

Review

A lichen hotspot in the city of Boulder

Reviewed by

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Tripp, Erin A. 2016. Field Guide to the Lichens of White Rocks (Boulder, Colorado). University Press of Colorado, Boulder. 170 pages. Paper: ISBN 978-1-60732-553-6. \$21.95; Ebook: ISBN 978-1-60732-554-3, \$17.95



Every major park, especially one that features a nature preserve, strives to document its biological resources, at least its flowering plants, mammals and birds, and if it has the money and mandate as well as the personnel, it may include reptiles, amphibians, and insects such as butterflies and dragonflies. Only the luckiest nature preserves ever see their “cryptogams,” the fungi, mosses and lichens, listed in a systematic way. Urban parks, those in or close to population centers, are especially keen to create inventories because they are so vulnerable to impacts from overuse, pollution and pressures on their very existence. The managers want to know what’s there, what is rare and what is vulnerable. White Rocks Nature Preserve, within the city boundaries of Boulder, Colorado, is such a park. With Erin Tripp’s book, we not only have a carefully executed inventory of the lichens, a neglected but important segment of the biodiversity, but we also have an accessible field guide to carry in the Preserve to help us recognize them.

The book illustrates every lichen discovered in Erin Tripp’s inventory, 56 in all, and it provides descriptions and keys for their identification. It is a field-book in size and format with a full page photograph on the left and comments on morphology, chemistry, distribution, habitat and pertinent literature on the right-hand page. The photos were all taken in the field at White Rocks and mostly are at close range, perhaps a blown-up and cropped portion of a larger photo. Most are excellent and in some cases illustrate a species for which there are no other color pictures in existence (for example, the rare and newly reported *Rinodina venostana*). Some,

however, could be sharper and a few (e.g., *Lichinella stipatula* and *Enchylium tenax*) do not have enough detail to be helpful. The photos of *Montanelia disjuncta* and *M. tominii* unfortunately do not show the characteristic soralia, although both species are normally sorediate, perhaps not abundantly so at White Rocks.

Tripp’s notes are informative but do not provide complete descriptions. They only mention what the author believed would help distinguish the species from others, either at White Rocks or elsewhere. They are written in an informal, chatty style, often with funny personal comments and asides.

The book is clearly written with the casual naturalist in mind, one who has the interest and perseverance to flip through the volume comparing pictures and even using the keys. A glossary is provided to define many technical terms, but not all (e.g., placodioid, thallinocarp). I think some of the technical terms could have been avoided (e.g., why not “colorless one-celled spores” rather than “hyaline simple spores?”)

The factual material is reliable throughout the book, which makes the occasional lapse all the more noticeable. For example, *Peltula* doesn’t have perithecia as stated on page 99, and the stable K+ purple reaction in the grey thallus cortex of *Caloplaca pratensis* is due to an insoluble pigment, not to an anthraquinone like the yellow pigments in other species of *Caloplaca* that give soluble and dissipating K+ deep purple reactions.

The names of the lichens basically follow Esslinger’s 2015 version of the North American checklist, but some recent generic splits are not

recognized, I think wisely, such as those in *Caloplaca*, although *C. trachyphylla* does appear as *Xanthomendoza trachyphylla* in a discussion of the ecology of *Acarospora stapfiana*.

Each species discussion begins with the scientific name (the describing and combining authors appear in the checklist at the end in the Appendix) and then a sort of vernacular name. I say “sort of vernacular name” because they appear very personal, almost “pet names” that the author wouldn’t expect anyone else to use (Stool Pigeon, Flaming Cowgirls, Rib-Ticklers, Lunar Walk, etc.). None of the English names in *Lichens of North America*, or Trevor Goward’s books on British Columbia lichens are used. I couldn’t find an explanation.

The keys to all 56 species are brief and should certainly work very well to separate most of the White Rock lichens. They will not do as well outside of that area because the couplets do not give enough information to distinguish the species from species that might be encountered elsewhere. However, they were not written to be used that way, so I expect that they will be very helpful for anyone visiting White Rocks. They rely heavily on easily seen field characters and do not use spore measurements

(not mentioned even in the descriptions), although some choices do require a compound scope to determine the general shape, color or septation of spores. Chemical observations, even spot tests, are only needed for a few choices.

With regard to the lichens that are documented in this study, I was surprised that there do not seem to be any lignicolous species. There are only four corticolous lichens, which is a small number even if woody plants are scarce in the Preserve. There is, unfortunately, no description of the vegetation of the Preserve in the book, so I’m not sure if that is the case. If there are terricolous species (as I believe there are, especially in such an arid habitat), they are not keyed out as such in the key, which begins with a choice of growing on rock vs growing on bark.

All that said, I think any naturalist interested in learning the lichens at White Rocks Preserve would do well to purchase a copy of Erin Tripp’s guide. It will serve its purpose well. It should also be useful to anyone interested in the Colorado lichen flora or arid sandstone outcrops in western North America because many of the species of that region are documented and beautifully illustrated here.