

analysis of the native pottery from the Acropolis and Mr. W. Lamb a study of the bronzes from the Acropolis and the Orthia site. Mr. W. J. Forsdyke describes his excavation of the Mavro Spelio Cemetery at Knossos. These tombs were discovered in 1926, and the first five excavated by Sir Arthur Evans himself. From one of these came the gold ring with linear inscription described by him in the *Times* of June 8, 1927, in which he ascribed a talismanic meaning to the script. A paper of great interest is that by Mr. W. A. Heurtley on the excavation of a prehistoric site at Boubasta on the banks of the Haliakmon in Western Macedonia. The site, though small, was occupied over a very considerable period of time from the late Bronze Age. Not only is it interesting in itself as a hillside settlement, probably of seasonal nomadic shepherds, but it affords Mr. Heurtley the basis for a comparative study of the painted pottery of northern Greece from which he makes some suggestive deductions as to a possible source for the Dorian invasion.

*Biology of the Vertebrates: a Comparative Study of Man and his Animal Allies.* By Prof. Herbert Eugene Walter. Pp. xxv + 788. (New York: The Macmillan Co., 1928.) 21s. net.

THE author states that his book is the outcome of twenty years' teaching of pre-medical students and others, and in regard to the latter he says: "It is not so generally realised that it may not be amiss for every man to gain some inside information about the human mechanism and how it came to be." That is the keynote of the book. In the first part of the book taxonomy, distribution of animals in space and time, the ancient history of man, cytology, histology, and embryology are considered, and there is a short concluding section on biological discords. The second part deals with the skin, alimentary tract, and with the circulatory, respiratory, excretory, and reproductive systems, and the third part with the skeleton, muscles, nervous system, and sense organs. In the second and third parts is given an account—necessarily concise—of the principal modifications of the organ or system under consideration met with in the vertebrate series, and due reference is made to functional activities.

To the student who has spent a year or so in zoology and desires to proceed further in the study of the comparative biology of the vertebrates, this book is a handy source of much interesting information which he would otherwise have difficulty in finding in small compass. Of the 687 text-figures a few are on too small a scale to be really serviceable. Of errors there appear to be relatively few, but *Xenopus* is not, as is stated, South American.

*Ice Engineering.* By Prof. Howard T. Barnes. Pp. vi + 364 + ii. (Montreal: Renouf Publishing Co., 1928.) 5 dollars.

TWENTY years ago, Prof. Barnes published his work on "Ice Formation with Special Reference to Anchor Ice and Frazil", and in the lengthy

bibliography contained at the end of his new work on ice engineering will be found many papers by him on various aspects of the ice problem. His life-long study of the blocking of the rivers of North America by ice and of the icebergs of the North Atlantic, led him to the discovery of the value of thermit for breaking up great masses of ice, and in 1925 he was granted a patent by the United States for his process. Thermit, it will be recalled, was discovered in 1895 by Dr. Hans Goldschmidt, who died in 1923. It is a mixture of aluminium powder and iron oxide which, when ignited, produces intense heat in a very short time. As applied by Prof. Barnes, thermit has been used for clearing the streams leading to power houses, for the prevention of floods, and for the breaking-up of icebergs, and only last winter the Canadian Government entered into a contract involving an expenditure of some £12,000 for an experiment on a large scale for the prevention of ice-jams on the St. Lawrence.

Details of some of the work done by Prof. Barnes is given in this volume, which, however, also deals with the physical properties of ice, the theory of the formation of anchor ice, ice remedial work, ice navigation, ice breaking, and other aspects of the subject. The bibliography is classified and chronological and contains references to papers by Boyle, Gay-Lussac, Faraday, Forbes, Kelvin, and other famous investigators.

*Handbuch der regionalen Geologie.* Herausgegeben von Prof. Dr. G. Steinmann und Prof. Dr. O. Wilckens. Band 7, Abteilung 7a: *The Union of South Africa.* By A. W. Rogers, A. L. Hall, P. A. Wagner and S. H. Haughton. Pp. 232 + 3 plates. (Heidelberg: Carl Winters Universitätsbuchhandlung, 1929.) 17 gold marks.

THESE 'handbooks' are indispensable works of reference for the countries they describe. The first part of the seventh volume deals with the Union of South Africa. The sections by the four main authors are supplemented by contributions by Dr. J. L. Krige, Dr. du Toit, and Prof. Shand. The book, as might be expected from the authors, deals mainly with the work of the Geological Survey, and includes a useful list of its maps and publications. The work is shorter than the volumes by du Toit and Krenkel, and its special value is as an authoritative statement of the present conclusions as to the classification and correlation of South African rocks. It may be noted that the Stormberg Series is all included in the Trias; the system in which the Ecca Series should be included is left indefinite; and the Waterberg System, from which the beds below the unconformity in it are excluded and referred to the Transvaal System, is accepted as pre-Palæozoic.

The section that is of particular value is the account of the complex and long series of rocks included in the pre-Palæozoic. The economic section by Dr. Wagner has an interesting account of the occurrence and distribution of the platinum ores.