

Although these are not colour plates, they are carefully produced pictures, all large enough to be detailed and revealing.

The first chapter is a general introduction to mammals, covering their evolution, and the distinctive features of all the Orders. The eight Orders found in Britain are dealt with in detail, including both wild species and alien species bred in captivity. From this chapter alone, an enormous amount can be learnt about mammals in general.

Chapters 2-12 deal, by groups, with the different species of mammals in Britain, including domestic animals, including domestic pets. Among a host of interesting information, there are accounts of origins, and of present-day efforts to preserve species that are gradually becoming extinct. The final chapter is on breeding animals for fur.

This would be an excellent book for a senior school library, or for any layman's shelf.

B. J. G. MATTLAND

### A Biology of Crustacea

By Dr. J. Green. (Aspects of Zoology Series.) Pp. xv+180. (London: H. F. and G. Witherby, Ltd., 1961.) 30s. net.

**I**F the severe limitations of length are accepted, then this is an excellent book. It deals mainly with the biology of the intact animal, and it is said that the aim "is to provide a general background of biological knowledge for all who may encounter the Crustacea"; however, a background of biological knowledge is required to read this book. Although a good attempt is made to keep technicalities to a minimum, a fair number of terms are introduced without explanation.

Most chapters are over-condensed and, unfortunately, the first suffers most. This chapter endeavours to give a picture of the origin and radiation of the entire class, introducing, what, to the non-specialist, must be a bewildering array of names from sub-class to species. The account of radiation is confused by details of classification and it is suggested that the book would be much improved if the appendix (a systematic classification of the genera mentioned in the text) included a short list of the diagnostic characters of each group. Other chapters deal with feeding, growth, behaviour, blood, distribution etc., and the species used to exemplify the subjects are well chosen and from a wide geographical range. A considerable proportion of the subject-matter is taken from recent works. As might be expected, Dr. Green has drawn largely from studies of the Branchiopoda, but this certainly does not detract from the value of the book or invalidate the generalizations made. Typographical errors are few and errors of fact less.

J. A. ALLEN

### Biochemistry of Steroids

By Erich Heftmann and Erich Mosettig. (Reinhold Organic Chemistry and Biochemistry Textbook Series.) Pp. xi+231. (New York: Reinhold Publishing Corporation; London: Chapman and Hall, Ltd., 1960.) 55s. net.

**T**HE authors acknowledge the help of 28 well-known colleagues who reviewed part or all of the manuscript. It is not surprising, therefore, that this book is both well written and remarkably free from errors. Although the text occupies only 169 pages, the most important features of the biochemistry (with relevant chemical and physiological background

where necessary) of cholesterol and related sterols, tetracyclic triterpenes, vitamin D, sapogenins, steroidal alkaloids, cardiac glycosides, bile acids, progesterone, corticosteroids, androgens and oestrogens are presented in a concise, readable style. At the end of the text, 774 references to recent books and reviews are appended; the headings and sub-headings to this bibliography simplify the search for more detailed accounts of selected topics. In addition, there is an extensive subject-index, which enables structural formulae in the text to be found rapidly. Moreover, reference numbers in the bibliographic section are quoted in the subject index under the various entries, thereby facilitating a search of the literature. Honours students and those research workers who wish to acquire a working knowledge of an important and rapidly developing field with the minimum of reading will find this book very valuable. Unfortunately, the price suggests that their access to it is likely to be through the medium of a library. D. T. ELMORE

### Plant Viruses

By Dr. Kenneth M. Smith. (Methuen's Monographs on Biological Subjects.) Third edition. Pp. xii+209+8 plates. (London: Methuen and Co., Ltd.; New York: John Wiley and Sons, Inc., 1960.) 16s. 6d. net.

**A**T a time when virus research is so thriving, it is regrettable that plant viruses are so little studied in British universities. A book intended for "the student who has no previous knowledge of plant viruses" may encourage such study and is therefore very much to be welcomed, especially when its author is so experienced in plant-virus work as Dr. Kenneth Smith. But although the new edition of this little book contains more than twice as many pages as the old, one feels that it is still too small to do justice to the subject, which has grown immensely in recent years. No doubt, to limit the book's size, the author has left out many of the new lines of work which have developed in his "fourth period" in the history of virus study, starting in 1935. Thus, for example, the chemical nature of plant viruses is scarcely referred to, although the fact that all those yet sufficiently adequately studied have proved to be ribonucleoproteins is basic to any attempt to understand their stability, serological properties, multiplication, and methods of purification. Then again, the student, like myself, may not understand the techniques of X-ray crystallography in detail, but he should know more of what X-ray studies have contributed to knowledge of the structure of virus particles.

In the first part of the book are described symptomatology, modes of dissemination, electron microscopy and effects on physiology of host plants; all students of biology should read the chapter on the relation of plant viruses to their vectors. The chapters on practical methods in plant virology which form the second part cannot fail to benefit students. There is, however, little to indicate which of the methods described are of greatest practical use and which are the most reliable. Some, such as neutralization of infectivity, and anaphylactic shock, are unfashionable; some others, such as certain of the diagnostic colour tests, are unreliable.

In short, although there is plenty of good information for the student in this book, the spice of modern work might have been a little more liberally applied.

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