

Book Review

Ferns and allied plants of Victoria, Tasmania and South Australia with distribution maps for the Victorian species. Betty D. Duncan & Golda Isaac. Melbourne University Press, 1986. 272 pp., 8 pp. colour plates, 252 photographs, 122 line drawings, 104 distribution maps. A\$35.00.

Here is a magnificent book whose quality is heralded by Celia Rosser's elegant cover design and fully realised as one moves from a cursory glance at the pleasing layout of text and illustrations to the superb photographs by Bruce Fuhrer, and finally to a more leisurely appreciation of all the detailed information that has been included. The authors deal with about 130 pteridophytes native to Tasmania, South Australia and Victoria (the emphasis being on the latter region). However, New Zealand botanists should note that 80 of the species reach this country and that the fine photographs enable one to appreciate some subtle differences in morphology between populations of several species that occur on either side of the Tasman. Also, a few species previously thought to be endemic to New Zealand are recorded for the first time from Victoria (e.g. *Grammitis pseudociliata*). On these points alone the book will be required reading for professional botanists.

For those not so familiar with ferns, there is an introductory section that describes clearly their main features, the complexities of their life-cycle and defines some essential technical terms (although the more unnecessary of these have been avoided). I am less impressed with the somewhat dated system of classification that provides the family and generic sequences for the rest of the book. There is growing agreement amongst pteridologists that the Adiantaceae is derived from the Schizaeaceae, and that the Thelypteridaceae is closely related to the tree ferns. Here, both are widely separated, and it is still more disconcerting to find the Osmundaceae included with the tree ferns, despite the disclaimer that this is "for convenience". Also misplaced to my mind are *Culcita* in the Dennstaedtiaceae and *Rumohra* in the Davalliaceae. Perhaps in a book of this sort an alphabetical arrangement of at least the genera and species might have been preferable, especially as the rationale for ordering the species is nowhere explained.

Much more satisfactory, at least in design, since their effectiveness can only be determined by student use, are the two keys for identifying genera. One, that progresses across a double page fold-out through a series of bracketed options, has obvious appeal in that all the ramifications can be assessed at a glance. The other, although in principle a more traditional numbered dichotomous key, is significantly improved by the addition of photos and line drawings that will greatly assist the beginner.

The descriptive part of the text provides accounts of the families and genera, keys to the genera and species, and more detailed information on every species. The latter includes a full description, specific characteristics for field identification, ecological preferences and distribution both inside and outside Australia, although, unfortunately, the overseas distributions are not entirely reliable. For example, *Blechnum patersonii*, *Cheilanthes austrotenuifolia* and *Doodia caudata* are all erroneously recorded for New

Zealand, whilst the occurrence here of *Blechnum minus*, *Botrychium lunaria* and *Cyathea cunninghamii* has been overlooked or recorded uncertainly.

The descriptions are fulsome and effectively intermixed with some 200 supporting black and white photos and 80 line drawings. In addition there are 48 colour photos on 8 plates which are generally good and sometimes superb, but include a few which have suffered from too great a reduction. Surprisingly, some are duplicated by very similar black and white shots, and in a strange lapse from what is otherwise a well-designed book, the captions are clustered at the bottom of the page rather than being under each photograph.

The nomenclature is accurate and up-to-date, and apart from some predictably contentious names such as *Microsorium*, *Ophioglossum lusitanicum*, *Schizaea asperula* and *Gleichenia alpina*, my only real unease is at finding *Cystopteris tasmanica* still referred to as *C. filix-fragilis*. Inevitably the authors have been caught wrong-footed by a few very recent revisions which affect the names of *Lunathyrium japonicum* (now *Deparia petersenii*), and some species in *Hypolepis*. There is understandable evidence of indecisiveness in the Hymenophyllaceae where only *Hymenophyllum* and *Trichomanes* are actually described, but names such as *Polyphlebium*, *Macroglena* and *Apteropteris* are subsequently used. Also confusing is the inconsistent use of author abbreviations; E.B. Copeland, for example, is variously referred to as Copeland, Copel. and Cop., whilst Smith (p.62) could refer to either James Edward Smith or John Smith, both of whom are responsible for several fern names in the south Australian region.

A feature of the book is the inclusion of over 100 dot maps showing the Victorian distribution of all but the rarest species recorded for the State. Each dot represents a 10 minute rectangle (c. 18 x 15 km), and the maps provide remarkably detailed distributional information of great value. Unfortunately they also highlight the lack of information that has been provided for South Australia and Tasmania, where, in most cases, no attempt has been made to do more than record presence or absence. This discrimination also occurs elsewhere; for example, three species of *Isoetes* endemic to Tasmania have been described, but, for some inexplicable reason, omitted from the key (p.47).

The book concludes with an excellent account of propagation and cultivation of ferns by Chris Goudey and R.H. Hill. In the Foreword, Professor Carrick Chambers makes a special plea for fern lovers to respect the bush and grow ferns from spores. The chapter by Goudey and Hill leaves us with no excuse for doing otherwise.

The appendices include a 4-page bibliography, a list of author abbreviations and a comprehensive glossary of pteridophyte terminology. The odd word (e.g. microphyllous, p.51) has slipped through the net, but the beginner will gain great encouragement from this list, especially if used in conjunction with the introductory chapter.

The book has been generally well proof-read and is beautifully presented. Despite the quibbles outlined above, there is no doubt that Duncan and Issac have set a very high standard for pteridologists in neighbouring regions to emulate. At the very reasonable price of A\$35.00 (originally \$25.00), this book should not be missed by any New Zealand fern enthusiast.

Patrick Brownsey