

Book Review

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Holubinky (*Russula*)

518 p., Academia, Praha, 2011. – ISBN 978-80-200-1993-6.

The book *Holubinky (Russula)* is the most comprehensive monograph of the genus *Russula* in central Europe, containing 150 illustrated and described species. It is written in Czech language. It is well organised and has a structure already adopted in other monographic studies on this genus and other fungal groups. The authors declare that the book addresses both beginners and experts in *Russula*. Their aim is to help identify *Russula* species and recognise the edibility of the illustrated species.

The introductory part with general information on history of research and modern trends, detailed descriptions of morphological characters, methods used for their observations and the ecology of *Russula* species will be very much appreciated by Czech readers, because it is the first time this information is presented in their language. Moreover, it is updated with recent data and organised in a practical way.

The keys for the identification of infrageneric taxa and species follow the classification by Sarnari (*Monografia illustrata del genere Russula in Europa 1, 1998*). It is based on a combination of mostly macromorphological characters, but in several cases it is also supported by micromorphological ones. The authors use in most cases a complex of several field characters to allow or improve identification in the field. This implies many steps, making the key text very long. Using such complicated combination of characters without knowing the importance and variability of them can be very confusing and may lead to controversial results. In many cases characters known to be very variable and subject to change during maturing of the basidiomata are used, e.g. colour of the cap cuticle and smell or consistency of the flesh. The authors frequently use spore print colour as a basic character for species identification, but this character often shows only subtle differences. In many cases, proper identification will require a comparative colour chart (which is not included in the book), or a collection of spore prints. However, also the use of a collection of spore prints as comparative material is problematic, because gathering correct spore prints as examples for the identification of colour codes requires prior use of the key, but beginners do not have anything available to compare. The result of the identification process is a species name, but this is not provided with a reference to a page or species number in the descriptive part (this information is available only in the index at end of the book).

The core part of the book consists of descriptions and photographs of species and infraspecific taxa. The quality of the photographs and the descriptions of macromorphological characters are in most cases good to excellent. Descriptions of micromorphological characters are mostly brief, the values of characters are estimated roughly and any drawings of micromorphological structure are missing for most species. Only the few species described as new to science at the end of the book are illustrated with line drawings, but these are very schematic and brief.

The species concept adopted by the authors is the weakest part of the book. Species names with dubious concepts (not accepted in most literature) are used, eight new species are described, and dozens of new infraspecific taxa and combinations are introduced. Accepted names with dubious concepts include *R. alternata* (Zvára) Bon, *R. amoenoides* Romagn., *R. cicatricata* Romagn., *R. emeticicolor* (Jul. Schaeff.) Singer, *R. deceptiva* Romagn., *R. nobilis* Velen., *R. pruinosa* Velen., and *R. urens* Romell. Species described in this book as new to science are mainly based on spore print colour and other macromorphological characters or on subtle and not well explained or illustrated differences in micromorphological characters. Their delimitation is discussed very briefly and mostly only species similar in habitus are discussed, overlooking other species with similar microscopic structures. For example, *R. gibbosa* Socha is a species with a fruity smell and yellow spore print, but its delimitation from

the similar species *R. odorata* Romagn. is not discussed. *R. lilacinocrema* Socha is a species with a weak fruity smell and with a spore print intermediate between *R. odorata* and *R. versatilis* Romagn., but it is not compared with these related species. *R. roseolilacea* Socha is a species with a slightly darker spore print and smaller spores than *R. fragilis* (Pers.) Fr., but it is not compared with *R. atrorubens* Quél., having very similar characters, and in the key it is only differentiated by a less variable cap colour.

The authors present in many cases information on the delimitation and interpretation of species which is different from many important taxonomical studies. The publication of new combinations and taxa is scientific output, but in this case, these outputs are published for the first time in a popularising book for the identification of species. The credibility of these new taxa and combinations has never been explained in detail and published in a reviewed scientific journal. The information on the new taxa is, moreover, not accessible to the international community of experts, because it is published (except for Latin diagnoses) only in Czech. The authors have not been in contact with professional experts in *Russula* taxonomy, have not presented sufficient knowledge of the variability of the species and their decisions are not based on knowledge of the types. In several cases the species concepts contradict serious studies presented in scientific publications based on type studies. For example the interpretation of *R. variegatula* Romagn. is in conflict with a publication by Buyck [Bull. Soc. Mycol. France 120(1–4): 385–401, 2004] and that of *R. clavipes* is in conflict with a publication by Adamčík [Persoonia 18(3): 393–409, 2004].

Summarising, the book is not suitable as a popular identification book, because it uses very complicated combinations of macromorphological characters with subtle and subjective differences certainly evoking confusion and controversial results. Concerning its scientific impact; the publication of important taxonomical conclusions (including descriptions of taxa new to science) in a popular-science book without detailed explanation of species delimitation and variability, without referring to any type studies or recent descriptions, in a language not comprehensible to many foreign mycologists; are certainly undesired and uncommon features introducing new questions and confusion in *Russula* taxonomy.

