

BOOKS RECEIVED BY THE RIJKSHERBARIUM LIBRARY

R. Agerer (ed.). *Colour atlas of ectomycorrhizae. Issue 2.* (Einhorn Verlag, Eduard Dietenberger GmbH, Schwäbisch Gmünd. 1997). ISSN: 1431-4819; ditto, *Issue 3.* (Einhorn Verlag, Eduard Dietenberger GmbH, Schwäbisch Gmünd. 1998). ISSN: 1431-4819. Price: unknown.

The second and third issue of this series give elaborate descriptions of the morphology, anatomy of the mantle, colour reactions with different reagents, auto-fluorescences, a list of reference specimens, discussions and references for 34 species of macrofungi, including *Tricholoma scalpturatum*, *Lyophyllum descastes*, Gasteromycetes (*Gastrum fimbriatum*, *Balsamia alba*, *Genea verrucosa*, *Hysterangium stologniferum*, *Leucangium carthusianum*), Aphyllophorales (*Gomphus clavatis*; *Bankera fuligineoalba*), and several unidentified mycorrhizae. This documentation is unique in its kind, and not only a very valuable tool for all those dealing with mycorrhizae, but it also presents new data on ecology of several mushrooms.

H.L. Barnett & B.B. Hunter. *Illustrated genera of Imperfect Fungi. Fourth edition.* (APS Press, The American Phytopathological Society, 3340 Pilot Knob Road, St. Paul, MN 55121-2097, USA. 1998.) Pp. i–xxii, 1–218, 24 black-and-white photographs, 69 illus. Price: US \$ 43.

This is the fourth edition of a well-known illustrated key to the 'Fungi imperfecti', often used in elementary courses of mycology. The keys and classification used are still based on the fully artificial, but very practical and easy system proposed by Saccardo (1886, 1906) and Lindau (1900). The present authors do not believe the time has come to shift to a new system for the identification of 'form-genera' of these fungi by the student. An alternative set of keys, based on the Hughes-Tubaki-Barron system of classification, is added and uses characters primarily based on the development of the conidia. The convention by hyphomycete specialists (Kananaskis, 1969) to standardize the categories and terms to allow accurate description of the conidium ontogeny is not followed here. In this edition a new introduction is included, with several additions of new genera and 60 new references since the former edition (1972). The illustrations are about the same with some rearrangements and additions. Only the print is now much darker, leaving details in the dark parts unresolved.

T.E. Brandrud, H. Lindström, H. Marklund, J. Melot & S. Muskos. *Cortinarius Flora Photographica, Vol. 4.* (Cortinarius HB, Klöverv. 13, c/o Muskos, SE-864 33 Matfors, Sweden, 1998). Price: Unknown.

This is the fourth volume of this *Cortinarius Flora*, which occurs in regular intervals (the last volume occurred in 1994). It is gratifying that this Flora still continues and can maintain its high standard. This volume presents another set of 60 colour plates, accompanied – as in former volumes – by a description of the morphology and microscopy, data on habitat,

and general comments on the taxa. These new colour plates can be sorted in between the previously published plates, according to the systematic arrangement. The text contains an updated systematic arrangement of the plates, references to supplementary descriptions, addenda and corrigenda to previous volumes, nomenclatural discussions and typifications, Latin diagnoses and new combinations, a complete list of references for volume 1–4, and an updated alphabetical index of taxa. It is hoped that the series will continue this way.

R.T. Hanlin. *Illustrated genera of ascomycetes. Volume II.* (APS Press, The American Phytopathological Society, 3340 Pilot Knob Road, St. Paul, MN 55121-2097, USA. 1998.) Pp. i–viii, 1–258, 3 black-and-white photographs, 100 illus. Price: US \$ 35.

This volume contains the compiled descriptions and illustrations of a series of 100 genera of ascomycetes, additional to the 100 of the first volume, entitled 'Illustrated genera of ascomycetes', published in 1990 by the same author. The spiral-bound booklet consists for the main part of the generic descriptions and the accompanying illustrations. The genera treated are chosen rather arbitrarily from a very wide range of ascomycetes, such as yeasts, *Taphrinales*, unitunicate and bitunicate pyrenomycetes, operculate and inoperculate discomycetes, *Laboulbeniales*, and lichenized groups. Cleistohymenial plectomycetes and hemiascomycetes are not included. The arrangement is on the basis of the over a century old Saccardoan system of spore types (like hyalospores, allantospores, phaeospores, hyalodidymae, phaeodidymae, etc.) and types of ascoma. This leads to a completely artificial arrangement, with e.g. a group of 'hyalospores', including together genera like *Saccharomyces*, *Taphrina*, *Amauroascus*, *Bisporella*, *Cookeina*, *Cyttaria*, *Otidea*, *Cladonia*, *Colpoma*, etc. A dichotomous key using artificial characters is provided for the identification of the hundred genera of this second volume, without considering the genera included in the first volume. The work is meant for students with little knowledge of fungi and should provide means for easy identification. But the artificial keys and arrangement will not learn the student much about relationships and relevant structures of genera of ascomycetes. The main value of this book is in the rather consistent generic descriptions and the clear, somewhat stylized and diagrammatic illustrations. References are made mainly to handbooks and flora's, but modern monographs of the genera treated are rarely cited.

R.T. Hanlin. *Combined keys to illustrated genera of ascomycetes I & II.* (APS Press, The American Phytopathological Society, 3340 Pilot Knob Road, St. Paul, MN 55121-2097, USA. 1998.) Pp. i–v, 1–113, 3 text-figs. Price: US \$ 20.

