

*Handbuch der Experimentalphysik.* Herausgegeben von W. Wien und F. Harms. Unter Mitarbeit von H. Lenz. Band 25, Teil 3: *Angewandte Geophysik.* Unter der Redaktion von G. Angenheister. Pp. xii + 556. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1930.) 54 gold marks.

THIS work opens with a short account (48 pages), by H. Reich, of the geological foundations on which applied geophysics must build; the remainder of the book consists of small treatises on the various methods, each by a specialist in the method. Gravimetric methods are discussed by K. Jung (162 pages); the next section, on seismic methods, is divided into two parts, one (of 40 pages), by O. Meisser, on 'air-seismology', and the other (of 55 pages) on earth-seismology; the former, though interesting in itself, seems out of place in the present volume, as it bears on the constitution of the upper atmosphere, and not on that of the earth's interior, to which applied geophysics (as now understood) refers. Magnetic methods of prospecting are discussed in 100 pages by H. Haalck, and electrical methods by J. N. Hummel and W. Heine, the former dealing with the theory (67 pages) and the latter with the practice (56 pages). J. N. Hummel also contributes the final section (28 pages) on radioactive methods.

The price of the book, 54 gold marks, seems excessive, but will doubtless not deter commercial users, who are those chiefly concerned with the subject, from purchasing a copy. Even they, however, may feel that the multiplication of books covering much the same ground can be overdone, especially when at so expensive a rate. Some of the joint authors of this volume have recently published fuller accounts, in separate books issued by another publisher, of the sections which they here deal with; the shorter accounts in the present work have the advantage, however, of including mention of the most recent work, with references.

*Egyptian Civilization: its Sumerian Origin and Real Chronology, and Sumerian Origin of Egyptian Hieroglyphs.* By Dr. L. A. Waddell. Pp. xx + 223 + 21 plates. (London: Luzac and Co., 1930.) 12s. 6d. net.

IN this volume, the seventh of the series that Col. Waddell has devoted to the exposition of his views on the origin and relations of the great civilisations of antiquity, the author aims at demonstrating the historical character of Menes as an Aryan, a descendant of the first Sumerian or Aryan king who founded civilisation. He maintains that Menes was at one and the same time the Sumerian emperor in Mesopotamia and the first dynastic king of Egypt, a crown-colony of his world-empire.

In a previous volume it has been held that Harappa and Mohenjo-Daro are the relics of a Sumerian colony in India. Arguing from identifications in the king lists of India, Mesopotamia, and Egypt, it is now maintained that Menes was the son of Sargon, the ruler of an empire extending from India to Britain. Egyptian civilisation is made to date from the conquest of the country by the

pre-dynastic Pharaohs, now shown to have been Sumerian emperors, the father and grandfather of Sargon, the date of the conquest being about 2780 B.C. Menes, the crown-prince and governor of the Indus valley, erected Egypt into an independent kingdom, civilised Crete as Minos or Min, and extended his power to the Pillars of Hercules and Britain. Col. Waddell regards any discrepancy between his theories and those of a more orthodox chronology as due to the weakness of archaeological dating; but until he convinces scholars of the accuracy of his identifications—a difficult task, we fear—his own chronology hangs in the air.

*The Art of Study.* By Prof. T. H. Pear. Pp. vii + 117. (London: Kegan Paul and Co., Ltd., 1930.) 3s. 6d. net.

THIS book is the outcome of some broadcast talks to school children on how to concentrate. The author has expanded and developed these talks so that they apply not only to school children, but also to children of maturer years who may find they want to study something and yet feel they do not know how to do so.

Perhaps nobody but Prof. Pear can put abstract psychological problems in such a winning way; the chief difficulty is that the knowledge behind his exposition is so artistically disguised that readers may erroneously believe that the problems involved are really very simple. He discusses what we mean by learning; the differences in people with regard to mental make-up so that a method of study useful to one may be a stumbling-block to another; how to form habits of study; how to memorise. Interspersed between the facts is much good advice, tendered by one experienced in the difficulties of learners.

This book can be recommended as really being what it is called, the art of study; the science of study forms the background.

*Jorullo: the History of the Volcano of Jorullo and the Reclamation of the Devastated District by Animals and Plants.* By Dr. Hans Gadow. Pp. xviii + 100 + 2 plates. (Cambridge: At the University Press, 1930.) 7s. 6d. net.

JORULLO stands in an amphitheatre amongst the foothills of the great southern slope of the Mexican plateau. It was subjected to a series of eruptions between 1759 and 1775, about five square miles of land being buried and probably at least ten times as much completely devastated. The late Dr. Gadow, who meditated a larger work on the distribution of animals in Central America, spent a month there and tells the story of the re-peopling of the area by plants and animals. These penetrated the devastated area at an average rate of a mile in forty years. This is slow as compared with Krakatoa, to reach which most organisms must have used sea transport, but this is explained by the situation of Jorullo being in a comparatively dry area. We would not care to draw deductions after a month's collecting, but Dr. Gadow was unique in his knowledge of the ways of reptiles and amphibians, upon which mainly he bases his views.