

revision of two genera of Kalotermitidae, *Kalotermes* and *Neotermes*, in which 29 species are re-described, measured in considerable detail and fully illustrated, and a further six species described as new. In addition a number of lectotypes have been designated, since it was formerly the more usual practice to give a series the status of co-types. It is noted that in some instances the lectotype selected is the only specimen at the authors' disposal, and would not appear to have been chosen from a series of co-types.

This revision of two important genera of oriental dry-wood termites is a valuable contribution to the literature of the Isoptera, reflecting credit on the authors and the Indian Council of Agricultural Research, which financed the work. It will be of much practical assistance to entomologists working in the region, and beyond, on the biology and control of these insects.

W. V. HARRIS

Ornamental Trees for Garden and Roadside Planting

By S. A. Pearce. Chapters on Diseases by Derek A. Reid, and Insect Pests by Joyce van Konynenburg. Pp. 195 + 94 photographs. (London: W. H. and L. Collingridge, Ltd., 1961.) 35s. net.

THE author, who is on the staff of the Royal Botanic Gardens, Kew, in writing this book enjoyed the advantages of being able to refer to one of the finest collections of living trees.

He has succeeded in passing on to his readers his expert knowledge, for this well-produced book contains in its sixteen chapters most that nearly all those interested in trees for ornamental purposes should require to know when selecting the right tree to plant in the right place. Having made this selection, advice is given on the correct planting of a tree and its after-treatment, including an excellent chapter on dangerous trees and how to deal with these, with some useful information on a tree owner's liability.

Ninety-four good black-and-white illustrations and nine helpful line drawings are included. The student, however, who refers to the book may be a little disappointed in the absence of a good annotated diagram of a cross-section of a complete tree-trunk to illustrate the chapter on "Life of a Tree" and the omission of a paragraph on the pH of soils in the chapter entitled "Knowing your Soil". In keeping with the high standard reached by the author when dealing with the practical aspects of growing trees are the six chapters devoted to descriptive lists of these.

He is to be commended in arranging for the specialists Derek A. Reid and Joyce van Konynenburg to contribute the authoritative chapters on "Diseases" and "Insect Pests of Trees".

F. P. KNIGHT

Cork and the Cork Tree

By Dr. Giles B. Cooke. (International Series of Monographs on Pure and Applied Biology. Division: Botany, Vol. 4.) Pp. xii + 121. (London and New York: Pergamon Press, 1961.) 50s. net.

CORK from the bark of the cork oak (*Quercus suber*) of southern Europe has been used by man from very early times and has been of importance commercially in Europe over a very long period. In spite of the advance of synthetic materials the demand for cork does not lessen, probably because natural cork has a combination of unique properties not to

be found in other materials. A good idea of the manifold uses of cork in the modern world may be obtained from a perusal of this book. The author was previously director of research of a large cork and seal company in the United States and has obviously made a close study of cork and its many modern applications.

Last century, the cork oak was introduced to cultivation in many other parts of the world where the climate seemed suitable, often through the agency of Kew. No lasting success or commercial development resulted from this, however, and southern Europe and north Africa continue to meet the world demand for cork. Interesting details are given in the book of early planting of the cork oak in the southern United States and of a recent project to stimulate further planting there. There is also up-to-date and useful information on the cultivation and treatment of the cork oak in Portugal and on production and trade in cork in that country—the world's largest producer. The book contains chapters on the physical properties, chemical composition, and the manufacture of cork articles, and the many forms of composition cork so much used to-day.

F. N. HOWES

Studies in Paleobotany

By Prof. Henry N. Andrews, Jr. With a chapter on Palynology by Charles J. Felix. Pp. xii + 487. (New York and London: John Wiley and Sons, Inc., 1961.) 94s.

THE appearance of a new and up-to-date book about fossil plants is of rare occurrence. In the event, a special welcome must be accorded to *Studies in Palaeobotany*, for Prof. Andrews writes with great clarity and his text is accompanied by numerous excellent illustrations, many of which are completely new or reproduced from publications not easily available to the majority of readers. The larger part of the volume is devoted to a systematic survey of the major groups of vascular plants, but there are separate sections dealing with more general aspects such as the evolution of the seed, Palaeozoic and Mesozoic floras, fossil plants of the polar regions, and palaeobotanical techniques. There is also a section on bryophytes, and Charles J. Felix has contributed a most useful chapter on the specialized topic of palynology.

Prof. Andrews argues in favour of a polyphyletic classification of the vascular plants, but many would not agree that all the evidence on which his arguments are based is sufficiently convincing. As one example, there may be noted the importance attached to *Aldanophyton*, the supposed lycopsid of Cambrian age. Very little is really known about this fossil, and there is no proof of its affinities, still less that it was a genuine vascular plant. It is true that the Lycopsida and Psilopsida were already co-existent during the Silurian, but there is no evidence as to which appeared first or whether they represent quite separate lines of evolution as polyphyletism demands. To me, it seems that the more conventional outlook, which regards the *Rhynia*-type as having provided the ancestral stock for the other groups of vascular plants, is still not seriously challenged.

Two errors need to be noted. Fig. 9-2A is not a reconstruction of *Calamophyton bicephalum* but of *C. primaevum*, and on p. 416 the Cathaysian flora is incorrectly stated to have overlapped the Angara province when, in actual fact, the reverse was the case.

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