Throughout the text, considerable care and thought has been given to amplifying potentially difficult concepts, taxonomical terms and nomenclature in a clear and understandable way and the end of each chapter is supported with a highly useful and relevant list for further reading. In this book, John Burnett has skilfully brought together in a unique fashion, his highly insightful view on the development and changing opinions on the ecodynamics of the fungal population as new methodologies have been developed and applied and new knowledge gained. That he has done so in such an open and comprehensible manner that does not exclude the non-specialist whilst also representing a highly desirable resource for the experienced mycologist is to his great credit. *Fungal Populations and Species* is rightly set to become another classic text for anyone with even a passing curiosity for this unique group of organisms.


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**MARINE MYCOLOGY**


This volume represents a collection of papers put together to recognize E.B. Gareth Jones 65th birthday. It commences with a Preface by Samuel P. Meyers, a light-hearted and colourful ‘photographic history’, and an American-style academic genealogy; this is impressive as regards non-UK, and especially Malaysian and Thai students. A list of publications he has authored or co-authored since 1962 occupies an amazing 19 pages. Although there are sidelines developed, the thrust is marine mycology, with which Gareth’s name will always be linked. However, I must admit to some disquiet on going through these sections: the content would have perhaps been more appropriately saved for a future obituary, and the wisdom of expending so much effort and resources in a relatively minor fungal ecological niche.

The book comprises 22 contributions grouped into three sections: organisms, ecology, and applied aspects. Those on organisms concern *Corollospora*, *Halophytophthora*, *Halosphaeriales*, *Lophiotrema* and *Massarina*, marine yeasts, and sheaths in marine loculoascomycetes. Most interesting...
amongst these are perhaps the transfer or 26 species into Lophiostoma (sadly without molecular data or indications that type material had been studied), and the identification of marine yeasts with DNA hybridization microarrays. Mangroves, not surprisingly, dominate in the ‘Ecology’ section, along with papers on marine grass endophytes, ascomata formation in Corallospora gracilis, and a wide-ranging study of marine fungi in New Zealand. The ‘Applied’ section has only four contributions, on secondary metabolites, bioremediation, fatty acid production by thraustochytrids, and the cloning and characterization of the isopenicillin synthase gene mediation, fatty acid production by thraustochytrids, and the cloning and characterization of the isopenicillin synthase gene

While I am sure that the volume will have takers amongst the devotees of marine mycology, the volume lacks the in-depth overviews that those wishing to find in a volume with the devotees of marine mycology, the volume lacks the in-depth overviews that those wishing to find in a volume with the devotees of marine mycology, the volume lacks the in-depth overviews that those wishing to find in a volume with the devotees of marine mycology, the volume lacks the in-depth overviews that those wishing to find in a volume with


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ASPERGILLUS IDENTIFICATION


While specialist identification and taxonomic works are not generally covered in this column, an exception is made here for three reasons: (1) so many mycologists work with Aspergillus, (2) the work is authoritative and hands-on, and (3) the price is affordable even to students. The introduction, after a little on the history and medical importance of the genus, includes colour photographs of colonies, media recipes, practical hints, and a key. The body of the work includes a page of text on each species, including data on any teleomorph, colony features, microscopic characters, habitats, distinguishing features, and mycotoxins, and then a facing page of photographs (colony, microscopic and SEM). In all, 46 species are treated in depth, but while this is a small proportion of the 185 or so now accepted in the ‘genus’ (Pitt, Samson & Frisvad 2000), it does include those most commonly encountered and of the most industrial, medical, or spoilage importance. If you encounter species of Aspergillus, or major on them, this is an easy to use volume that should be to hand.


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GENE EXPRESSION


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BIOCONTROL


Two books focussing on biocontrol, the first arising from symposia held in Southampton in 1998 and Swansea in 1999, with (unacknowledged) support from the British Mycological Society, and the second as a series of invited contributions to a book. Butt et al.’s book is as wide-ranging as the title suggests, with 14 chapters and 27 contributors from eight countries. An in-depth overview was timely and the book has major reviews of the use of fungi as biocontrol agents of plant diseases, insect pests, nematodes and weeds. In addition, consideration is given to monitoring the fate of biocontrol fungi in the environment, strain improvement, formulations, spray application, toxic metabolites and safety. The three editors also provide an up-beat series of overall appraisals and recommendations on the progress and prospects of the approach. This volume deserves to be widely used and cited for its series of overviews and forward-look, but while the time-lag between the meetings and its appearance means that there are few citations of work since 1999/2000, this is less important for reviews and issue-raising contributions.

Upadhyay’s book has a narrower focus from the perspectives of the target organisms, insect pests, but is not restricted to fungal agents. Of the 16 chapters, only five focus on fungi; these relate to the control of tsetse flies, thrips, brassica root flies, and applications in China and Latin America. The remaining chapters concern Bacillus thuringiensis and its toxins, insect viruses, resistance through transgenic plants, and entomopathogenic nematodes. The broader overviews that are such a feature of the first book are lacking. Yet while Upadhyay’s book might consequently be of more limited appeal to mycologists in general, those concerned with biocontrol issues may find the sophistication of some of the bacterial work particularly stimulating. At the same time, I did not feel that this second book fully acknowledged the potential of fungi in the biocontrol of insect pests or was at the forefront of our knowledge in these areas. Even the reclassification of Verticillium lecanii into Lecanocillium in May 2001, and the encouraging use of Metarhizium strains against desert locusts, escape mention.

In summary, mycologists with a primary interest in biocontrol will find much of interest in both these titles but, Butt et al.’s is the one to reach for when preparing lectures or contemplating starting projects in this exciting field which holds so much promise.
The Restless transposon from *Tolypocladium inflatum* has been inserted into these two key fungi using a variety of vectors in order to facilitate its use for gene-tagging. The study explores ways to increase the activity of Restless, including triple transformation. The expression system used was based on the heterologous *phoA*-promoter in the *Acremonium*, polypeptides appearing necessary for the activity of the Restless element. Deletions of the transposon were identified by the selection of excision events investigated using sequence analysis, and may be mediated by a transposase protein. In addition, the promoter of the biosynthesis gene in the cephalosporin C producing *A. chrysogenum* was characterized by expression studies with a reporter gene, leading to the identification of regulatory sequences which enhance or repress expression. This study is important in providing a tool for gene-tagging in two β-lactam producing fungi; this may assist in the elucidation of regulatory mechanisms for antibiotic synthesis and so strain enhancement. Sadly, this elegant study is marred by the strains of the two fungi used not being deposited in service genetic resource fungal collections.

Erratum

*Mycological Research* 106 (12): 1380–1391 (December 2002).

In the paper by Tanabe, Watanabe & Sugiyama ‘Are *Microsporidia* really related to *Fungi*?: a reappraisal based on additional gene sequences from basal fungi’, the two last lines of the legend to Fig. 4 (p. 1388) were omitted in the final printed version due to a printing error. The following lines should be inserted after ‘Characteristic’:

2-aa deletions are boxed. Conserved residues are indicated by an asterisk. The putative GTP-binding domain G-4 (Bourne, Sanders & McCormick 1991) is shaded.

The Executive Editor and Cambridge University Press wish to apologise to the authors for this mistake, and regret any confusion that may have been caused to readers endeavouring to understand the figure concerned.