

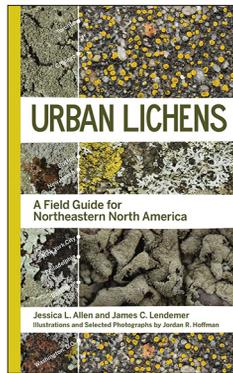
Urban Lichens: a Field Guide for Northeastern North America

By Jessica L. Allen and James C. Lendemer. Illustrations and Selected Photography by Jordan R. Hoffman. 2021. Yale University Press. 168 pages and 121 colour illustrations, 33.95 CAD, Paper.

This book is a field guide to 61 of the most common urban lichens found in the Northeast. The authors based their fieldwork in New York City, but the guide will be useful for most large urban areas in northeastern North America, including Toronto. The book is divided into three sections. The first section is a 26-page introduction to lichens and their cultural relevance (e.g., for use as dyes). The short description of lichen biology in this section is the most technical part of the book, but understanding it is not critical to successfully using the field guide. The other parts of the introductory material are very accessible to a broad audience. Part Two, pages 27–108, contains the illustrated species descriptions followed by a 23-page dichotomous key. Part Three includes a complete list of New York City lichens, a partly illustrated nine-page glossary of terms, a bibliography, and a suggested reading list.

Species descriptions are sorted first by growth form and then by colour. Within each colour category, species are sorted alphabetically by scientific name, although this is not immediately apparent because the common names appear first in larger, bold font. Each species entry consists of a photo, common name, Latin name, species authority, physical description, Where to Find It, and abundance level in urban areas. For 14 species, there is also an Air Quality Rating, which identifies sensitivities to acidic pollution and fertilizing nitrogen, and overall sensitivity, if known. Species photos are high-quality and illustrate key features; importantly, all photos were taken in urban areas. Delightfully, some lichens have charming common names, such as Curly Biscuits, Rei of Sunshine (*Cladonia rei*), and Bruce's Lucky Dust.

Why does this book exist? According to the authors, many lichens have distinct city morphologies compared to similar species established in areas with better air quality. This book was a response to popular demand for a field guide of species that can survive or thrive in urban areas. The authors' goal was to create a guide that would be accessible to anyone—from a novice to an expert—with an interest in lichens. With



so many of us living in urban areas, it is nice to see a field guide that intentionally supports urban naturalists in their adventures.

I tested the dichotomous key and species descriptions in downtown Halifax, Nova Scotia, to assess its accessibility and ease of use. Get your hand lenses or dissecting microscopes ready: lichen features are very small. Although not exactly beginner-friendly, the photo glossary helped with parsing the dichotomous key, and with some time and backtracking I could arrive at an educated guess for the species in question. As this book covers only a subset of lichen species, it suffers from the drawback of all guides of its type: when you arrive at a species identification, you cannot be sure if you have indeed keyed correctly or if the species that you have in hand is simply not included or mentioned in the guide. Species pages do offer useful advice on what distinguishes look-alikes, but without a more involved follow-up an accurate identification is not guaranteed.

There is an unfortunate error in the dichotomous key where one of the main options (lead 10) is trichotomous, leading to some early confusion keying species. The dichotomous key is also missing page numbers referencing the species entries in the book, so you have to open the Index and attempt to find your result there. Flipping through the book until you land on the correct photo is an alternative to searching the Index, but in either case you will discover that several species included in the key are not described in the book. There is also no indication in the key which species are or are not covered. This can prove frustrating, and if your objective is to positively identify lichen species this book is best used in combination with a secondary source.

This field guide is a good fit for those looking to appreciate lichen diversity and the unique morphologies in northeastern North American urban areas. While urban lichen aficionados with prior experience using dichotomous keys and field guides will probably get the best utility from this book, it is also suitable for a general audience. If the cost of misidentification is low, the process of keying out lichen species provides many of us with a much closer and more intimate view of these taxa than we would otherwise have, and the more folks out appreciating lichens the better.

HEATHER CRAY
Halifax, NS, Canada