

welcomed. The saving of cost, by having a paper-back instead of a more substantial binding, is from 30 to 60 per cent. The range of subjects is large and includes sociology, mathematics, mechanics, geography, psychology, medicine, engineering, physics, chemistry, biology and communication theory.

The greater availability of so many text-books and standard works raises an important question. What is a student's text-book? Particularly in view of the great extension of university and technical education, with its concomitant increase of examinations, considerations of the nature of the text-book and the purpose and the technique of examination are important and overdue. Some text-books are treatises with notes, others just boiled down' treatises, some are mélanges of other treatises and text-books. There is a great spectrum of possibilities in science books for students, from treatises and original papers which make no concessions to the reader, to the programmed or self-help text-book in which every paragraph has been evolved according to the most recent pedagogical and psychological principles. Again, the relations of the text-book to the teacher's work, the student's writing, the recent research, the examination syllabus if any, the maturation level and intelligence of the student are all important. Here is a field which is in urgent need of a thorough investigation.

W. L. SUMNER

Short Guide to Geo-Botanical Surveying

By S. V. Viktorov, Ye. A. Vostokova and D. D. Vyshivkin. Translated by J. M. MacLennan. (International Series of Monographs on Pure and Applied Biology. Division: Botany, Vol. 8.) Pp. xi+158. (Oxford, London, New York and Paris: Pergamon Press, 1964.) 63s.

IN any country with large sparsely inhabited regions vegetation surveys are of great importance in assessing natural resources.

Short Guide to Geo-Botanical Surveying reviews the procedures that have been employed in Russia. It is concerned chiefly with the planning of surveys, and discusses the suitability of various methods of ground traversing and aerial interpretation, the setting out of the sample traverses or plots, the data that should be recorded, and how these may be represented cartographically. The practical applications of such surveys are emphasized in separate chapters dealing with forests, peat bogs and grazing land, and with the use of vegetation as an indicator of soil conditions or mineral deposits.

The procedures advocated are mainly of an empirical nature found to be satisfactory by experience, and there is no attempt to estimate the accuracy of different sampling methods. Indeed, with exploratory surveys on a regional scale the choice of method is often dictated more by the nature of the country and the resources available than by academic considerations of sampling density. It is essentially a manual on the organization of survey networks, and strictly ecological topics such as the assessment of botanical composition and the recognition of plant communities are scarcely touched upon.

W. D. CLAYTON

Symposium on Instrumentation for the Detection and Determination of Pesticides and their Residues in Foods

Los Angeles Meetings of the American Chemical Society, April 1963. (Residue Reviews, Vol. 5.) Pp. viii+176. (Berlin, Göttingen, Heidelberg: Springer-Verlag, 1964.) D.M. 26.

THE declared object of Residue Reviews is to make available on an international basis concise, critical reviews of advances in the field of residues in foods, whether in methods for measuring residues, in the understanding of their significance when measured or in methods of controlling their incidence (by legislation or

otherwise). This volume differs from the five others so far published in the series in that it is the only one to result from a symposium—organized for the American Chemical Society by the series editor, Dr. F. A. Gunther. It shares in common with the other volumes the fact that for the most part the residues considered are those of pesticides.

With the exception of Dr. H. Frehse, who contributes the opening chapter, all the authors are American. Dr. Frehse considers the problem of residue analysis and food control. He compares the classical, general 'wet' methods of residue analysis (for example, for organo-phosphorus or for chlorinated pesticides) with esterase and bioassay techniques and with the more modern physicochemical methods such as chromatography. And he contrasts the position of the commercial analyst, normally concerned with field trial work in which the identity of the residue is known, with that of the official analyst to whom the field history of the crop or food will probably be quite unknown. There is useful comment on the expression of results in relation to the precision and sensitivity of the analytical method used. Nine of the remaining eleven chapters of the volume are devoted to detailed practical aspects of pesticide residue analysis, ranging from detectors for gas chromatographic work to neutron activation analysis and the automation of 'wet' methods. R. C. Blinn deals with the general subject of residue analysis using infra-red and ultra-violet spectrophotometry, and in the remaining chapter specific consideration is given to polarographic and (despite the title of the chapter) spectrophotometric and gas chromatographic methods for the determination of additives in animal feeding-stuffs.

The volume is primarily of direct interest to practising pesticide-residue analysts: it is at the same time of general interest to those otherwise concerned with the control of residues, and it gives some insight into the complex and varied methods to which residue analysts now resort.

H. EGAN

The Practical Home Gardener

A Guide to the Cultivation of Plants in Australia with special details for the Drier Regions. By T. R. N. Lothian. Second edition, revised. Pp. xix+390+32 plates. (Melbourne: Lothian Publishing Co. Pty., Ltd., 1963.) (A) 97s. 6d.

IN this recent addition to Australian gardening literature, Mr. Lothian ranges widely, from structural botany to the organization of flower shows. Though writing more particularly for suburban gardeners, he adds useful advice here and there for those struggling with the problems of horticulture in remoter areas.

From his experience of gardening in the extremes of a Mediterranean climate, Mr. Lothian is able to suggest many useful and interesting ornamental trees and shrubs worth trying in other parts of Australia where long dry periods occur, and to this topic he devotes his two longest chapters. Vegetable and fruit growing also receive a fair share of space, but the treatment of other subjects is more sketchy and the touch less sure. An extreme case is the chapter on soils which amounts to only two and a half pages, nearly all of which might have been written for gardeners in Europe. A fuller account of so large a subject, with more reference to Australian conditions, would surely have been useful here.

Throughout the book, much of the information is given in tabular form, whereby space is saved and reference facilitated. The illustrations include a coloured frontispiece and more than sixty black-and-white plates, some rather indifferent in quality. There is also a number of line drawings which will help the reader, though a few of these would have been better if somewhat larger and less confused with shading. Not all spelling mistakes have been detected. Among those which remain are the words *calciphobe* and *calcicole* whose meanings are also transposed.

J. SOUSTER