This key was necessary after the publication of 'Illustrated genera of ascomycetes' (1990) and 'Illustrated genera of ascomycetes. Volume II' (1998) by the same author; each containing descriptions and illustrations of 100 genera. Since the keys in each of the previous volumes were restricted to the hundred genera included, the author felt the need of a new key to the 200 genera of both volumes. An alternative key on more natural characters is missing. Following the key is a section containing corrections and additions to the first volume (1990). Especially nomenclatural changes and additional information is provided for the earlier descriptions. More recent references are listed. Special attention has been paid to the terminology, with three diagrams on types of spores and tissues, and a more general glossary of terms.

H.-J. Hardtke & P. Otto (Eds.). *Kommentierte Artenliste der Pilze des Freistaates Sachsen. – A commented list of the fungi of Saxonia. (Myxomycota, Oomycota, Ascomycota und Basidiomycota, exclusive der lichenisierten Arten.)* (Sächsisches Landesamt für Umwelt und Geologie. Lößnitz-Druck GmbH, Güterhofstraße 5, D-014445 Radebeul, Germany. 1998.) Pp. 1–217, 45 colour photographs. Price: DM 24.

The project for an extensive list of the fungi of Saxonia is of long standing. It started in 1916, but was interrupted several times. Most progress was made during the previous two decennia. The area covered is the German Province of Saxonia with its political boundaries of 1997. It has been subdivided in eight geographical regions. The groups of fungi included depend on the specialists available in the region. In total 3,833 species of 816 genera are listed. Especially Myxomycota (195 species), 'macromycetes' (c. 2,600 species), terrestrial Oomycota, phytopathogenic fungi (Peronosporales, Erysiphales, Uridinales, Ustilaginales), and many orders of Pyrenomycetes are included. 'Micromycetes', Fungi imperfecti, and lichens are omitted. The list is based on numerous field trips and publications on the local myco-flora. The mycological collections of the herbaria of Dresden, Görlitz, and Leipzig are screened. The historical herbarium collection of K.W. Krieger (1885–1919) 'Fungi Saxonici' is incorporated in the present work. Many mycologists collected extensively in Saxonia and published on its fungi, e.g. B. Auerswald, J.B. von Albertini & L.D. von Schweinitz, E.H. Benedix, D. Benkert, R. Buch, P. Dietel, W. Dietrich, H. Dörfelt, I. Dunger, P. Ebert, O. Frömelt, H.-J. Hardtke, K. Herschel, H. Kreisel, K.W. Krieger, P. Otto, E. Pieschel, L. Rabenhorst, R. Rauschert, and P. Sydow. For each species listed the following information is given: the correct name, important synonyms, frequency, habitat, geographical region(s) within Saxonia, localities with geometrical grid, and eventual literature references. Of taxa described as new from Saxonia reference is made to the type and the type locality. It is a thorough mycological inventory of an important part of central Europe. From the literature consulted and the names used it can be concluded that the main part was already finished about ten years before publication.

L. Krieglsteiner. *Pilze im Naturraum Mainfränkische Patten und ihre Einbindung in die Vegetation.* (Regensburger Mykologische Schriften 9 (1) and 9 (2), Regensburgische Botanische Gesellschaft, Regensburg. 1999.) Pp. 905, 40 coloured pls., 74 text-figs. Price: DM 92.

This voluminous publication is based on an inventory of 100 permanent plots in the nature area of the Main-frainconian plates in NW Bavaria. During this research project almost 2,500 species of Fungi and Myxomycetes were found and their ecology, in particular their relations to the 42 investigated plant associations, were studied.

About 100 pages of the first volume are filled with an enumeration of the plant communities studied and the Fungi and Myxomycetes found in them: the last two grouped according to the substrate. The main body (about 700 pages) of this work consists, however, of an annotated list of the Fungi and Myxomycetes found in the area with detailed notes on their localities and habitats. Another list is added of Fungi arranged according to host and special habitats. The coloured photographs depict mostly rare species.

This work offers a wealth of autecological and synecological information on the elements of a very rich mycoflora of an area in southern Germany.

M. Sarnari. *Monografia illustrata del genere Russula in Europa. Tomo primo.* (Associazione micologica Bresadola, Trento. 1998.) Pp. 800, appr. 200 coloured photographs. Price: LIT 100.000.

The first volume of this monograph is an impressive hard-cover book with a large number of very high quality, well-reproduced photographs. It is the first European monograph on the genus *Russula* since the magistral work of Romagnesi (1967). The book gives an extensive introduction on the characters of the genus, including 25 (!) pages on ecology, and a long discussion on the infrageneric taxonomy. The taxonomic part gives keys and descriptions of about 100 taxa, with discussions, coloured photographs and microscopical drawings of high quality. The nomenclature is brought up to date with the help of the French specialist G. Redeuilh. References are not given, and will be listed in the second and final part of the monograph. The keys are not always strictly dichotomic, and in quite a few cases the couplets are not clearly giving opposite character states, which makes identification sometimes difficult. However, the long and detailed descriptions and good illustrations facilitate identification. Species concepts seem to be rather large, in contrast to those of some contemporary French authors (Bon, Reumaux). The conclusion is that we have a very good modern European monograph with this work of Sarnari, that is highly recommended, although the Italian language may form a difficulty for many users. Fortunately the keys are also given in English. It is recommended that the author gives an extensive English summary in the second volume of this series, which will certainly increase the number of users. We look forward to volume 2.