

chapter, it is of no use to engineers in England, and probably of but little use even to American engineers, because the most recent methods are not discussed. The chapter on loading machines and conveyors is decidedly disappointing; the compiler appears to have got his information on the subject of loaders mainly from the builders of the machines, rather than from their users, and gives the impression of not having been in touch with their practical use underground. He entirely ignores the existence of the gate-end loader which is making considerable headway in Great Britain, and omits from the discussion some of the modern American cutting and loading machines which are being tried out in West Virginia.

The last chapter on timbering, etc., again is unsatisfactory. The compiler has attempted to work out certain formulæ for determining the size of timbers to be employed; he gives one of these on p. 307, and is apparently unaware of the fact that he is repeating the same formula only slightly altered in form and in the letters used in designation on p. 331. His confidence in his own formulæ is best expressed by the statement that he solves a particular example, and shows that according to his formula "a 4 $\frac{3}{8}$ -in. stick will support the load"; he goes on to say, however, that "in this case it would be advisable to use a larger stick, say, 8 in. diameter."

Geologie von Europa. Von Prof. Dr. Serge von Bubnoff. (Geologie der Erde.) Band 1: *Einführung, Osteuropa, Baltischer Schild.* Pp. viii + 322 + 8 Tafeln. (Berlin: Gebrüder Borntraeger, 1926.) 22:50 gold marks.

THE present volume forms the second instalment of the "Geologie der Erde," vol. 1 of Prof. E. Krenkel's "Geologie Afrikas" having been published about a year ago. The whole project is a decidedly ambitious one, for the aim is to give a comprehensive and correlative account, from the structural as well as from the stratigraphical point of view, of the geology of the earth, each continent being dealt with separately.

Prof. von Bubnoff has been faced with a task more formidable than that of any of the other contributors, so complicated is the structure of the continent of Europe, and so extensive the literature. He sets out in the first place to determine from palæogeographical considerations what are the fundamental structural divisions of the whole area, and shows how, with certain modifications due chiefly to the great mountain-building movements, the character of each region has tended to remain constant throughout geological history. He then discusses the variations in gravity over the continent, the general distribution of ore-deposits, and the present-day morphology.

The rest of the present volume is devoted to a detailed account of eastern Europe, the development of which is shown to have been independent of that of western Europe since Palæozoic times. The Ural Mountains, the Posthumous Uralides, the Russian Platform, the Baltic Shield, and the Podolian Massif are dealt with in turn, and an

account given of the stratigraphy, the orogenesis, the ore-deposits, and the morphology of each region, together with references to the more important literature. As might be expected, the text makes rather solid reading, but, fortunately, it is well illustrated by explanatory maps and sections. The appearance of the remaining two volumes, which are to deal with western and Mediterranean Europe, will be awaited with interest, since the complete treatise will undoubtedly fill a gap in geological literature and be of considerable use as a work of reference.

Die Ökologie der blattminierenden Insektenlarven. Von Dr. Martin Hering. (Zoologische Bausteine: Ausschnitte aus dem Gesamtgebiet der Zoologie, Band 1, Heft 2.) Pp. iv + 253 + 2 Tafeln. (Berlin: Gebrüder Borntraeger, 1926.) 18 gold marks.

ONLY a few months ago we had the opportunity of noticing Dr. Hering's "Biologie der Schmetterlinge," and it is seldom that an author is able to produce two works of evident scientific merit within a period of less than a year. The treatise before us is the result of the study of the specialised subject of leaf-mining insect larvæ.

A great deal of the information that lies scattered through the pages of numerous periodicals has been critically examined and gathered together in producing this book. At the same time, Dr. Hering has incorporated much of his own studies, and has imparted greater exactness and a more scientific viewpoint, in what has hitherto remained an ill-defined branch of entomology. In order to achieve his object he has coined a special terminology which differentiates the various characteristic features of miners. As the names which he adopts are short and convenient, it is possible that they may find acceptance.

The book is divided into sixteen chapters, each one being devoted to a particular aspect of the subject. Thus, Chap. i. is concerned with the definitions and the general morphology of mines. Chap. ii. deals with mines in different parts of plants; Chap. iii. with 'stationary' and 'temporary' miners; and Chap. vii. discusses larval structure in relation to mining habits. Chap. x. is concerned with problems relative to the nutrition of miners, and there are chapters dealing with aquatic mines and on the parasites, inquilines, and symbionts of mining larvæ. The book is well printed and illustrated; it is provided with a very complete bibliography, and the price on the whole is reasonable.

A. D. I.

Meteorological Office: Air Ministry. British Rainfall, 1925: the Sixty-fifth Annual Volume of the British Rainfall Organization. (M.O. 285.) Issued by the authority of the Meteorological Committee. Pp. xviii + 279. (London: H.M. Stationery Office, 1926.) 15s. net.

FOR the year 1925 the rainfall over the British Isles was very slightly above the average and can be taken as normal. In some districts abnormalities occurred; among the most remarkable of these was the exceptionally dry June, which was