

BOOK REVIEWS

R. Agerer et al. *Descriptions of Ectomycorrhizae, vol. 7/8*. (Einhorn Verlag, Schwäbisch Gmünd. 2004.) Pp. 142. Price EUR 95.

The combined 7th and 8th volume of this series contains descriptions of the mycorrhizae of 17 taxa in the genera *Amanita*, *Cantharellus*, *Craterellus*, *Lactarius*, *Melanogaster*, *Rhodocollybia*, *Russula*, and *Tuber*, as well as five well-characterized, but not yet identified mycorrhizae of *Pinus* and *Quercus*. The descriptions, on loose leaflets to be inserted in a binder, are of the same excellent quality as before, giving a short description, extensive morphological and anatomical characters, colour reactions, data on autofluorescence, and a list of reference specimens used for the study. Usually the descriptions go along with an extensive discussion and a list of references. The descriptions are accompanied by high quality line-drawings on the morphology of the mycorrhizae. This series is exemplary, and should belong in the library of every mycological and forestry institute.

Machiel Noordeloos

A. Bidaud et al. *Atlas des Cortinaires, pars XIV (2)*. (Editions Fédération Mycologique Dauphiné-Savoie, 70 Rue Edison, F-69330 Meyzieu, France. 2004.) Pp. 863–981, 55 coloured tables. Price: EUR 130.

The 14th volume of this *Cortinarius* Flora deals with species from subgenus *Hydrocybe*, section *Obtusi* subsection *Obtusoides*, and with subgenus *Phlegmacium* section *Laeticolores*. Dealing with 40, respectively 39, new taxa. Keys to the species are provided. Every species is depicted in colour using rather nice pencil drawings, and accompanied by extensive descriptions of the macroscopical and microscopical characters. The authors contribute with this volume to the ever increasing knowledge on the genus *Cortinarius* in Europe, with an almost frightening rising number of species.

Machiel Noordeloos

J. Deacon. *Fungal biology*. 4th ed. (Blackwell Publishing; www.blackwellpublishing.com. 2005.) ISBN 978-1-4051-3066-0. Pp. 480, numerous black-and-white plates. In English. Price: £ 35 paperback; £ 45 hardback.

This book is the successor to three previous editions of the textbook called ‘Modern Mycology’. It has been fully updated and expanded, and can still (or even better now) serve as an excellent textbook for students. The 17 chapters deal with all subjects concerning biology of fungi and include also recent developments in fungal genetics. The first chapters deal with the structure and organization of fungi and related organisms, the diversity of fungi, and fungal products like antibiotics and mycotoxins. Further chapters concern fungal genetics, spore dispersal, and ecology. Plant pathogens and plant defense

are treated in a separate chapter. The two final chapters are devoted to fungal diseases of humans, and the antifungal drugs used. Although the plates are black-and-white, the book is supported by a comprehensive website with many images in colour, together with additional information and study questions. The book is recommended for anyone involved in teaching (and who is not?).

M.M. Nauta

F.S. Dobson. *Lichens. An illustrated guide to the British and Irish species*. 5th revised ed. (The Richmond Publishing Co. Ltd; e-mail: rpc@richmond.co.uk. 2005.) ISBN 0-85546-096-2 Paper; 0-85546-095-4 Hardcover. Pp. 480, numerous coloured plates. In English. Price: £ 35 paperback; £ 45 hardback.

The fifth edition of this book has been revised to conform with the Checklist of lichens of Great Britain and Ireland of Coppins. Also, an additional 130 species have been included, which brings the total number of species treated on 850. Of most of the species likely to be found in Great Britain and Ireland a description is given in this book, often accompanied by a full-colour photograph of good quality. Numerous line-drawings, notes on the distribution and habitat, and a distribution map complete the picture.

The introductory chapters cover 19 pages, then the main key leading to the generic keys follows and covers together with the generic keys another 27 pages. The rest of the book is filled with the species descriptions. Each genus starts with a key to the species.

