

by a consideration of the problems and methods of geology; and the attention of the lay reader is at once engaged by the mention of familiar geological phenomena. The author then proceeds to discuss the constitution and age of the earth. He gives a clear idea of the relations in size and distance of various members of the solar system, but, very wisely perhaps, refrains from discussing the origin of our planetary system, commencing his story with the earth as a glowing mass. We then see the origin and nature of the present crust of the earth. The various agencies that have affected its configuration—heat and cold, running water, snow, ice, and the sea—are interestingly considered, and a short chapter is devoted to a very clear account of volcanoes. The occurrence of marine fossils at great heights on the earth's surface, among other phenomena, is then referred to in proof of the changes that have taken place in land and sea; and finally we have a review of the succession of life on the earth. Additional value is given to this work by the inclusion of a well-arranged bibliography.

V.—*DANA'S MANUAL OF MINERALOGY.* Thirteenth Edition, entirely revised and rewritten by *WILLIAM E. FORD.* 12mo; pp. viii, 460, with 10 plates. New York, John Wiley and Sons; London, Chapman & Hall, 1912. Price 8s. 6d.

THE revision of this well-known manual will be very welcome, for although the book has been frequently reprinted it is twenty-five years since the text was revised. The present volume is arranged on the same plan as formerly, but there are some necessary omissions and not a few useful additions. Thus we find that the chapter on petrology has been excluded, but there is a useful account of the occurrence and association of minerals. There is less detail in the descriptive portion of the book, and the catalogue of American localities is omitted—changes that will be quite in keeping with the requirements of the general student. As new features we note the useful list of minerals arranged according to systems of crystallization, and the statistics of mineral production in the United States for 1910. The tables for the determination of 203 species are decidedly useful in their new form, and the ten photographic plates make a good addition. The book is well printed, contains 357 text-figures, and has a convenient index; printers' errors are rare, although we observe a misspelling of 'cryptocrystalline' on p. 176. We now have several excellent elementary manuals of mineralogy, but the present volume will take a high place in making the Dana series complete.

VI.—BRIEF NOTICES.

1.—*THE BEGINNER'S GUIDE TO THE MICROSCOPE.* By *CHAS. E. HEATH,* F.R.M.S. 8vo; pp. 1-119, with 46 text-illustrations. London: Percival Marshall & Co., n.d. Price 1s. net.

THERE is no pretence in this little book of giving instruction in scientific microscopy: its aim is purely to teach the beginner to use the instrument as a means of recreation. As an introduction

to the essentials of a modern microscope, however, it should prove of distinct use. The various parts of the instrument and their uses are described, and the subject of illumination is well dealt with. The hints given regarding the choice of a microscope are likely to be of value to the class of readers for whom the book is intended, and the same may be said with respect to the instruction given on the mounting of objects. To readers taking up the study of petrology, however, the book could scarcely be recommended as comprehensive. An account of the camera lucida would not have been out of place.

2.—THE ORIGIN AND EVOLUTION OF PRIMITIVE MAN. By ALBERT CHURCHWARD, M.D., F.G.S. Crown 8vo; pp. 88, pls. 46. London: George Allen & Co., Ltd., 1912. Price 5s.

THIS is a discursive little book specially devoted to pointing out the so-called mistakes of 'authorities'. The writer asserts that "it was in Africa that the little pygmy was first evolved from the *Pithecanthropus erectus* or an Anthropoid Ape", and then gives some account of the African pygmies as the survivors of the earliest type of man. He thinks that the skeleton lately discovered near Ipswich is probably that of a Nilotic negro, though he "cannot positively say if this was a man of late exodus of the Nilotic negro, or one of an early exodus of Stellar Mythos". Notwithstanding the beautiful photographs of implements and primitive peoples with which the book is illustrated, we fear it will scarcely commend itself to geologists.

3. GEOLOGY OF EGYPT.—Attention was called (GEOL. MAG., 1910, p. 571) to the issue of two colour-printed geological maps of Egypt, by the Survey Department, Cairo; one on a fairly large scale in six sheets and the other in one sheet. The Department has now (1912) issued *Explanatory Notes to accompany the Geological Map of Egypt, with tables showing distribution of geological formations and economic products*. The work is written by the Director of the Geological Survey, Dr. W. F. Hume, and it contains a concise account of the geological features and history of the formations, illustrated by two plates of longitudinal and vertical sections. As a guide in the field, and for reference, this thin volume will be of great utility.

4. CROYDON NATURAL HISTORY AND SCIENTIFIC SOCIETY.—The Proceedings and Transactions of this Society for the session 1911-12 contain the Address of the (now past) President, Mr. W. Whitaker, F.R.S., entitled "Surrey Geology in the past Eleven Years". In this is given an exceedingly useful record of the works published (with comments), thus continuing the record of subjects dealt with in the previous geological addresses (1900-1) by the same President. Dr. H. Franklin Parsons, F.G.S., was elected President for the session 1912-13. He has contributed to the volume an important paper on "The Flora of the Commons near Croydon", with notes on the physical features and geology of the several areas.