case histories where geological phenomena have directly affected human life. As propaganda for the science it is invaluable; but it is much more than that, since it brings between two covers detailed descriptions of most of the significant geological disasters of the last four decades. The section on Volcanism first describes three volcanic areas in detail—Parícutin, Taal, and the Cascade Range—followed by one practical paper on the diversion of lava flows. Earthquake activity is described from San Andreas and Alaska, and there follow logically contributions on Earthquake Prediction and Control. Tectonic creep is illustrated from California and Venice; gravitational mass movement from Wyoming and Italy. A contribution on Quick Clays points out the environmental hazards that may result from changes in clay mineralogy.