The book is very useful for identifying lichen species in Great Britain and Ireland and in other countries in western Europe, both for the amateur just starting with lichens, and for the more advanced lichenologist. Recommended.

M.M. Nauta

N.W. Legon & A. Henrici, with contribution of P.J. Roberts, B.M. Spooner & R. Watling. *Checklist of the British and Irish Basidiomycota*. (Kew Publishing, Kew, Richmond, Surrey TW9 3AB, England. Website: www.kewbooks.com/; e-mail: kewbooks@kew.org. 2005.) ISBN 1-84246-121-4. Pp. 568. Price: £ 29.

With this checklist the authors provide the first publication of this kind on the Basidiomycota ever produced for the British Isles, including Ireland, the Island of Man and the Channel Islands. The data on which the checklist is based are gathered in the past years and refer to reliable sources, identifications and the major British herbaria. The checklist has a very clear and concise concept: species are ranged alphabetically according to genus, again alphabetically per main group: Basidiomycetes, Urediniomycetes and Ustilaginomycetes. Interestingly, the genus concepts are taken from the before-last edition of the Dictionary of Fungi (Hawksworth et al., 1995) and not from the most recent one (Kirk et al., 2001). Obviously the authors did not want to follow recent developments with regard to generic concepts and relationships, based on recent molecular evidence. This conservative and debatable attitude, however, has no big impact on the value and usability of the book.

Each entry consists of the accepted name of the species, followed by synonyms and misapplications in British literature, and distributional data. References are given to

relevant descriptions and illustrations in a selection of (modern) literature. Brief additional notes refer to various aspects of the species concerned, such as the taxonomic status, distribution and collections, and occasionally also to distinguishing characters from similar taxa. Supplementary lists are provided of alien and excluded taxa.

Minor criticism could be made to the conservative approach with regard to generic concepts. It is a pity the authors did not try to include more English names. The absence of the Red Data List Status is due to the fact that this list is currently under revision and new data could not be included. In all, this publication offers a lot of interesting information for those interested in the Basidiomycota of the British Isles, and will serve as an important work of reference for all interested and working with these fungi: taxonomists, ecologists and environmentalists included.

References

- Hawksworth, D.L. et al. 1995. Ainsworth & Bisby's dictionary of Fungi. Ed. 8. Wallingford: CAB International.
 Kirk, P.M. et al. 2001. Ainsworth & Bisby's dictionary of Fungi. Ed. 9. Wallingford: CAB International.

Machiel Noordeloos

M. Moser & U. Peintner. *Farbatlas der Basidiomyceten, Lieferung 22*. (Spektrum Akademischer Verlag Elsevier GmbH. 2004.) ISBN 3-8374-1559-4. Pp. 144, 60 coloured plates. Price: EUR 75.

This 22nd volume of this well-known series includes coloured photographs of species of the following genera: *Agaricus*, *Bolbitius*, *Calypotella*, *Chrysomphalina*, *Clitopilus*, *Cortinarius*, *Flammulaster*, *Galerina*, *Hebeloma*, *Lepiota*, *Marasmius*, *Mycena*, *Naucoria*, *Oligoporus*, *Pholiota*, *Podophomes*, *Psathyrella*, *Pseudoclitocybe*, *Ramaria*, *Sirobasidium*, *Stropharia*, and includes several rarely depicted species. Most of the photographs, by A. Hausknecht, are made in the studio and are of good quality. This issue also provides generic diagnoses of some genera not included in earlier issues of the series, and references to name changes for earlier published issues, and new generic circumscriptions following recent phylogenetic studies. It is debatable whether some of the recent proposals to split up for example the omphalinoid fungi should be included in this work, mainly meant for amateurs, since many of the newly proposed generic concepts need to be evaluated with future research.

Machiel Noordeloos

R.H. Petersen & K.W. Hughes. *A preliminary monograph of Lentinellus (Russulales)*. Bibliotheca mycologica 198. (J. Cramer in der Gebrüder Borntraeger Verlagsbuchhandlung, Berlin – Stuttgart. www.borntraeger-cramer.de; mail@schweizerbart.de. 2004.) Pp. 270, 13 coloured plates. Price: EUR 80.

