Book Reviews

Australian Flora

A Handbook to Plants in Victoria. vol. 1, *Ferns, Conifers, and Monocotyledons.* James H. Willis. Melbourne University Press, Melbourne, Australia; Cambridge University Press, New York, 1962. xv + 448 pp. $8.50.

When we consider a manual's usefulness in identifying the vascular plants of a given area, it is rather surprising that so little scientific recognition is accorded those who prepare such floras. Only those botanists who, in preparing a manual or an annotated checklist, have spent years in painstaking research—in the field, herbarium, and library—can appreciate fully the time, effort, and ability required to produce such a major scientific contribution as Willis's *A Handbook to Plants in Victoria.* Therefore, the author of a flora must derive his satisfaction from work with the ever-fascinating variety of plants in his area, from his sense of accomplishment, and from the gratitude (usually unexpressed) of those who will use his manual for many years—fellow botanists, geographers, foresters, agriculturists, students, and amateurs.

The most pressing botanical need in Australia today is a modern, continent-wide "Flora Australiensis" to replace Bentham and Mueller's long outdated, unavailable, and now most incomplete work of that name (vols. 1–7, 1863 to 1878). It seems unlikely that this most worthy project will be undertaken for many years. Meanwhile, books like this volume and the much-awaited second volume that Willis plans to publish must fill the regional needs in the various Australian states. A. J. Ewart's *Flora of Victoria,* (1930) has long been out-of-print. Futhermore, intensive field work, the immigration and spread of weeds, and the naturalization of ornamental plants have increased the flora of Victoria. Genera have been revised, generic concepts have changed, names have been changed, and misidentifications have been corrected. This handbook, therefore, fills a serious gap.

Willis must be commended for making available to us, as a result of 12 years of careful research, a reasonably priced, compact, up-to-date, authentic handbook to the ferns, conifers, and monocotyledons of Victoria. He is to be congratulated especially for the large amount of information he has packed into a small space. Author, place, page, and date of original publication have been cited for each specific and infraspecific name; in almost all instances the original description has been consulted and the reference checked. Taxonomists who are working with Australian plants will appreciate this feature as well as the pertinent synonymy and the excellent selection of references to published illustrations. Vernacular names, ranges within and beyond the boundaries of Victoria, habitat preferences, and frequency are also given. Descriptions of taxa are omitted, with the exception of the coverage provided in the unusually complete keys to the 60 families, 285 genera, and 943 species. The keys appear to be most usable, with well-selected and adequate contrasting characteristics. Those who prefer strictly dichotomous keys may object to frequent triplets and occasional quadruplets in the family and generic keys. The arrangement of the families follows that of Engler and Prantl; species are arranged according to their position in the dichotomies of the admittedly artificial keys.

I hope the second, larger volume (on the dicotyledons) will be published soon. There we can hope to find a statistical breakdown of indigenous versus naturalized species, genera, and families and lists of the largest families and genera in the flora of Victoria.

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History of Science

Scientific Books, Libraries, and Collectors. A study of bibliography and the book trade in relation to science. John L. Thornton and R. I. J. Tully. Library Association, London, ed. 2, 1962. xiii + 406 pp. Illus. 68s.

This is a bad but useful book. It is a one-volume, standard, bibliographic history of science that has run through two printings (1954, 1956) and is now in its second (revised) edition. It was compiled by a pair of librarians who charmingly confess their lack of training in science, and it appears to be directed toward those without previous experience in history or bibliography. The style of historical writing is that of a library catalog—John Doe, chemist, born at some time and place, studied at sundry universities, died at another time and place, discovered so-and-so, published the following books. And needless to say, the listings are neither complete nor entirely accurate.

Although so much at fault, the book is worthy of much use. Not only does it give the history of scientific literature, period by period, from the time of the medieval manuscript through the 19th century, but it provides as well competent outlines of scientific societies and their journals, bibliographies and their makers, private and public scientific libraries, and the business of specialized publishing and bookselling. Short though the latter sections are, it would be difficult to replace them by any more extensive coverage of such a wide field. We need at least a couple of good books in this area; but since we have only this one, use with care, supplement the diet whenever possible, and give thanks to the authors.

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Undergraduate Textbook

Elementary Solid State Physics. A short course. Charles Kittel. Wiley, New York, 1962. xii + 339 pp. Illus. $8.75.

In this book, Charles Kittel has supplied a much needed textbook for use in a one-term course in solid state physics. The text represents a condensation of his earlier book *Introduction to Solid State Physics* (Wiley, New