

**Fungi of Southern Australia** by Neale L. Bougher and Katrina Syme (1998). 391 pp. (Hardcover). ISBN 1 875560 80 7. University of Western Australia Press. Price \$75.00

The authors' aim for this book was 'to improve awareness of Australian fungi in a wide range of people' and to 'introduce a broad sample of fungi in Australia to the reader'. They succeed admirably in their task, as the book is of interest to both the amateur and the professional mycologist.

The introductory chapter includes broad aims and an outline of the book, the geographical focus of the book, and a brief introduction to the Kingdom Fungi and the larger fungi. Although most of the species in the book occur throughout Australia, the specimens described and illustrated were collected from the South-West Botanical Province of Western Australia. The second chapter, Australian fungi, and the South-West region covers the climate, geology, vegetation and the history of studies on fungi of the south-west region; on an Australian basis it then gives very brief outlines of previous literature, level of knowledge about biodiversity and identity, past and present mycogeography, fungi introduced into Australia, rare and endangered fungi, management and conservation value, roles of fungi in ecosystems, and fungal influences on human existence. These brief outlines serve to provide the non-specialist with some basic mycological knowledge.

The third chapter gives a brief introduction to scientific names and synonyms, very useful for the beginner, and an outline of the way species in the book are described and documented. Chapters 4 and 5 are of great value to the beginner, outlining the basics of finding, collecting and processing fungi, and the identification of fungi. The descriptions of characters and character states and associated illustrations are very useful. An excellent glossary is also included at the back of the book. Chapter 6 gives a brief outline of the major groups of fungi starting at the Kingdom level, with tables 7-14 providing useful illustrations and short descriptions of the groups. The authors acknowledge that keys to species are not provided because only a representative portion of fungi known to be present in the region are included and many Australian fungi are yet to be discovered and named. I would have liked to have seen a key to included genera, but this is more a personal opinion than a criticism of the book.

The descriptions of species and watercolour illustrations are in Chapter 7. This chapter is beautifully laid out. Each species receives a two page treatment; the left page has the Division, species' name and author, place of publication, synonyms, habitat and mode of life given in a coloured box in the top left hand corner. Important microscopic characters are illustrated. The introductory paragraph gives useful information, for example, noting the species' distinguishing characteristics, derivation of the common name, *etc.* Detailed descriptions of the fruiting body and microscopic features are given. The right hand page has the watercolour illustration by Katrina Syme. Watercolour illustration of fungi as part of taxonomic study has a long tradition in other countries, but in Australia has been sadly neglected. Katrina Syme's pictures are exquisite and are a wonderful vehicle for introducing the macrofungi to a wider audience in Australia. Each painting illustrates fruiting bodies from immature to mature and often gives a cross section; habit and substratum is also illustrated. These paintings are excellent examples of botanical illustrations that are both visually beautiful and botanically accurate.

The study of fungi in Australia has been greatly neglected compared with the study of vascular plants. This book introduces fungi and their importance to a wider audience, as well as being a scientific reference book for professional mycologists.

Cheryl Grgurinovic

**Edible and Poisonous Mushrooms. An Introduction** by I. Hall, P. K. Buchanan, W. Yun & A. L. J. Cole. (1998). 189 pp. (Softcover.) New Zealand Institute for Crop and Food Research Limited, Christchurch, New Zealand.

At the outset one must emphasise this is a beautifully presented book. It includes 170 full page or half page colour photograph figures of excellent quality of the fungi discussed in the text. There is no available comparable book dealing with the Australasian edible macrofungi. For those people in New Zealand or Australia interested in eating macrofungi from the wild or in commercial cultivation of macrofungi this book is essential.

After a short introductory chapter on edible macrofungi, including interesting information on the size and value of the commercial mushroom market in New Zealand and the world, the next two chapters deal with techniques for cultivation of Saprobic Mushrooms and Mycorrhizal Mushrooms. The discussion of commercial cultivation of saprophytic mushrooms includes a short discussion of conservation and quarantine considerations; *Pleurotus*

*ostreatus* is not permitted into New Zealand, or *Hypsizygos marmoreus* into Australia. However, there is no discussion of these issues in the chapter on mycorrhizal mushrooms although species such as *Amanita muscaria* are known to be invading native plant communities in Australasia. The information provided on cultivation techniques is probably not sufficient for a novice mushroom grower but further references to more detailed information are cited for each genus or in some cases species. Details are provided of the Mushroom Growing Societies in New Zealand and Australia, plus worldwide internet addresses.

The major portion of the book (Chapters 4 & 5) deal with wild mushrooms. Surprisingly, these chapters deal at length with exotic ectomycorrhizal fungi symbiotic with exotic trees in New Zealand and Australia. Chapter 3 could better have been titled 'Cultivation of truffle fungi'. Rules are listed to help determine if a collection is likely to be of an edible species. Two novel and interesting pie-charts should be very helpful to those trying to identify to genus macrofungi with 'Caps with stems' and those 'not cap-shaped with stems'.

The hyperparasitic fungus *Hypomyces lactifluorum* that grows on white species of *Russula* and *Lactarius* in North America, and on *Boletus edulis*, is illustrated and discussed. It is not clear from the information provided if it is established in New Zealand. It is not clear why *Lamperomyces japonicus* is included. Both *H. lactifluorum* and *L. japonicus* would seem to pose a significant threat to the indigenous Australasian fungi and their introduction to Australia should not be encouraged. In fact the information presented on many of the taxa in Chapter 5 reads as if prepared as background notes on fungi that might be introduced to New Zealand for commercial purposes rather than as accounts of fungi already growing in Australasia.

The book has three tabular appendices. Appendix 1 lists some macrofungi with reputed medicinal properties. Appendix 2 lists the scientific, English and Chinese common names for many edible or medicinal macrofungi. Poisoning syndromes, and the classes of toxins present, are listed in Appendix 3.

Some of the naming is curious, for example, *Naematoloma* is used in preference to *Hypholoma*. The large, orange-coloured, 'big laughing gym' in New Zealand is referred to *Gymnopilus spectabilis* while the Australian species is called *G. pampeanus*; there is no mention of *G. junonius*. Only one species of *Laccaria* is discussed, the exotic *L. laccata* although there are numerous indigenous species. The fungus shown in Figure 59 does not look like *Armillaria novae-zelandiae*.

A book of this nature cannot provide all the answers. The two page, multi-lingual disclaimer in the preface shows the authors are fully aware of the difficulties associated with macroscopic identification of macrofungi. However, as an introductory guide this book will be invaluable to Australasian mycophages. It is worth noting too that by today's standards the price is very reasonable.

J. A. Simpson

## WEB PAGE FOR THE AUSTRALASIAN MYCOLOGICAL SOCIETY

A web page is currently under development. The Australian National Botanical Gardens' server will host the page. It will include a short history of the Society, a list of office holders and their addresses, a subscription form, the contents page of the most recent *Newsletter* and information about collecting permits. If you have any other ideas for the web page please contact Cheryl Grgurinovic at the address on the verso of the front page.

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