

Excursion Flora of the British Isles

By A. R. Clapham, T. G. Tutin and E. F. Warburg. Pp. xxxiii+579. (Cambridge: At the University Press, 1959.) 22s. 6d. net.

THIS volume has been developed from Clapham, Tutin and Warburg's "Flora of the British Isles", published in 1952, by curtailing descriptions to little more than is needed for identification, by omitting all information not strictly relevant to identification, by omitting most of the rarer mountain species and by simplifying the accounts of such critical genera as *Rubus* and *Hieracium*. The result is very considerably to reduce the time taken in using the keys and substantially to cut down the number of wrong turns that a beginner can take. The book also is a bare three-quarters of an inch thick as against the solid two inches of the original.

In practice, it has been found that even a beginner can identify plants satisfactorily with the aid of the excellent glossary, which has been retained from the original work, and the authors must be congratulated most warmly on having produced such a practical book with up-to-date nomenclature and equally up-to-date information. In these ways their work is beyond criticism. There are, however, two gaps to be filled. The first is illustrations, and this could easily be filled by a companion volume taken from the illustrations to the larger volume, by Sybil Roles, Vol. 1 of which has already appeared. Her line drawings, in this case with only one to the page and with only those species here included, would make an invaluable supplement. Our other need is for a student's flora in Hooker's sense. The present volume could easily be modified for this purpose by the addition of something comparable to Hooker's synopsis of natural orders and natural arrangements of families.

P. FALK

Soil Chemical Analysis

By Prof. M. L. Jackson. Pp. xiv+498. (Englewood Cliffs, N.J.: Prentice-Hall, Inc.; London: Constable and Co., Ltd., 1958.) 57s. 6d. net.

THE seventeen years that have elapsed since the publication of Piper's "Soil and Plant Analysis" have seen rapid advances in the subject of soil chemical analysis, notably by the widespread adoption of spectroscopic techniques, and a considerable need has been felt in recent years for an authoritative up-to-date treatment of methods of soil analysis. It is fortunate that Prof. Jackson has undertaken the task of meeting this need, because his diversity of interests and long experience of the complex problems of soil analysis have enabled him to write a book that is much more than a collection of recipes. Within the compass of 500 pages he deals adequately with nearly all the techniques employed in modern soil chemical analysis and also finds space for alternative methods of analysis. This coverage has been achieved by judicious selection of methods and references, concise writing, and good organization of the subject material (every paragraph is numbered to permit cross-reference).

It is easy to criticize a book of this type, and some analysts will undoubtedly question the omission or inclusion of certain procedures. There are a considerable number of typographical errors, the index is rather inadequate, and the relevance of some of the quotations under the chapter titles is obscure. However, these are minor defects, and this work deserves praise rather than criticism. The book is

well illustrated, reasonably priced and generally well produced, although a more suitable type of paper could perhaps have been found for a book that seems destined to spend much of its life on laboratory benches.

This work is indispensable to anyone concerned with soil chemistry. It should be particularly welcome to teachers, because it includes suggestions for a laboratory course, pertinent questions at the end of each chapter, and admirably concise discussions of the principles of various methods. J. M. BREMNER

Curare and Curare-Like Agents

Edited by D. Bovet, F. Bovet-Nitti and G. B. Marini-Bettolo. Pp. xi+478. (Amsterdam: Elsevier Publishing Company; London: D. Van Nostrand Company, Ltd., 1959.) 85s.

THIS book is the outcome of an international symposium held in Rio de Janeiro in August 1957. It is very different from previous monographs on curare and from the now familiar pattern of conferences of which the names of the participants can almost be predicted from the title: both the wide scope of the book and the large number of contributors from South American countries are welcome innovations. The home countries of the curare alkaloids have provided specialists reporting on the botany, history and ethnology of curare, on the methods used to prepare the poisoned arrows, on the survival in present days of the use of curare for hunting purposes. Other parts of the book deal with classical organic chemistry, pharmacology and clinical uses of curare and its synthetic substitutes; there are fascinating speculations on the receptor-drug interaction, which is no longer considered as a stable equilibrium but as a dynamic process in which not only the drug but also the receptor may suffer deformation and therefore changes in the course of time. The book is well produced; the autoradiographs (in P. G. Waser's article) of end-plate regions of muscle poisoned with decamethonium are particularly beautiful.

MARIE VOGT

Outline of Historical Geology

By A. K. Wells. Fourth edition revised with the assistance of J. F. Kirkaldy. Pp. xv+398. (London: George Allen and Unwin, Ltd., 1959.) 32s. net.

A. K. WELLS'S "Outline of Historical Geology" was first published in 1937, and was then intended as an introduction to the stratigraphy of Great Britain for the general reader presented in such a way as to stress the cultural or philosophical value of historical geology. Later editions, written with the assistance of J. F. Kirkaldy, enlarged the scope of the work to make it more suitable for the use of students reading for a degree in geology or geography. In the present, fourth, edition, further improvements and additions have been made. A new chapter has been included on the Pre-Devonian rocks of Scotland, which incorporates the results of recent research on Highland stratigraphy and structure. New data on the Pre-Cambrian of Shropshire, on the nature of the chalk, and on the Wealden 'delta' are also included among the revisions that have been made. Selected references now appear at the end of each chapter. Despite the pressure of new facts, the authors have contrived to maintain the emphasis on principles, in accordance with the aim with which the first edition was introduced, rather than the mass of detail into which the teaching of stratigraphy can too easily degenerate.