

PLANTING THE SOUTHERN PINES. By P. C. Wakeley. U.S. Department of Agriculture, Forest Service. Agriculture Monograph No. 18, 1954. 233 pp. Illus. Price \$2.75.

In 1951, the U.S. Forest Service published a preliminary mimeographed version of Wakeley's manuscript, making available to foresters in the southern States the accumulated results of a half-century of knowledge and skill in the establishment of the southern pines, in order to assist their rapidly expanding programme of forest planting. This book is a printed revision of the earlier work, which was not widely distributed. The bulk of the information is drawn from studies made by the Southern Forest Experiment Station since 1922, and from Forest Service records, a number of the research findings being published here for the first time.

The monograph is limited in scope to loblolly, slash, longleaf and shortleaf pines, though minor species are mentioned incidentally. In plan, it follows the successive steps in planting, in the order in which they are usually carried out. The first chapter discusses the bases for policy decisions, most of which must be made before a planting job is started, and includes sections on the choice of species, spacing, site selection, planting costs, and plantation yields. The second deals with seed—its development, yield, collection, extraction, storage, and testing. The third and largest section is concerned with nursery practice, including nursery site and layout, sowing, injuries and their control, and management. The fourth chapter relates to planting, with notes on site preparation and planting methods, and the last discusses the protection and early tending of plantations, including thinning and pruning. Much additional basic information, and details of recommended methods and treatments, is given in a series of appendices. More than 800 references to literature are cited, and the book is illustrated with over 60 well-chosen photographs and diagrams.

In all, the volume is a most useful and convenient handbook of summarized information on the principal southern pines, and a guide to standard practices in their establishment and tending in the United States. As such, it is of great value to foresters concerned with their successful establishment in New Zealand, at least until our own experience in handling these species under local conditions has accumulated and crystallized.

—G.C.W.

A CARD SORTING KEY FOR THE IDENTIFICATION OF EUCALYPTS. By N. Hall and R. D. Johnston, Forestry & Timber Bureau, Canberra. Price £A5/15/0 posted.

Any system that will help a botanist to sort out eucalypt species is a great asset and one that will assist foresters and others with limited botanical training to sort out species is of real value. This is exactly what the "Eucalypt Card Sorting Key" prepared by N. Hall and R. D. Johnston can do.

Five hundred and fifty-one species have been carded and the sorting procedure is extremely simple. It is done on macroscopic characters, and can be done in any order so that it does not break down if full botanical material is not available. This is a very great advantage because it is seldom that a full set of material can be collected at one time. A set of very fine illustrations of fruits is provided with the cards and these should prove very useful to users.

The greatest disadvantage is the necessarily high cost of production, and it is this factor that prevents part sets from being provided.

The authors are to be congratulated on the usefulness of the key.

J.E.H.

FOREST FUNGI. By Margaret E. Lancaster, M.Sc.; The Government Printer, Wellington, 9/6.

Prompted by the need for an elementary book on this subject for the use of field staff of the New Zealand Forest Service, Miss Lancaster has produced this compact manual (96 pages). The introductory portion of the book gives a very brief survey of the whole of the plant kingdom, showing the place of the fungi in the general classification of plants. The remainder of the book is taken up largely with a general account of the fungi, their classification and the distinguishing features of each group. Examples are given and special mention is made of any member which may have significance in forestry and in New Zealand forestry in particular. It should be understood however, that the book is not intended to be used for the identification of any particular species of fungus, for in no case has an individual fungus species been dealt with in detail. However, the characters of each group have been described.

A feature of the work is that portions of the text are printed in small type. This is information for the specialized reader and can be omitted if desired. The material is extremely well laid out; it is noticeable, for instance, that care is taken to present classification tables at one view. The glossary saves much back reference to original explanation of technical terms.

In compiling the book, Miss Lancaster has done something that needed doing, and has done it well. To most students of botany, a true understanding of the fungi is rarely achieved, partly on account of the difficulty of the subject itself, in the complex life cycles of the different types of fungi, but also on account of the consequent initially confusing terminology and nomenclature. Miss Lancaster has sorted it all out, presented the facts lucidly, and illustrated her material with many clear, easily-followed diagrams and sketches. There is nothing careless or haphazard in the compilation of this work. Everything points to planning, careful thought, attention to detail, good proof-reading, and above all, scientific accuracy.

No advanced student of botany nor any person technically interested in forestry should be without this book.

L.H.L.