

leftovers on nights when he is far from home and has stayed out later than expected.

I learned a lot from this book – the first, and most surprising, discovery being estimates that butterflies make up only 10 to 12% of known Lepidoptera species, with moths filling in the rest! It was also interesting to learn about moth-plant interrelationships, moth lures, and the potential effects of climate change on moth populations.

I especially appreciated the first two chapters – on moth life cycles, colours, patterns and shapes. Yet I must confess that by the time I finished them and came

to Chapter 3: Numbers and Distribution, I was becoming dissatisfied with the constant references to species, regions, and habitats unfamiliar to me. I yearned for details relating to my own experience.

It would be helpful if the book's title were a little more specific – something along the lines of *Enjoying the Moths of Britain* – to identify it more accurately.

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BOTANY

Ainsworth and Bisby's Dictionary of the Fungi

Edited by P. M. Kirk, P. F. Cannon, J. C. David, and J. A. Stalpers. 2001. CAB International, Wallingford. 9th edition. xi + 655 pp., illus.

This is an extremely useful reference book for those studying fungi and lichens. The fact that this is the ninth edition attests to the *Dictionary's* value.

The Preface gives an overview of three major areas emphasized in the new edition; i.e., revision of the classifications of both the Ascomycota and the Basidiomycota; and, third, the integration of the fungi lacking the sexual stage (these are known as the anamorphic fungi, conidial fungi, and/or imperfect fungi) into the overall fungal classification. Thus after each of the nearly 4000 genus names for anamorphic fungi there is a phrase giving its placement; e.g., for the anamorph genus name *Botrytis* the entry is "anamorphic *Botryotinia*." This integration is, unfortunately, not reflected in the Systematic Arrangement of the genera of fungi (an 86 page appendix) where anamorphic names are grouped in an alphabetical list.

A one-page User's Guide helps the user get the maximum benefit from the entries. The paragraph headed Generic names gives the web site where the place of publication of the names can be found. This site is useful but complex and I could not find the database containing the places of publication. Following the User's guide 10 family and nine order names are validly published. There are 41 figures in the book, mostly ink drawings illustrating the differences between, for example, hyphal types, cystidia, predescence asci, synnema, hyphidia, and septa. Figures also illustrate life cycles, metabolic pathways, ascus and ascospore development, growth forms, thallus structure in lichens, etc.

The majority of the entries are the taxonomic names, such as genera, families, orders. Most prevalent are the generic names where each entry is composed of the name, the name(s) of the author(s) that described that name, the year the description was published, the major taxonomic group that the name belongs to, the number of species worldwide, and one or a few perti-

nent references, especially those containing keys to the identification of the species.

Several terms have nearly a page devoted to, in addition to the definition, the history, procedures, current status, and pertinent literature. For example, under the entry "Authors" there are about 200 names of taxonomic mycologists with their birth and death dates, and herbaria where most of their collections can be found. The contribution of these mycologists is, for most, summarized in the text. The heading "Mounting media" includes 11 common fluids used to make slides for examination under the microscope and the formulae for mixing them. Following "Media" there are three pages of evaluation and formulae for the cultivation of fungi in the laboratory. Nearly a page is devoted to the term mycopesticides. Mycorrhiza (that symbiotic association between a fungus and the roots of a green plant), mycetism (poisoning by larger fungi), mushroom cultivation, allergy, air spora, air pollution, predacious fungi, and antibiotics are just a few of the dozens of terms that receive extended treatment. The Lichens have a three-page discussion that includes fungal partners, algal partners, structure, reproduction, establishment, nomenclature, and literature. Unfortunately Brodo, Sharnoff, and Sharnoff's (2001) *Lichens of North America* is not cited, although lichenologists were aware that publication of this significant lichen book was imminent. For other groups of fungi, there were references that I expected to see but did not find, e.g., under Polyporaceae the two volumes titled *European Polypores* (1994) by Ryvarden and Gilbertson are not cited.

This book is a technical reference volume that contains a wealth of information on all aspects of the fungi. One of its strengths are the leads provided to the current literature and more detailed treatments of taxa, methods, phylogeny, etc.

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