

is summarised, and special reference made to the asbestos and chromite mines, and to the Great Dyke and its associated ore-deposits. The section relating to Northern Rhodesia is particularly interesting. It epitomises the geology so far as is at present known, and gives good accounts of the lead-zinc-vanadium ores of Broken Hill, and of the deposits of the great copper mines—Bwana M'Kubwa, Mufulira, Roan Antelope, N'Kana, N'Changa, etc.—now in course of development. It is shown how the Rhodesian geology carries on into the Belgian Congo, and interesting accounts are given of the copper-field of the Katanga and of the remarkable uranium and radium deposits of Chinkolobwe.

The book runs to about 110 pages, and is interestingly written. It is profusely illustrated with photographs, maps, and sections, some of the maps being particularly valuable, because they represent the latest results of geological surveys now actively in progress. Although necessarily based in large measure upon the work of others, it contains much that is original either in substance or interpretation. It is a compilation which many who are interested in the geology and mineral resources of South Africa will greatly appreciate, and of which its author may be justly proud.

C. G. C.

Short Reviews.

The Study of Rocks. By Prof. S. J. Shand. Pp. xi + 224. (London: Thomas Murby and Co.; New York: D. Van Nostrand Co., 1931.) 6s. net.

PROF. SHAND has written a clear and well-proportioned account of modern petrography, which instructs the beginner along sound lines and is well worth reading by mature students. Nearly two-thirds of the book is devoted to igneous rocks, and both in this section and in those dealing with the sedimentary and metamorphic rocks, the treatment of rock-forming minerals, and classification, reveals the author's remarkable capability for adequate summarisation.

Chap. iv., on the classification of eruptive rocks, is a masterly outline of the chief systems that have been proposed from the time of Zirkel onwards, culminating in Shand's own scheme as recently developed in his larger book on "Eruptive Rocks". The difficulty of dealing with rocks that carry both quartz and olivine is met by suggesting that if there is enough quartz to convert all the olivine into pyroxene "the rock should then be considered a saturated one". A welcome feature is the recognition that there are peridotites which are definitely intrusive on their own account and seem to owe nothing to accumulation of early formed crystals from basaltic magma.

Sedimentary rocks are divided into: (a) organic residues; (b) solution residues; (c) crystalline

rock-residues; and (d) crypto-crystalline and colloidal rock-residues. The main classes of metamorphic rocks recognised are mylonites, hornstones, and crystalline schists; granulites and injection-gneisses are referred to under the third of these categories.

Each chapter is followed by suggestions for reading which provide a useful guide to petrological literature. The book is a model of competent compression, and should prove to be a stimulating introduction to this vast and ever-growing subject.

The Primitive Mind and Modern Civilization. By C. R. Aldrich. (International Library of Psychology, Philosophy and Scientific Method.) Pp. xvii + 249. (London: Kegan Paul and Co., Ltd.; New York: Harcourt, Brace and Co., 1931.) 12s. 6d. net.

EARLY excursions of the psycho-analysts into the realms of anthropology did not produce any results which inspired confidence. Prof. Malinowski had no difficulty in showing in his well-known examination of the hypothesis of the father-son antagonism, in the light of the customs of a matrilineal society such as the Trobrianders, that they had failed to take actual conditions into account. Mr. Aldrich, a follower of the Zurich school, however, maintaining that anthropology is unable to handle its data unaided, now examines the beliefs and rituals of primitive and savage society in the light of the two principles of the 'racial unconscious' and the gregarious instinct. He attacks the school of Lévy-Bruhl and shows that, so far from the savage standing at a prelogical stage, between which and the thought processes of the civilised mind a gulf is fixed, there is in fact a regular progression from the unconscious, as manifested in an instinct for co-operation, through the conventional morality of the savage and civilised, to the consciously directed social co-operation which is now making itself manifest in certain individual members of society as the place of conventional morality is taken by what he calls 'bio-morality'.

Anthropologists will welcome Mr. Aldrich's critical examination of their data, even if they do not agree with his stimulating conclusions. His 'racial unconscious' is at present no more than hypothetical. Its existence still has to be proved. At present his interpretation of social phenomena, such as reasons for purification of warriors on their return from a successful raid, is metaphysical rather than psychological; but it cannot be ignored and will stimulate further research.

The Life of the Ant. By Maurice Maeterlinck. Translated by Bernard Miall. Pp. 192. (London, New York, Toronto and Melbourne: Cassell and Co., Ltd., 1930.) 6s. net.

THIS book completes the author's trilogy—"Lives" of the bee and the white ant being already well-known works from his pen. Much personal observation has been drawn on for the compilation of this volume, and scarcely a page passes without reference to a prominent myrmecologist, whose views are freely discussed. We read of the habits of ants, their social sense, their community