

(1) The little book entitled "Everyday Doings of Insects" is written with the intention of supplying answers to some of the questions that are often asked concerning the exhibits in the Insect House at the Zoological Gardens. It is more especially addressed to boy inquirers with the view of encouraging their interest in entomology. The photographs and sketches have been made from the living insect in almost every case, and they add greatly to the attractiveness of the volume.

(2) "The Great Little Insect" is intended for older readers, and consists of a series of essays discussing various activities of insects and the laws which we believe govern them. In these chapters the author has brought together many facts which, although well known to the entomologist, seldom reach the lay public. Such facts are weaved together in an interesting manner, and the volume is a fascinating one for the fireside reading of winter evenings.

Illustrations of the British Flora: a Series of Wood Engravings, with Dissections, of British Plants. Drawn by W. H. Fitch, with additions by W. G. Smith and others. Fifth revised edition. Pp. xxvii+338. (London: L. Reeve and Co., Ltd., 1924.) 12s. net.

THE appearance of the fifth revised edition of the "Illustrations of the British Flora" completes the republication of "Bentham's Handbook of the British Flora." It is universally acknowledged that both the text (now called the Handbook) and the illustrations have been of great use to several generations of botanical students, especially beginners. It is, however, unfortunate that the two volumes have been reissued without more drastic alterations having been made. A considerable number of serious mistakes are perpetuated, as, for example, in Fig. 933, where the leaves of *Populus canescens* are figured as *P. alba*, and in Fig. 935, where the catkins of one species and the leaves of another are figured under the name of *P. nigra*.

The common vernacular names and, for many species, a letter to indicate the flower colour have been added to the botanical names for each figure. A new index has been compiled, giving, in single sequence, the generic and common names. A summary of family characters and an analytical key to the families and anomalous genera are reproduced from the Handbook. Several new figures are incorporated, but they are not up to the standard set by Fitch.

The Teaching of Biology in Schools and Training Colleges. By Ethel M. Poulton. Pp. xv+112. (Birmingham: Cornish Bros., Ltd., 1924.) 5s. net.

BIOLOGY, as here considered, is not that of the specialist in zoology or botany, but rather that for which a place is claimed in the general education of all pupils, and especially of those in primary and secondary schools. In addition to minor, but not unimportant, objects, the chief aim of such general biology is rightly stated to be the stimulation of interest and curiosity, and to produce enjoyment, both æsthetic and intellectual, of Nature. The opening chapters of this useful little book contain an eloquent *apologia* of biology, based upon a consideration of its values and aims, and of the psychological factors which should influence the selection of material and the methods of teaching. The teacher who would be ready to give an answer for his faith in biological

teaching will find here his brief set out in excellent style. In subsequent chapters the author has constantly in mind the students at training colleges. Though, perhaps, she says nothing that is entirely new on courses of Nature study and the more advanced work, she has nevertheless done good service to all teachers of biology in bringing together, and more or less codifying, the general principles by which all should be guided, and not less in pointing out the many pitfalls that beset the path of the inexperienced. Stress is very properly laid on the importance of presenting biology as a study of *living* things.

BACTERIOLOGY.

Practical Bacteriology: an Introductory Course for Students of Agriculture. By Andrew Cunningham. Pp. vii+188. (Edinburgh and London: Oliver and Boyd, 1924.) 7s. 6d. net.

A LARGE amount of information is contained in this small book, which is well planned and very readable. Bacteriological technique is described in the earlier sections: preparation and sterilisation of culture media, the use of the microscope, and staining methods and cultivation. A series of exercises then follows, each dealing with some particular subject or process, and so arranged that the student becomes familiar by easy stages with bacteriological methods.

The bacteriology of milk and dairy products, of soil and manure, is then similarly dealt with, some of the special reactions applied to milk being also included, namely, the catalase, curd, and other tests.

In the final chapters some of the more important bacterial plant and animal diseases are described, and classification and formulæ are given in appendices. The practical exercises for the most part are simple and easily carried out in a short time, and have been chosen with commendable discretion; any one who worked through the lessons with some supervision should possess a considerable grip of bacteriology. The book is well produced and illustrated.

Elements of Water Bacteriology: with Special Reference to Sanitary Water Analysis. By Prof. S. C. Prescott and Prof. C. E. A. Winslow. Fourth edition, rewritten. Pp. ix+211. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1924.) 11s. 6d. net.

THE work under notice is, on the whole, an excellent monograph on water bacteriology. First published twenty years ago, the present edition has been revised throughout. The procedures outlined are those of the Committee on Standard Methods of the American Public Health Association, and in some respects differ from those current in Great Britain. Chapters on the bacteriology of sewage and sewage effluents and the bacteriological examination of shell-fish are included. Much information has been collected on *Bacillus coli* and its variants and methods for their detection and isolation, though some of the fermentation reactions of the allied organisms are incorrectly given. One of the most important chapters is that on the significance and interpretation of bacteriological examinations of water, and the position taken is a thoroughly sound one. A bibliography running into twenty-nine pages completes this useful book.