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Book review

HANNS KREISEL

**Pilze von Mecklenburg-Vorpommern
Arteninventar, Habitatbindung, Dynamik**

Weissdorn-Verlag, Jena, Germany, 2011, 612 p., hardcover, 170 × 240 mm. – ISBN 978-3-936055-65-8. Price € 24.95. The book can be ordered directly from Weissdorn-Verlag Jena (www.weissdorn-verlag.de), Wöllnitzer Str. 53, D-07749 Jena, Germany.

The book represents an inventory of fungi found in Mecklenburg-Vorpommern, a northern German state bordering the Baltic Sea and Poland, located at an altitude of 0 to 179 m. It is a collective work compiled by H. Kreisel as the main author and a large number of collaborators, of which the 22 most important are mentioned as co-authors. It is in German, printed on high-quality glossy paper, black-and-white (without colour photographs inside), consisting of a well-structured text without line drawings. The only illustrations are the photographs on the cover and a grid map of the area on the inside cover.

The introductory part consists of chapters on the geography and habitat conditions in Mecklenburg-Vorpommern, ecology of fungi, methods of the study of mycobiota, taxonomic literature used, and a detailed history of mycology in the area (comprising such names as J.H.F. Link, L.P.F. Ditmar, C.E. Weigel, H. and P. Sydow). All persons involved in past and current research are mentioned in a very useful and long list.

The main part (starting on p. 49) is represented by a systematically and alphabetically arranged list of fungal species known from the area. The following groups are included: Glomeromycetes, Zygomycetes, Taphrinomycetes, Ascomycetes, Basidiomycetes (divided into heterobasidiomycetes, hymenomycetes, gasteromycetes, some groups with even more subdivisions), and Deuteromycetes. Each species is provided with one paragraph of text having the following structure: accepted Latin name, German name (in micromycete groups sometimes missing), selected synonyms, ecology (substrates and habitats), occurrence in the area (brief data in the form of simple evaluation phrases, references to published data and voucher specimens), dynamics of occurrence (increase, decrease etc., for selected species only). In some cases, comments on practical use of the species are added. The text is typographically well-arranged, so that it reads fast and easily. At the end of the book, all used literature is carefully cited.

What are the main positive aspects of the book? It is very exhaustive, has a well-considered structure, covers a large number of fungal groups (not only micromycetes), the texts on individual species are brief (but not only consisting of abbreviations, so they read easily), full of basic data, and the data can be verified (in literature and herbaria). It is a very important source of data on the ecology and distribution of fungi in this part of Europe and a model example of which species are able to grow in typical lowlands of (northern) central Europe (influenced by the sea). It is an ideal source of information for comparison with the mountain areas of Europe.

What would be good to have included in the book? The book has no specific index, which is a little problematic in some cases. First one has to look for the group (but the groups are not indicated by e.g. a running title at the top of the pages) and then look for the species according to the alphabet (inside the group). One can also use the index of generic names and look for the species name inside the genus. It would also be interesting to know the total number of species in the groups included in the book (one simple table) and the number of database records on which the book is based. The image of the book would have been better if more colour photographs had been added, e.g. of species typical of the area (or the most important rarities).

Generally, the book is very helpful and should not be absent from the library of any person or institution dealing with the distribution and ecology of fungi in Europe. The low price supports this.

Jan Holec

Book review

WILLIAM W. BOCKUS, ROBERT L. BOWDEN, ROBERT M. HUNGER, WENDELL L. MORRILL, TIMOTHY D. MURRAY, RICHARD W. SMILEY (eds.)

Compendium of Wheat Diseases and Pests, Third Edition.

American Phytopathological Society Press, St. Paul, Minnesota, USA, 2010, 171 p., 269 images. – ISBN 978-0-89054-385-6. Price \$ 89.00.

The first edition of the Compendium of wheat diseases was published in 1977, the second edition in 1987. Because of the large amount of new information discovered since this time, a new completely updated third edition was prepared by 70 authors, all experts in their fields. It represents the largest compendium ever in the series published by APS Press. New chapters on insect and mite pests have been added. This fact is reflected in changing the title to “Compendium of wheat diseases and pests”. Compared with the previous edition, the third edition has 32 new, up-to-date chapters and the number of illustrations has been increased. These mostly new colour illustrations are placed near the corresponding text, e.g. descriptions of disease symptoms, causes, life cycles, and control practices, which is very practical for users.

The book includes the following sections: introduction, diseases caused by bacteria, diseases caused by fungi and fungus-like organisms, diseases caused by nematodes, diseases caused by viruses and virus-like agents, damage caused by insects and mites, and other pests and disorders, glossary, and index. The major section on fungi and fungus-like organisms covers 49 chapters. The diseases are arranged alphabetically according to their common names. Each chapter is completed with selected references introducing the users to additional literature.

The new comprehensive third edition of the Compendium provides useful information not only to everyone who is interested in the production of wheat crops, but also to specialists in mycology, entomology, virology, bacteriology and other disciplines. It can also serve well as a manual for teaching activities.

Jaroslava Marková