

SHORT BOOK REVIEWS

Evolutionary Biology of the Fungi: edited by A. D. M. RAYNER, C. M. BRASIER and DAVID MOORE, Cambridge University Press, 1987. 465 pp., \$80.00.

The British Mycological Society held a Symposium at the University of Bristol in April 1986 and this thick volume of 29 review papers has emerged as a result. What is most confusing to the non-specialist reader is that the papers do not seem to be grouped in any logical sequence. Papers on microevolution at the species level, e.g. in *Phytophthora* by E. M. Hansen, mingle with those considering overall relationships, such as that of T. Cavalier-Smith on fungal origins. There are several reviews on the application of DNA and RNA data to fungal classification, but the most surprising thing is that this does not seem yet to have made a great impact on our views of fungal macroevolution. Cell wall characters, as discussed by S. Bartnicki-Garcia, are still of crucial importance in phylogenetic speculation. Secondary metabolites have scarcely been looked at on a sufficiently wide basis to provide mycologists with much useful information, although of course the DPA/AAA dichotomy in lysine biosynthesis is still highly relevant to fungal classification at the family level. A. J. S. Whalley and R. L. Edwards, in the only paper on secondary metabolism in the book, briefly discuss the taxonomic value of distribution patterns of dihydrocoumarins and succinic acid derivatives in the Xylariaceae.

Overall then there is much of interest and value in these proceedings. In his opening chapter, Sir John Burnett is somewhat pessimistic about the progress that has been made in this field and is clear from reading this book that we are still a long way away from having a generally accepted picture of how the fungi evolved.

Biochemie der Pflanzen, Second Edition: by HELMUT KINDL, Springer, Berlin, 1987. 379 pp., DM 98.

This is the second, completely revised edition of what has clearly been a successful plant biochemistry text first written in 1975. It hasn't the same depth of coverage as the comparable English textbook by Goodwin and Mercer. The various chapter headings are: The cell and its compartments; Enzymes as catalysts of the cell; Information molecules and their regulation; Energy conversion at the membrane; Chloroplast metabolism; Anabolic metabolism; Catabolism and mobilisation of reserves; and Extracellular compartmentation. There are a wealth of illustrations in two colours but there are no references. Within these limits, therefore, it can be recommended to German-speaking readers.

Reviews of Environmental Contamination and Toxicology, Volume 100: edited by G. W. WARE, Springer, Berlin, 1987. 156 pp., DM 84.

This volume contains two review articles, one on the metabolism in mammals of chlordane, an insecticide

patented in the UK in 1949 and the other on pesticide persistence on leaf foliage. The remaining half of the book is taken up with cumulative tables of subjects and authors from Volumes 1 to 100 and a comprehensive table of subject matter from Volumes 91 to 100. It is certainly right and proper to celebrate the production of Volume 100 with such summary material and as a reviewer one can only congratulate the editors on achieving a century and wish them well in their future endeavours. In this case the founding editor Francis Gunther unfortunately lived only long enough to see Volume 96 but it is clear that the continuation of the series by G. W. Ware is a worthy tribute to his memory.

The Purpose of Forests: by JACK WESTOBY, Blackwell, Oxford, 1987. 343 pp., \$60.00.

This book of essays is more concerned with economic and political than scientific matters, but nevertheless anyone concerned about the continued and irreversible destruction of the tropical rainforests will find this of interest. The author, a statistician and economist, has lectured throughout a busy life on forestry matters and this book charts his realisation that the present day policy of tropical forest development impoverishes the many and enriches the few. He points out in the last section of the book the need to orient forestry towards community needs. From an experience based only on the mistakes made in forestry policy in the United Kingdom, one can but agree with this authors' analysis.

Molecular Determinants of Plant Diseases: edited by S. NISHIMURA, C. P. VANCE and N. DOKE, Springer, Berlin, 1987. 293 pp., DM 124.

This volume stems from a US-Japanese Seminar held in Inuyama, Japan in May 1985 to discuss recent developments in physiological plant pathology and to honour Professor J. M. Daly for his many contributions to this research area. The 16 research papers presented here are gathered together under three headings: primary events at the plant surface; determinants of pathogenicity and virulence; and molecular events of host responses. As the title of the volume implies, the focus of attention is on the macromolecules of host-pathogen interactions, although phytoalexins do get some mention. P. E. Kolattukudy and M. S. Crawford for example in their chapter on polymer-degrading enzymes provide us with the nucleotide and amino acid sequence for the cutinase from *Fusarium solani*. There is thus much of interest in this book for those working in this field and who were unable to attend the meeting.

Medicinal Plants and their Traditional uses in Mozambique, Volume 2: edited by P. C. M. JANSEN and O. MENDES, Minerva Central, Maputo. 260 pp., no price or date of publication.

This second volume covers angiosperm families alphabetically from Apocynaceae to Asclepiadaceae. For each plant, there are a list of synonyms and vernacular names, a description, an inventory of where herbarium specimens are located, a line drawing, a distribution map and then notes on medicinal and other uses with a bibliography. This series deals with both native and naturalised plants and will be of interest to phytochemists and pharmacognosists working on African species.

Proceedings of an International Symposium on Medicinal and Aromatic Plants: edited by R. S. THAKUR and colleagues, published by the Central Institute of Medicinal and Aromatic Plants, Lucknow, India, 1987. 213 pp., no price given.

This paperback provides a record of a symposium held in Lucknow in December 1983. It contains a variety of topics ranging from the use of plants of the Zingiberaceae and Costaceae in Chinese medicine to the hepatoprotective principles in plants. As the editors say in their preface 'This is a conglomerate of the old and the new, traditional and modern and projects the ideas of leading (oriental) scientists who wish to serve humanity through science'.

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