see how much has changed since 1951.—A. M. EVANS, Botany Department, University of Tennessee, Knoxville, TN 37996.

"*Ferns and allied plants of Victoria, Tasmania and South Australia*," by Betty D. Duncan and Golda Issac. 1986. 258 pp. Melbourne Univ. Press. ISBN 0-522-84262-3. Available hardcover only, exclusive U.S. distributor: International Specialized Book Services, Inc., 5602 N.E. Hassalo Street, Portland, Oregon 97213-3640. $20.00 + $2.25 postage.

This book is a field guide for naturalists, gardeners, and professional botanists. The introductory chapter makes the book understandable to the layman since it covers the fern life cycle, morphology, taxonomy, and how the dot distribution maps were prepared. In the following taxonomic chapters, the Polypodiaceae *sensu latissimo* is divided into twelve families, and genera are treated within the families. The genera are often narrowly defined, e.g., *Christella* and *Pneumatopteris* are separated from *Thelypteris*; *Polyphlebium, Macroglena,* and *Apteropteris* are separated from *Hymenophyllum* and *Trichomanes*. There are no keys to the families, but the book has two keys to the genera: 1) an illustrated, dichotomous key, and 2) a foldout tabular key that resembles a sideways dendrogram. The species treatments describe 130 pteridophytes in 53 genera. Synonyms are not listed unless widely used or controversial, as in Holttum's vs. Tryon's classification of tree ferns. The species descriptions are brief, followed by a list of the most important field characters. The discussions deal with habitats, variation, and other features of the plants, and here the authors show that they have considerable field experience as evidenced by their original observations about the ecology of ferns in the region. Each species treatment ends with notes on cultivation and a statement of world range. Following the taxonomic chapters is a nine page, illustrated chapter on growing ferns (by C. J. Goudey and R. J. Hill). The authors emphasize growing ferns from spores, special requirements of epiphytic or rupestral ferns, and problems with insects and other pests. A comprehensive bibliography, glossary of terms, and index to names conclude the book.

The book's greatest strength is its superb illustrations. Almost all the species have black and white photographs showing sori, leaf cutting, and, in many cases, habit and habitat. In addition, eight color plates, each with six pictures, are interspersed throughout the text. All the photographs are sharp, detailed, and well reproduced. I congratulate Bruce Fuhrer, the photographer, for his fine work. In addition to the photographs, line drawings are given and often show details of scales, hairs, or other features difficult to capture on film. The dust jacket is an attractive watercolor showing ten species of the region.

The book has, however, two weaknesses. First, although it covers Victoria, Tasmania, and South Australia, dot distribution maps are given only for Victoria. Second, cytological information is lacking—lamentable because such information is important in fern classification. Nevertheless, the book is well written, beautifully illustrated, and reasonably priced. I recommend it to everyone from down

under and anyone unfamiliar with the Kangaroo fern family.—ROBBIN C. MORAN, Missouri Botanical Garden, Box 299, St. Louis, MO 63166-0299.

"Illustrations of Pteridophytes of Japan, Volume 5" edited by S. Kurata and T. Nakaike with the cooperation of the Nippon Fernist Club. 1987. x + 818 pp. + folding map. University of Tokyo Press. Yen 14,000. ISBN 4-13-061065-1.

The fifth volume, with another hundred taxa of Japanese ferns, is as splendid as the preceding four, all of which have recevied reviews in this *Journal* [for review of preceding volume, see Amer. Fern J. 77:65. 1987]. Volume five is principally devoted to Hymenophyllaceae, Blechnaceae, Vittariaceae, *Adiantum*, *Arachniodes*, *Cyrtomium*, and *Lindsaea*.

The three beautiful color plates on two pages of frontispiece, a feature of each of the volumes, here depict species having reddish fronds, at least when young. The red pigments are presumably anthocyanins, once thought to be absent in ferns.

Names of several included species are subject to nomenclatural change, especially in Hymenophyllaceae. *Arachniodes hasseltii* has been placed in *Dryopteris* subg. *Nephrocystis* (H. Ito) Fraser-Jenkins [Bull. Brit. Mus. (Nat. Hist.), Bot. 14:197. 1986], and *Ctenitis maximowicziana* in the genus *Dryopsis* Holttum & Edwards [Kew Bull. 41:179. 1986]. All plants named *Adiantum diaphanum* Blume from Japan, S. China, and the Philippines should be called *A. setulosum* J. Smith, since the Javan species which includes Blume's type is very distinct, characterized by glabrous indusial flaps.—M. G. PRICE, Herbarium, North University Building, University of Michigan, Ann Arbor, MI 48109.

"A key to the genera of New Zealand ferns and allied plants," by P. J. Brownsey and T. N. H. Galloway. 1987. 31 pp. National Museum of New Zealand Miscellaneous Series no. 15. Available from the Librarian, National Museum, Private Bag, Wellington, New Zealand. NZ $5.95 (incl. postage). ISSN 0110-1447.

This publication provides an illustrated key for identifying the 66 genera of ferns and fern allies occurring in the New Zealand botanical region. Some 92 species (out of a total of 211) are illustrated by line drawings, with every genus represented by at least one illustration. Technical terms have been kept to a minimum, and all are defined in the illustrated glossary.