Book Reviews¹

REVISITING THE WHOLE FUNGUS


Since the publication of The Whole Fungus (Kendrick 1979) and The Fungal Holomorph (Reynolds & Taylor 1993) the exponential growth of molecular data has made a revisit of the issue of integrating generic integration and correlation of anamorphic and teleomorphic fungi overdue. This volume is based on selected papers from two different symposia convened during the XVIth International Botanical Congress in St Louis and the IXth International Congress of Mycology of the International Union of Microbiological Societies in Sydney in 1999.

The 19 contributions are stimulating and challenging. Particular papers address the situation in groups where the problems of integration are particularly acute, notably Hypocreales, Hypocreaceae, Clavicipitaceae, Mycosphaerella, Botryosphaeria, Herpotrichiellaceae, Phialophora and Chalara. What is of especial interest, is the proposal to use names such as ‘acremonium’, ‘fusarium’ and ‘phialophora’ in lower case and not italicized for anamorphs which are known to be phylogenetically paraphyletic or polyphyletic, i.e. belonging to different teleomorphic genera. The issue of the desirability of maintaining different generic names for the states of the same fungus is drawn into question, and the eventual disappearance of the dual system of nomenclature is heralded by some contributors. How this can be accomplished remains to be seen. The practice of avoiding the introduction of separate formal names, also endorsed by the St Louis edition of the International Code of Botanical Nomenclature, is clearly one to be encouraged.

All those working with pleomorphic fungi and wrestling with the issue of separate names or the congruence between anamorphic and pleomorphic genera need to consider the issues raised in this challenging volume.


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BRIEFLY NOTED


Ravages of pathogenic Armillaria species are a scourge in developed and developing countries. This wide-ranging multi-authored volume brings together the current knowledge of these fungi and the diseases they cause. The biology, ecology, epidemiology, field quantification, taxonomy (with a synopsis of the world species and a key to the eight European species), molecular detection, pathogenicity, control (cultural, chemical, and biocontrol) are addressed, and future possibilities explored. Contributions are extensively referenced and there are eight pages of coloured photographs of basidiomata, cultural features, rhizomorphs and symptoms. This book will be of value to all having to wrestle with the identification and control of these fungi.


The exploration of marine fungi has become an increasingly active area of research in the last two decades. While several symposia and treatments of particular aspects have appeared, there has not been a synthesis of practical approaches. This multi-authored volume addresses this gap. The topics covered include methods of isolation and culture, culture maintenance, biomass determination and productivity, assessments of wood decay, lignocellulolytic enzyme assays, and screening for metabolites, but includes much more – notably synopses of the known marine fungi with a pictorial identification key and a synoptic key. These latter show that the number of ‘higher’ marine fungi known has more than doubled in the last two decades and now stands at 235 genera and 444 species. The book is well produced, with an illustrated glossary, and is in effect a one-stop-shop for those entering into or requiring a synthesis of this fascinating fungal niche.

¹ Books for consideration for review in Mycological Research should be sent to the Executive Editor in the first instance: David L. Hawksworth, MycoNova, 114 Finchley Lane, Hendon, London NW4 1DG, UK.