The chapter on thermodynamic properties of feldspars in addition to containing the known thermodynamic constants for feldspar includes a large number of phase diagrams, which show phase relations in systems containing feldspars. The final chapter consists of historical notes and old names and is a useful concluding chapter.

The book is beautifully printed on a high quality paper on which the ten photomicrographs reproduce very well. The price for a book of this size at 6*d.* per page is excessive and in the reviewer's opinion authors should be more careful in their selection of publishers. Some publishers apparently cannot discriminate between a book that will have very limited sale and therefore must be priced very highly and a book that has such wide appeal that it can make a good profit without excessive cost.

W. S. MACKENZIE

SAVITSKIĬ (E. M.), POLYAKOVA (V. P.), and TYLKINA (M. A.). *Palladium Alloys.* Translated by R. E. Hammond. New York (Primary Sources), 1969. vi+212 pp., 129 figs. Price $24.50.

The main part of this monograph is devoted to the phase diagrams and the physical and electrical properties of binary and ternary alloys containing palladium. Other sections deal with the uses of the metal and its alloys, the extraction of palladium from copper–nickel sulphide ores, and the chemical and physical properties of the metal itself. Since the U.S.S.R. is responsible for about half of the present world production of platinum metals, it is appropriate that the authors should be Russian, and some of the work, particularly on the alloys of palladium with other transition metals, is their own work, unpublished hitherto. The presentation is rather too uncritical, but the book provides a most useful, if costly, compendium of information, particularly from Russian sources.

P. S. ROGERS

SCIENTIFIC AMERICAN. *Readings in the Earth Sciences.* Vols. 1 and 2. San Francisco (W. H. Freeman & Co.), 1969. Vol. 1, xii+305 pp. Vol. 2, xii+316 pp. Price 94*s.* each volume.

For many years *Scientific American* has made a major literary and scientific contribution by keeping both scientists and non-scientists informed of the latest developments in all fields of science. In these two volumes 74 of the articles that have appeared in the last 20 years on various aspects of the Earth Sciences have been collected together and reprinted in their original format complete with the original superb illustrations. Articles of direct interest to mineralogists and petrologists include those on 'Astroblemes' by R. S. Dietz, 'Tektites' by V. E. Barnes, 'Ancient fluids in crystals' by Edwin Roedder, 'Volcanoes' by Howell Williams, and 'Continental drift' by J. Tuzo Wilson, but these volumes will be used no doubt even more to read up on

other developing aspects of geology with the help of such articles as those on Micropaleontology, the Antarctic, or on Ocean waves. All libraries should have it.

R. A. H.

DE KUN (NICOLAS). *The mineral resources of Africa.* Amsterdam (Elsevier), 1965. xxvi+740 pp., 136 figs., 172 tables. Price £12.

In Africa today a shift is becoming apparent away from the traditional 'precious' mineral mining industries towards a more intensive exploitation of industrially important minerals. This transformation is of considerable significance on a continent where mining has long been a major force in social as well as economic life. The first section of this book attempts a review of African mineral deposits by countries whereas the larger second section deals with minerals classified into various economically related groups, e.g. iron–bauxite group, base metal group, etc. Despite the massive nature of this compendium it nevertheless appears to give frustratingly few details of particular deposits or of individual minerals: under indium for example we are told that sphalerite contains 0·0024 % In, but no locality or reference is given. A 44-page appendix lists more than 2000 names and addresses of companies, individuals, and organizations having interests in the African mineral industries but the main index of equal length is so constructed that to track down monazite the reader finds it neither under that name nor under cerium but is forced to look up some of the hundred or so entries under rare earth metals and thorium: crocidolite asbestos is similarly difficult to locate. This book represents an immense amount of work in compilation but will probably be of more interest to economists and geographers than to mineralogists.

R. A. H.

PARK (C. F., Jr.) and MACDIARMID (R. A.) *Ore Deposits.* San Francisco and London (W. H. Freeman & Co.) 1964. 475 pp. Price 70*s.*

This medium priced book, written by two American professors (one a former student of the other), is aimed at students and professional geologists concerned with ore deposits.

Twenty short chapters cover a galaxy of topics pertinent to metalliferous deposits. After a short introduction, a rapid historical review of ideas relating to ore genesis follows, and leads up to recent theories of ore deposition. Within this section emphasis is placed on Lindgren's genetic classification, which is upheld as a guiding star.

It is the authors' contention that ores are formed from fluids whether igneous, metamorphic, or meteoric in origin. Their nature, mobility, and reactivity, together with physical and chemical controls, whether temperature, porosity, or structure, form the subject-matter of the early chapters. Wall-rock alteration, paragenesis and zoning, and geothermometry are fairly extensively dealt with in three chapters and these