

The Major Achievements of Science

By A. E. E. McKenzie. Vol. 1. Pp. xvi+368+24 plates. 30s. net. Vol. 2: Selections from the Literature. Pp. xii+195. 17s. 6d. net. (Cambridge: At the University Press, 1960.)

IN the first of these two volumes the author attempts to describe, in twenty-four chapters, the progress made in various branches of science during the past four centuries. The first chapter introduces the subject with an outline of the development of science and technology from the Stone Age to the Renaissance; and four chapters, appropriately placed, give some account of the state of philosophy in each century from the seventeenth to the present, showing how the changes in outlook are related to advances in science. Of the remaining chapters, more than half are devoted to the physical sciences; chemistry occupies two chapters, geology one, and some aspects of biology, including medicine, five. Neither botany nor zoology is mentioned in the index. Chapter twenty-four is philosophical rather than historical.

This work is intended primarily as an introduction to science for students of the humanities, either in the sixth form at school, or at universities, and is an expression of the belief of its author that such an introduction is best effected by the historical approach. In furtherance of this object, the second volume consists largely of selected extracts from scientific literature that are historically significant, and it supplements, chapter by chapter, the text of volume 1. Again some philosophy is included. Most of the extracts are quite short, and have been chosen so that they offer no technical difficulties to the non-scientific reader. All are in English, many of the translations having been supplied by the author, Mr. A. E. E. McKenzie. As seems usual in modern works on the history of science, and is perhaps inevitable in the 'space age', there is a bias towards the physical rather than the biological aspects of science. With this limitation, and provided it is realized that, though covering a wide field, the work is not comprehensive, it can certainly be recommended as likely to serve its purpose. The book is well produced, and contains numerous attractive illustrations.

J. M. EYLES

Principles of Human Genetics

By Curt Stern. Second edition. Pp. x+753. (San Francisco and London: W. H. Freeman and Company, 1960.) 68s.

P RINCIPLES OF HUMAN GENETICS possesses all the attributes of the perfect text-book: a wealth of accurate, up-to-date, well-illustrated information evenly covering every aspect of the subject presented in a logical, intelligible and interesting way. The form of the first edition is retained in the second, but the book has been extensively rewritten to include the enormous advances that have been made during the past twelve years. These have particularly necessitated considerable revision of the sections dealing with linkage, sex determination, biochemical genetics, mutation and the role of selection, and completely new chapters are now included on polymorphism and the genetic hazards of radiation. True to its title the book is primarily concerned with principles and all the detail is presented in exemplifying these. Particularly meritorious is the way that Stern has managed to explain simply the basis to the

mathematical and statistical procedures that are necessary in human genetics.

The recent studies of human populations have spectacularly elucidated many general genetic principles. This is, no doubt, why Stern's consideration of population genetics seems especially brilliant, but it would be unjust to single out any one topic for particular praise if by doing so it is implied that others are not as well treated as they could be. The only adverse criticism that might reasonably be made is that polygenic inheritance is not considered so comprehensively as the other topics, for no systematic attention is given to the statistical methods of analysing quantitative variation such as have been used by S. B. Holt in her rigorous study of dermatoglyphic patterns. However, in all, it is confidently predicted that *Principles of Human Genetics* will long be indispensable to those who study human biology, and many will be permanently indebted to the author of this magnificent book.

G. AINSWORTH HARRISON

Ovum Humanum

Growth, Maturation, Nourishment, Fertilization and Early Development. By Prof. Landrum B. Shettles. Pp. viii+78 (64 figures). (New York: Hafner Publishing Company, Inc., 1960.) 55s.

I NTEREST in the development of the mammalian embryology dates from the dawn of medical science, and there was much speculation as to the origin of embryos. It was not, however, until 1827 that Von Baer discovered the mammalian ovum. More than one hundred years passed before a human ovum was recovered from the uterine tube by Allen *et al.* (1930). Once the mammalian ovum had been recognized the science of mammalian embryology was established on a sound basis.

The author of the present atlas is to be congratulated for giving us a pictorial presentation in sixty-four superb photomicrographs of the development, growth, maturation, ovulation, fertilization and cleavage of the human ovum.

In the captions of different illustrations the following topics, among many, are discussed and illustrated: the enzymatic action of the tubal mucosa on the corona radiata cells, the movements of the vitellus within the zona pellucida, the presence of two primary oocytes within a single follicle and its possible bearing in twinning, and the nourishment of the ovum by the cells of the corona radiata.

The book makes a valuable contribution to our knowledge of the development of the human ovum, and it can be recommended without reserve.

W. J. HAMILTON

Mammals of the British Isles

By Philip Street. Pp. 185+32 plates. (London: Robert Hale, Ltd., 1961.) 21s. net.

T HIS is an exceptionally lucidly written book, which will appeal to a wide public. It will provide easy and enjoyable reading for anyone wishing to improve his knowledge of the huge subject of mammals. It may, in some ways, be too straightforward for the specialist, yet even he will appreciate the interesting and well-organized treatment of fundamentals, and the fact that much of the information is based on recent research.

There are thirteen chapters to the book, an index, and fifty-six excellent photographs of mammals.