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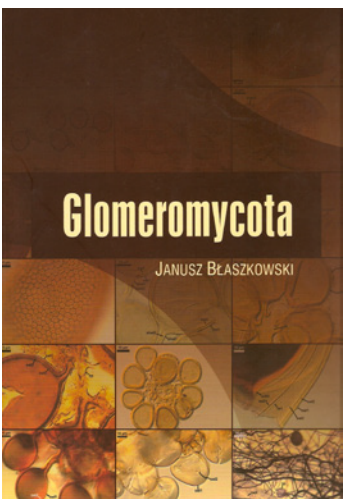
Book review



Błaszkowski J. 2012. Glomeromycota.
W. Szafer Institute of Botany Polish Academy of Sciences, Kraków, p. 304. ISBN: 978-83-89648-82-2

The monograph "Glomeromycota" written by Professor Janusz Błaszkowski is a unique publication in the mycological literature. This is the first worldwide comprehensive description of highly important soil fungi, which form arbuscular mycorrhizae (AMF) with a vast majority of world's plants (70–90 %). Although the fungal group is not numerous (ca. 220 species), its representative occur in any type of soil around the globe. The profound knowledge and detailed description provided in the monograph contribute to the Author's unquestionable success, which can be attributed to the impressive amount of work, determination, and perseverance as well as fascination with these fungi. A noteworthy fact is that mycorrhizal relationships had been discovered by a Pole, Franciszek Kamieński (1881), over 130 years before the year of publication of the work (2012).

The monograph comprises 137 species, which constitutes over half (62 %) of fungi from this group recognised so far. A great majority of the listed species originate from Author's own collections, and many of them are known exclusively from Poland. The study material was collected from the rhizosphere of both crop plants and wild-growing vegetation. Various techniques were used for identification of the fungi, including biochemical and molecular analyses, scanning electron microscopy as well as various techniques of light microscopy were employed for preparation of graphic documentation.

The editorial aspect of the book reveals great diligence and accurateness, which is also visible in its large format (A4). The book provides the most relevant information about the history of the knowledge of these fungi, classification, research (field and laboratory) methods, and habitat and substrate preference. Each species is fully described in terms of its morphological structures, basonyms, a full list of synonyms, and literature concerning its distribution range (in Poland and worldwide). Additionally, the phylogenetic position of the species has been discussed and lists of plants with which they form mycorrhizal relationships have been provided. Another great value of the work is the excellent microphotographic documentation of microscopic

preparations made by the Author himself during verification or originating from other research units. The description sections are preceded by dichotomous keys for identification of fungi within successive taxonomic units – orders, families, and genera. These elements of the documentation make the work an ideal source of information for further diagnostics of fungi excluding the necessity of carrying out molecular analyses. The list of literature references is particularly extensive, as it includes both the oldest and the most recent papers. The final section presents very useful indexes of fungal, plant and locality names. Generic or species taxa are additionally described by extremely interesting information concerning the etymology of these names.

The work impresses with its considerable substantive value. The knowledge of species is a fundamental element in investigations of species diversity and recognition of mechanisms that rule phenomena occurring in the ecosystem. Knowledge of fungi, particularly of soil fungal species is essential. In this group, the key role is played by mutualistic symbionts, including the Glomeromycota described in the book.

Undoubtedly, the book will be helpful not only to mycologists, but also botanists and ecologists; therefore, it should find its place in every library of natural sciences.

Wiesław Mułenko