

climatic zones in Australia and for special requirements such as for town and roadside planting, those suitable for arid conditions, for the seaside and for small gardens.

The admirable illustrations portray some hundred and fifty species, and of these fifteen are represented in colour. It is scarcely surprising to find that the characteristic Australian family of the Proteaceae occupies a prominent place among those of especial garden merit. The beautiful crimson *Telopea truncata*, a tree from Tasmania that attains a height of 20-30 ft., is portrayed in its natural colour, but the West Australian *Banksia prionotes* and *Banksia coccinea*, the former a yellow-flowered tree and the latter a crimson-flowered shrub, have a beauty of form to which the black-and-white photographs do full justice. Other noteworthy illustrations from the same family are *Dryandra formosa*, *Hakea laurina*, *Isopogon anemonifolia* and *Stenocarpus sinuatus*. Of the endemic Epacridaceae, the figure of *Sprengelia incarnata* is especially effective, while the Rutaceae are illustrated by the charming *Correas* and *Boroneas*, which emphasize the relationship of this family with the Ericaceae. From the Myrtaceae come the eucalyptuses, the true bottlebrushes (*Callistemon*), and their close relative *Calothamnus*, while mention must be made of the magnificent specimen of *Helichrysum thyrsoideum* and of the interesting blue-flowered Boraginaceous shrub, *Halganina cyanea*.

It is unfortunate that, in endeavouring to compass the trees and shrubs of a continent within the compass of a single volume, so little space could be devoted to each and so little data furnished as to soil conditions. Moreover, despite the desirability of avoiding technicalities in a volume of this character, the absence of any indication as to affinities is to be regretted, since the family to which an unfamiliar subject belongs is often a valuable indication to an experienced gardener as to treatment.

E. J. SALISBURY

CONDUCTION OF ELECTRICITY IN METALS

Leitfähigkeit und Leitungsmechanismus fester Stoffe
Von Prof. Eduard Justi. Pp. xii+348. (Göttingen: Vandenhoeck und Ruprecht, 1948.) 15 DM.

THIS book originates from a lecture course which the author, himself an experimental physicist, gave during the War to an audience consisting largely of electrical engineers, with the aim of bridging the gap between the outlook of engineers and physicists. The book covers a field somewhat wider than the original lectures and is written partly in collaboration with experts on special subjects.

The specialization of science has been widely commented upon, and its dangers for the future of science and human thought in general are recognized. Since this book is published with the purpose of counteracting some of the detrimental effects of specialization and establishing stimulating contacts between the worlds of science and industry, it should be welcomed.

Conduction in metals is a phenomenon on which the routine work of electrical engineers is founded, and the author conveys the views of modern physics on the subject to a public to whom presumably even the older physics is not too familiar. This is done by discussing conductivity in terms of moving electrons

and reviewing all other phenomena through which the dynamics of electrons in crystals is accessible to observation, such as the Hall effect, thermo-electricity, superconductivity, rectification in surface layers, semiconductors, photoconductivity, ionic conductivity of crystals and similar subjects.

The book is written as a review rather than as a treatise. It consists of accounts on the experimental work in various fields. The author lets the experimental facts speak for themselves and refrains from stressing opinions of his own. Theories are not presented in full, but theoretical results are freely quoted when this is necessary in discussing experiments. There is, however, an elementary introduction to the wave mechanics of electrons in metals.

An apparatus is described by means of which the interference of electrons was demonstrated in the lecture theatre in such a way as to impress the wave nature of matter on the largely non-academic audience. The author is anxious to point out the possible practical applications of phenomena that are, so far, of academic interest only, and he reports, therefore, in detail on the experimental work on the utilization of the free energy of fuel in galvanic cells.

The ample lists of references are obviously supposed to cover everything of importance, including recent work. Heisenberg's papers on superconductivity are quoted; but there is no reference to the recent electron theory of electric breakdown¹.

The book will be useful, in the first instance, to those readers who are interested in the facts rather than in their interpretation. It provides plenty of information for the non-expert, academic or industrial, and may be appreciated even by experts for reference purposes.

R. EISENSCHITZ

¹ Cf. Fröhlich, H., *Nature*, 158, 332 (1946).

FOOD CROPS

Brassica Crops and Allied Cruciferous Crops

By Chas. H. Oldham. (Agricultural and Horticultural Series.) Pp. 296+20 plates. (London: Crosby Lockwood and Son, Ltd., 1948.) 21s. net.

Grain Crops

By Harold K. Wilson. (McGraw-Hill Publications in the Agricultural Sciences.) Pp. xi+384. (New York and London: McGraw-Hill Book Co., Inc., 1948.) 24s.

THE production of food continues to be of vital importance to mankind, and there is no dearth of books for the guidance of cultivators. In the two books under review there is a wealth of information on the growing of bigger and better crops.

In "Brassica Crops and Allied Cruciferous Crops" the author has collected together from various, and often inaccessible, sources accurate information about modern methods of growing and marketing vegetables, and has incorporated the results of his own wide experience and observations. He has also given useful descriptions of the varieties generally grown. All this is arranged in thirteen chapters, one chapter for each vegetable, and each chapter is of precisely the same pattern, comprising sections on botanical and historical features, the principal types and varieties, geographical areas of production, maintenance of pure stocks and production of seed, cultivations, marketing, diseases and pests. The alphabetical arrangement of the chapters is con-