

McMullin, Troy & Anderson, Frances (2014): Common lichens of Northeastern North America. A field guide

New York: Botanical Garden Press. Pp. iv + 183, lavishly illustrated in colour & b/w. Price: \$39 spirally-bound hardback

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Lichens are perhaps the classic example of symbiosis and papers on this association are regularly published in *Symbiosis*, frequently by authors from North America. Research on these fascinating organisms, even if it involves molecular biology, physiology, the photobiont or air pollution, requires the collection and identification of the experimental material. North America has a high diversity of lichens and so in a book to introduce students and amateurs to the group, how does one make a selection to represent the immense morphological differences and the wide variety of habitats they exploit?

Although the present work (Volume 112 of the *Memoirs of The New York Botanical Garden*) covers only 138 species, the authors have made every effort in their selection to ensure that these taxonomic and ecological criteria have been met and that each lichen's frequency, distribution and recognisability have also been considered. This guide does more than whet the appetite to study these fascinating organisms by providing details of the salient features of representative species. However, although it has to be stressed that lichens are not easy to identify, those selected here can usually be

diagnosed with the aid of the text and illustrations. A novel colour-coded approach using marginal tabs for identification (but *not* classification) based mainly on the colour and shape of thalli, and on habitat (trees, rocks, soil, mosses), has been employed. However, perhaps the results of spot tests or reactions with UV light could have been added for those with access to chemicals or wishing to be more confident about identifications. The book is designed for use in the field or the laboratory not only in terms of diagnoses, but also in its physical make-up, with glossy pages that are spirally-bound to lie flat. For the library shelf, this book has a 'raised' spinal covering but the title printed in white on a light background is almost invisible making quick selection very difficult. There are short sections on lichens in general and how to use the book, with suggestions for further reading, websites and a glossary also provided.

Despite the above reservations and the rather high price for students and amateurs, this is a useful and attractive introduction to lichens.

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