

of a single enlarged flower (as has been made in a very few cases) would be a decided advantage.

In the present edition one of the original plates has been omitted, but four new ones (including selected rushes, sedges, grasses, ferns, lycopods, mosses, and lichens) form a useful addition. The book is well printed, but is perhaps unnecessarily heavy; considering that it is intended as a travelling companion for tourists, a lighter paper might have been used. The publishers would also do well to look more carefully to the binding: the pages in the review copy show an alarming tendency to break loose from their moorings.

*The Chemistry of Enzyme Actions.* By K. George Falk. (American Chemical Society Monograph Series.) Second and revised edition. Pp. 249. (New York: The Chemical Catalog Co., Inc., 1924.) 3.50 dollars net.

THIS book retains the main features of the first edition, although it has been approximately doubled in size. Enzyme actions are considered so far as possible as ordinary chemical changes, and the author's views on the theory and mechanism of chemical reactions are applied to them. A preliminary study of his book on this subject would probably be of advantage to the reader, as the sketch of the subject in the introduction to the present work suffers from enforced condensation. Briefly stated, the author is a strong supporter of the addition theory of chemical change. The mode of treatment renders the book rather difficult reading, but there is a constant appeal to the critical faculty which stimulates the reader's interest.

A good account of the recent work bearing on the vexed question of the chemical nature of enzymes is given, including the author's suggestive experiments on the selective action of ester-hydrolysing substances, made to glean indications regarding the chemical nature of the lipases. The whole problem is still in its infancy, and a consideration of the general physical and chemical properties of the enzymes leads only to the tentative generalisation "that an enzyme action is due to a chemical grouping of marked instability present in a complex molecule of colloidal nature." The colloidal character of all known enzymes is thus recognised but is kept carefully in the background in the author's consideration of the nature of enzyme action, since he believes that "fundamentally the chemical reactions of a substance are based upon its chemical properties," although its physical state will naturally modify the relations observed. He even holds out the hope (p. 233) of being able to obtain the "enzyme property" in a crystalloidal or readily dialysable form, thus abandoning the tentative suggestion just recorded.

A somewhat sketchy chapter on the uses and applications of enzymes and a long and detailed account of experiments on enzyme actions of tissues and tumours—the treatment of which is quite out of proportion to that of the rest of the work—are also included in the book, which concludes with a summary of the present status of the enzyme question.

As will be seen, the work is one only for the advanced student or investigator, who is able by the exercise of his critical faculty to enjoy the somewhat novel presentation of familiar facts. A. H.

*Bismuth Ores.* By Robert Allen. Pp. ix+62. 3s. 6d. net. *Antimony Ores.* By Edward Halse. Pp. ix+102. 5s. net. *Bauxite and Aluminium.* By W. G. Rumbold. Pp. ix+110. 6s. net. (Imperial Institute: Monographs on Mineral Resources with special reference to the British Empire.) (London: John Murray, 1925.)

THE above three volumes issued by the Imperial Institute form a further contribution to the series of monographs on mineral resources which the Institute has issued from time to time, and these follow closely the lines upon which their predecessors have been laid down. Each book consists of three sections, the first dealing with the characters and composition of the ores of the metal treated of, the uses and properties of the metal and of its more important alloys, and the metallurgy of the metal, that is, the processes by which it is extracted from its ores. The second section gives an account of the distribution and occurrence of the ores of the metal within the British Empire, these occurrences being described in some little detail; the third section describes the sources from which the ores of the metal in question are obtained from foreign countries, that is to say, countries outside of the British Empire. Statistics of production are usually given, though these are to-day of comparatively little importance in view of the fact that full official statistics are published regularly by the Imperial Mineral Resources Bureau. Each volume, however, concludes with a very useful bibliography of the metal to which the volume refers.

With regard to the individual volumes themselves, there is little to be said. It so happens that the production of each one of the three metals here discussed is in relatively few hands, and that there is accordingly a certain amount of secrecy concerning the processes of extraction employed, their general principles being of course known, though many of the minute details are looked upon as trade secrets; it need scarcely be said that it quite often happens that these minor details may make all the difference in the economic success or failure of a process. In every case the work appears to have been done carefully and painstakingly, and appears to be upon the whole quite accurate. No doubt the information given would not be sufficient for the specialist, but the object of these books is not to provide information of that type, but rather to give a general survey of the subject which will suffice for the objects of the average inquirer, and this purpose is quite well fulfilled by the books before us. It must often happen that the business man requires some general knowledge of the origin and mode of distribution of the materials in which he deals, and the object of these monographs is to supply information of that kind.

*Anthropology.* By Prof. A. L. Kroeber. Pp. x+523. (London, Calcutta and Sydney: George G. Harrap and Co., Ltd., n.d.) 12s. 6d. net.

THE professor of anthropology in the University of California has written a notable book—one which deserves to be known and studied in Europe as well as in America. He seeks to provide answers to the questions: When and where did the races of mankind