

Recent Advances in Atmospheric Electricity

Proceedings of the Second Conference on Atmospheric Electricity, held at Portsmouth, New Hampshire, May 20-23, 1958. Edited by L. G. Smith. (Sponsored by Aerophysics Laboratory, Geophysics Research Directorate, Air Force Cambridge Research Center, Air Research and Development Command.) Pp. xv+631. (London and New York: Pergamon Press, 1958.) 120s. net.

THIS book reproduces the fifty or so papers that were presented at the conference named in the sub-title. They are arranged under three sub-divisions: fair-weather electricity, thunderstorm electricity and the lightning discharge. In some cases a résumé of the discussions following a paper is included. There does not appear to have been any attempt at making a selection of the more important contributions for publication and in consequence the value of individual papers varies widely. It is difficult to find out from such a varied assortment of material how much of it does really represent recent advances in the subject; some of the papers describe work that is already well known, while others are more in the nature of interim reports.

It is significant that a large part of the work described is devoted to atmospheric electrical investigations in the upper air by means of aircraft measurements and radio sondes. Another significant trend is the use of radar in studying thunderstorm precipitation and lightning.

Interested people who were unable to attend the conference will welcome the opportunity of learning what went on there, and there is no doubt that the active worker in the subject can find a great deal of interest to him in many of the papers reproduced in the book. But it is very doubtful whether a book as expensive as this, beautifully produced though it is, will attract many individual purchasers.

F. J. SCRASE

Principles of Organic Chemistry

By T. A. Geissman. Pp. viii+635. (San Francisco: W. H. Freeman and Company; London: Bailey Bros. and Swinfen, Ltd., 1959.) 7 dollars; 56s. 6d.

THE author has written an elementary text-book of organic chemistry which includes most of the material required by a first-year university student, but which has its emphasis on important functional groups and on general types of organic reactions. This approach leads to obvious omissions in a book of such moderate size, but Prof. Geissman holds very reasonably that the student's time is initially better spent in the study of principles than in the acquisition of general information. The last sixty pages, however, are largely descriptive and deal with structurally more complicated molecules, many of which are biologically important. Thus the discussion of the basic principles of the subject has been complemented by some of its major achievements and applications. In this way, the student is shown some of the scope of organic chemistry.

Prof. Geissman has, on the whole, succeeded in his objects. The presentation and printing of the book are both good, except that some of the diagrams of molecular models are confusing and that a few errors in formulæ may be misleading to students. Perhaps the allocation of space to various topics is a little unbalanced. For example, more room is given to

aromatic electrophilic substitution than to stereochemistry. Nevertheless, this book can be enthusiastically recommended as an interesting and stimulating introduction to organic chemistry.

C. B. REESE

Introducing Astronomy

By J. B. Sidgwick. Pp. 259. (London: Faber and Faber, Ltd., 1959.) 6s. net, paper bound.

THIS book is a fairly drastic revision of the same author's "Astronomy for Night Watchers" and, as such, is aimed at promoting an interest in astronomy in the layman; no knowledge of mathematics or physics being presumed. It is divided into two roughly equal parts. After two introductory chapters, the first part consists of an elementary outline of descriptive astronomy, taking the usual route outwards from the Sun to extra-galactic nebulae; followed by simple explanations of some astronomical instruments. The second part is almost entirely taken up with a description and sketch of each constellation in turn, mentioning such objects of especial interest as may be observed with binoculars. These artificial divisions may be a disadvantage from an observer's point of view but allow the inclusion of a brief history and mythology of the constellations.

Mr. Sidgwick writes with an easy style and has succeeded in producing a very readable and balanced introduction to astronomy with very few errors, none of which seriously detracts from its value. Definitions are introduced as necessary and there are numerous cross-references, so the beginner should encounter few, if any, stumbling-blocks. The reader whose new interest in this old science has been so ably fostered is likely to want to know more. It seems a pity, therefore, that space has not been spared for even a short bibliography.

B. R. LEATON

The Birds of the British Isles

By Dr. David Armitage Bannerman. Vol. 8: Phalacrocoracidae, Sulidae, Fregatidae, Procellariidae, Diomedidae, Podicipedidae, Gaviidae, Columbidae, Pteroclididae. Pp. x+400+26 plates. (Edinburgh and London: Oliver and Boyd, Ltd., 1959.) 63s. net.

THE eighth of Dr. Bannerman's impressive volumes is largely concerned with sea-birds—the cormorants, the gannet and the petrels. The magnificent frigate-bird is included on the strength of its sole recorded appearance, in 1953, and the black-browed albatross in view of two certain and a few doubtful records; with these, as also with the rarer petrels, the author follows his practice of giving full information from the regions where the birds more truly belong. Then come the grebes, the divers, the pigeons and, finally, Pallas's sandgrouse. The remarkable spread of the collared turtle-dove, unknown in Britain until the present decade, is duly chronicled; so also are the extraordinary occasional visitations of the sandgrouse from the Aral-Caspian region. To an increasing extent Dr. Bannerman has included contributions from other writers. Thus the whole chapter on the gannet is by Mr. George Waterston and those on two of the exotic petrels are by Dr. Alexander Wetmore, while various other chapters have sections by ornithologists with special knowledge of particular aspects.

LANDSBOROUGH THOMSON