

## Book reviews

**Interfungal parasitic relationships.** By P. Jeffries and T. W. K. Young. 1994. XVII, 296 pp. CAB International, Wallingford, U.K.

Jeffries and Young have composed a book which really fills a gap. In the course of a decade books on biological control of plant diseases have appeared in large numbers. The present book, however, starts to cover a field which has been relatively underrepresented: the interaction of fungi as a discipline on its own. This is specifically the realm of mycologists *sensu stricto*. After this basis has been laid, the physiology of such interactions, and finally biological control, are discussed. In more detail, the outline of the book is as follows.

In an introductory chapter the terminology of fungal interactions is thoroughly discussed, and the scope of the book described. The possible evolution of different types of myco-parasitism and the host-parasite interfaces involved are presented. The presentation of fungicolous and lichenicolous associations in the second chapter has an encyclopaedical character. Most of the associations in the first category have not been studied in detail as to the mutual benefit in the interaction. In fact, many of the fungi associated with toadstools might simply be saprotrophs. There is also the huge number of interactions described for the humid tropics (see Table 2.2 and the appendix) such as those with *Meliolales* in the phylloplane, of which much remains to be studied. Chapters three and four give a more detailed description of necrotrophic and biotrophic associations, respectively. Excellent electron micrographs illustrate the fine structure of these interactions. As a plant pathologist I was amazed by the degree of similarity of biotrophic myco-parasites and biotrophic plant pathogens, as illustrated by the authors in treating in detail the structure and role of haustoria. Section 4.3 on intracellular biotrophs again shows a great deal of similarity with fungal pathogenicity on higher plants. Chapter 5 analyses the physiological aspects of mycoparasitism. Axenic growth and the

parasitic phase are compared, and the effect of parasitism on the host is described.

Students interested in biological control of plant pathogens will especially feel at home in the last chapters of the book. Chapter 6 deals with ecological aspects of mycoparasitism, also containing a section on mushroom cultivation and its disease problems, whereas chapter seven, on biocontrol of plant pathogens, gives a selection of examples in which fungal interactions have been studied in detail. These chapters are followed by an appendix on fungicolous fungi and their hosts, as already mentioned, and a (restricted) glossary. The list of references, 37 densely printed pages, is in agreement with the wealth of information of this book. Species and subject indexes of 24 pages together guarantee the retrieval of this wealth. The book can really be used as an encyclopaedia!

It should be clear that this book is of great help to anybody interested in fungal interactions, be it as a taxonomist, a scientific worker on biocontrol or a university student in biology. The book has been well edited and printed with care, which contributes to pleasant reading. Of course some critical remarks are always possible. Only a few merit to be mentioned. The authors aim at perfection. Their desire not to omit any significant information sometimes has led to redundancy, with nearly the same wording of sentences within one chapter (pp. 148, 154) or even one paragraph (p. 145). And a plant breeder will certainly oppose to the use of the term resistant 'strains' when cultivars or lines are meant. But these and a few other minor inaccuracies merely illustrate that a second edition could approach perfection still further. Recommended, if not obligatory!

M. Gerlagh

**Check-lists for scientific names of common parasitic fungi.** Edited by G. H. Boerema *et al.* Libri Botanici 10: 1–370. IHW-Verlag. ISBN 3-9803083-7-5. WM. 75.00.

This is a reprint of twelve papers originally published as check-lists between 1972 and 1993 in the *Netherlands Journal of Plant Pathology* by G. H. Boerema and a series of co-workers. The reprint makes the information more accessible by the inclusion of a Cumulative Index. The original purpose of the check-lists was to give the correct names of pathogenic fungi (and their relevant synonyms) of trees, shrubs, field crops and bulbs, together with information on pathogenicity and distribution with emphasis on the Netherlands and surrounding countries.

Over the 20-year-period in which the check-lists have appeared there have been changes in the *International Code of Botanical Nomenclature* (which governs the nomenclature of fungi), and changes in diagnostic and pathological aspects of the fungi. To cope with these, especially the former, changes have been included in the cumulative index and there have been minor changes in the texts for some pathogens. It is therefore necessary to fully read and understand not only the Foreword by Walter Gams, but also the guide to symbols and abbreviations etc. given on pp. 1-4. Thus fortified the user should have no

problems in 'reading' synonymies and comprehending the index.

This reviewer has been fortunate in having had access to pre-publication copies of most, if not all, the check-lists, so the nomenclature reflects a wider consensus than perhaps envisaged by the authors over the years. Suffice it to say that the painstaking work and scholarship by Boerema and his colleagues has resulted in as definitive a work as is possible, bearing in mind the constant modifications in the Code and the ever-improving knowledge of fungal plant pathogens and their behaviour. As such it has a far wider value than in the Netherlands and adjacent countries. No plant pathologist or associated manager of whatever affiliation in Europe should be without this compilation. For quarantine purposes the context is even broader. It is a standard tool, the use of which should facilitate the accurate exchange and location of information on the commoner fungal plant pathogens in Europe.

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