This volume of the well-known series comprises three parts: first a monographic treatment of the genus *Lentinellus*, secondly a chapter on type studies in *Lentinellus*, and finally a phylogenetic reconstruction of *Lentinellus*, using molecular markers. As such this can be considered a modern monograph.

The monographic part contains a key and descriptions of 24 species, preceded by chapters on the historic lineage of the genus, a discussion on the taxonomic relevant characters and the material and methods used. The nomenclature is extensive and up-to-date and the lengthy descriptions are accompanied by line-drawings of good quality, and lists of the studied collections. Information on sexual compatibility, when available, is also provided.

The type studies are very comprehensive and detailed, with comments on the taxonomic status of the taxa. The phylogenetic reconstruction based on ribosomal ITS1-5.8S-ITS2 sequences gives way to speculations about species concepts and relationship between certain groups. Some morphological species appear to be well supported, in other words the phylogeny is not very resolved, and several species which are well separable on morphological grounds and/or sexual distinctions group together. It is obvious that more work needs to be done with more data and more genes to resolve the taxonomy of these groups. The more robust phylogenies of *L. castoreus* and *L. ursinus* reveal biogeographic differences between populations and possible geographic origin of these species.

This monograph is very well conceived and warmly recommended.

Machiel Noordeloos

L. Ryvar den et al. *A critical checklist of the corticioid and poroid fungi of Norway*. (Synopsis fungorum 17. Fungiflora, P.O. Box 95, Blindern, N-0313 Oslo, Norway, 2003.) ISBN 82-90724-28-4. Pp. 109. Price: NOK 120.

The title of this booklet is a bit confusing, since it does not only include checklists of the mentioned groups, but in addition also taxonomic chapters. The checklist itself deals with 204 poroid and 439 corticioid species recorded from Norway. Species are arranged alphabetically per genus and main group (corticioid and poroid taxa). The entries are simple, and include only the accepted name of the species and a table with given distribution and collection numbers per province. For synonyms and additional data the reader is referred to Aarnes (2002). The list includes many new records, and in addition, two new species, viz.: *Oligoporus hydnoidea* and *Tyromyces vivii*. Descriptions of these new taxa are given in Chapter 6. The taxonomic part of the book deals with notes on the genera *Antrodiella* and *Skeletocutis*, with keys to the European species and descriptions and short comments. A valuable contribution to the knowledge of the distribution and taxonomy of these groups in Norway, and of interest for anybody interested in this poorly studied groups of Basidiomycetes.

Reference

Aarnes, J. 2002. Catalogue of macro- and micromycetes recorded for Norway and Svalbard. Synopsis Fungorum 16: 1–412. Fungiflora, Oslo.

Machiel Noordeloos

R.A. Samson & J.C. Frisvad (eds.). *Penicillium subgenus Penicillium: new taxonomic schemes, mycotoxins and other extrolites*. Studies in Mycology 49. (CBS publications, P.O. Box 85167, 3508 AD Utrecht, The Netherlands, e-mail: info@cbs.knaw.nl. 2004.) ISBN 90-70351-53-6. Pp. 260, numerous illustrations. Price: EUR 55.

The present volume of studies in mycology contains an updated account of the vast knowledge gathered in the past years on *Penicillium* subgenus *Penicillium*, a group of anamorphic fungi that is very common in all kinds of habitats, including the human environment in buildings, associated with diseases and often of economic importance as mycotoxins and pharmaceutically active compounds.

The main part of this volume is dedicated to a taxonomic treatment including species descriptions, notes on ecology, distribution, mycotoxins, and pharmaceuticals produced, as well as diagnostic figures and photographs of high quality.

The remaining chapters deal with a phylogenetic analysis of *Penicillium* subgenus *Penicillium*, using partial β -tubulin sequences, mycotoxins, drugs, and other extrolytes produced by species in *Penicillium* subgenus *Penicillium* and a final chapter on the classification of terverticillate *Penicillia* by electrospray mass spectrometric profiling.

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