

***Mushrooms of the Midwest***. Michael Kuo and Andrew S. Methven. 2014. University of Illinois Press. Urbana, Chicago, and Springfield, Illinois. 427 pages. \$39.95 (paper). ISBN: 978-0-252-07976-4.

*Mushrooms of the Midwest* is a significant new field guide and study manual for the novice and expert mushroomer alike. For the first time an extensive detailing of over 500 species common and exclusive to the western Great Lakes and upper Midwest region can be found in one book. Large format photographs exhibit these fungi in their native substrata, detail diagnostic features and showcase the beauty of their fruitings. Also unique to this guide is its detailed discussion of the process of mushroom collection, identification and preservation, designed to equip the enthusiast with the skills to support professional fungal diversity assessment of the region.

As the authors note in the introduction (chapter 1), it is an important time for the study of fungi for both the professional and amateur mycologist. With the advent of new DNA based technologies, the mycologists' ability to discover and identify novel fungal species has greatly accelerated. To support these efforts, typed, vouchered specimens are needed. However, there are few professional mycologists stationed in the Midwest. As such, these professionals look to the growing number amateur mycologists and citizen scientists to help document and properly collect new, unique, and rare fungal species from across the region. This cooperation is essential to the advancement of mycological knowledge of the region and offers a distinctive opportunity for all levels of mycologists to play a role in the cataloging of our fungal biodiversity.

This book offers the amateur mycologist a how-to-guide for the collection and identification of mushrooms of the Midwest. To support the enthusiasts' potential to contribute to the science of mycology, the full process of vouchering specimens is outlined in chapter 2, including approaches to collect, document biological and ecological characteristics, handle and preserve specimens, and how to submit them for study. Contact information for the regional fungal herbaria and experts is provided at the end of the chapter to encourage participation and connect the amateur with the expert. Even a list of favorite collection sites of the experts are included (chapter 1) to tip the amateur to exciting places to foray and continue the task of fungal biodiversity assessment. In chapter 3, the amateur can learn about the use of a microscope and preparation of specimens for study. A clear and easy-to-use dichotomous key (chapter 4) helps the novice learn mushroom features important for identification, and leads them to the detailed species descriptions of chapter 5. Chapter 5, arranged by name rather than form or relatedness, encourages the novice to work the keys and learn the fungi rather than flip and try to match description. Each species description and image includes the essential details of identification and ecology. Notes highlight key diagnostic features and lookalikes ensuring proper identification. Chapter 6 provides a glimpse into the current evolutionary arrangement of the fungi covered in the book. A combined glossary and index provide the novice with quick access to references and definitions. These combined features are supportive to the learning novice and offer an accessible guide guaranteed to get them excited for the foray.

For the more experienced and expert, this book proves a detailed reference and excellent teaching tool. The collection guide in the beginning of the book (chapter 2), the microscope use guide (chapter 3) and the clear dichotomous keys (chapter 4) provides the mycology instructor a training guide for the student mycologist. The alphabetical listing of fungi (chapter 5) allows the

mycologist to quickly access descriptions of the fungi of interest for their own reference or for instruction. This is a significant advantage over other guides where one must thumb through or visit the index to find a species of interest. The support of descriptions with helpful comments, drawn from the experiences of Michael Kuo and Andrew Methven, adds interesting depth. For particular species, multiple photos are provided to showcase phenotypic and life-stage variability as well as diagnostic microscopic features, a level of detail uncommonly found in field guides. Furthermore, this book has a unique and extensive coverage of fungi from the Midwest, a historically less studied region of the country. Collectively this book's depth, easy-to-use design, and instructional resources make it a must have for the advanced mycologist.

The treasure of this book is its valuing of all regional mycophiles and emphasis on their collaborative support of the science of mycology. This is exemplified by the authors themselves, who are a team of amateur and professional mycologists. Never before has a field guide devoted chapters to the potential role of enthusiasts to the field or detailed a training manual that will ensure their contributions are useful to the professional. As the authors suggest, this truly is an exciting time for Midwest mycology.

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