most important in the book and it might well have served the editors' purpose better if the authors had been asked to collaborate. In chapter 11, where the methods of separation discussed are those of ion exchange, solvent extraction, and paper chromatography, the reader may think that too much space has been devoted to theoretical considerations. The chapters are supplemented by copious references, which, except for those at the ends of chapters 6, 8, and 10, are arranged alphabetically.

Apart from these criticisms there can be no doubt that the editors have succeeded in presenting a concise and informative account of modern analytical methods in geochemistry and the book can be recommended unreservedly. A. A. M.

DE JONG (W. F.). *Kompendium der Kristallkunde.* Wien (Springer-Verlag), 1959. 258 pp., 227 text-figs. Price $10.50 or 75*s*.

—— *General Crystallography: A Brief Compendium.* London (W. H. Freeman & Co., Ltd.), 1960. x+281 pp., 231 text-figs. Price 38*s*.

These two books are independent translations, with some revision and rewriting, of the original Dutch edition of 1951.

They provide a clearly written, highly condensed account of modern crystallography in its proper setting as a department of physics. The author does not hesitate to go into the details of mathematical explanation where necessary, and thus provides data that are not to be found in many more voluminous textbooks. The book is sub-divided into four main parts: 'Geometric Crystallography', 'Crystal Structures', 'Crystal Chemistry', and 'Crystal Physics'.

The first part is the most extensive and gives a clear survey of the basic laws of geometrical crystallography, as well as symmetry elements and their derivation. After some aspects of direct and indirect lattices, different methods of calculating angles are discussed. Fourteen pages are devoted to different methods of crystal projection, the main emphasis being laid on the stereographic projection. The discussion of its practical application is a welcome addition.

A prominent feature of the second part is the mathematical interpretation of the refraction of X-rays in the crystal structure. All the important methods used for structural determination are briefly mentioned and illustrated with most informative diagrams. There are few textbooks of this size that give as de Jong does a clear survey of Weissenberg and retigraph methods, and enter into the mathematical background of Fourier analysis and Patterson synthesis.

The third section of the book ('Crystal Chemistry') deals briefly with types of bond. Unfortunately, important features, as for instance isomorphism and isotypism, are treated extremely briefly. The most important lattice types, both organic and inorganic, are clearly illustrated and provide an excellent survey for the student.

Remarkable is the sub-division of 'Crystal Physics' into a descriptive and an explanatory part. Mechanical, optical, electrical, and magnetic characteristics of crystals are summarized in the first chapter. The author lays much emphasis on tensor mechanics as applied to crystal physics. He stresses the importance of problems of elasticity and deformation and his treatment suggests that the dominant position taken by crystal optics in many textbooks is not entirely justified. Nevertheless the main features of crystal optics are dealt with in a comprehensive and clear way, assisted by excellent diagrams. The definitions are simple and straightforward. Cleavage, hardness, diffusion, Frenkel and Schottky defects, resonance, and crystal growth, as well as some practical applications (transistors, detectors, &c.), are discussed in the second chapter.

The reader, whether or not mathematically inclined, will find the book a concise yet comprehensive account of modern crystallography.

E. F. STUMPFL

MASON (Brian H.). *Trap Rock Minerals of New Jersey.* New Jersey Geological Survey, Department of Conservation and Economic Development. Bulletin 64, 1960, 51 pp., 16 figs., 1 map. $1.50.

This booklet gives an interesting and up-to-date account of the minerals of the trap rocks of New Jersey with special reference to the zeolites. A description of the occurrence and paragenesis is followed by some details of the localities. The species (of which there are sixty) are arranged in systematic order. Each mineral has a section devoted to its basic properties, followed by a note on the occurrence in New Jersey. Although it is not specifically stated, the general information on each mineral (which would be found in any elementary textbook) and the notes on the zeolite group suggest that the book is primarily for the amateur. It is very well illustrated from specimens in the American Museum of Natural History and has a useful map and bibliography. An unusual and helpful addition is a list of discredited and unconfirmed occurrences, but there is no general index.

J. M. S.