

Get Wild: Rain rain, don't go away!

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Karn Stiegelmeier
Get Wild



Lichen are photographed in August 2022 along the Meadow Creek Trail near Frisco. Lichens exist because of a symbiotic combination of two organisms. They are also important food sources for many local animals.

Karn Stiegelmeier/Get Wild

This summer of monsoonal multitudes has given us many superlatives – wildflowers and grasses bigger and taller than previous

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on the forest floor, and mixed in with the mosses are many lichens, which not as bright a green, but in great abundance amongst the fruiting mycelium (mushrooms). We commonly walk by without noticing these fascinating forest floor organisms.

Moss or lichen – what's the difference? Moss is a simple flowerless green plant and a lichen is a fungi-algae sandwich. Moss and lichen mix and mingle. Mosses have leaflets made of photosynthetic cells just like the leaves of trees and wildflowers. However, mosses don't have those specialized tissues that transport water and nutrients such as sap from the ground to the leaf and back to the roots. They have a leafy green sponge that absorbs water and nutrients, so they can't grow very tall or they would dry out at the top. Like lichens, mosses are found throughout the world, especially in forested areas growing in association with lichens.

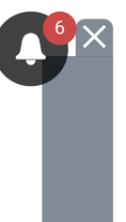
Lichens are hardy organisms living in some of the harshest conditions on Earth. They are not one plant, but a partnership, a symbiotic combination of two organisms – an algae and a fungus. Young students are taught this mnemonic explaining this amazing symbiosis: Freddy Fungus and Alice Algae took a lichen to each other, and they have been living together ever since. The algae in the lichen provides food for the organism through photosynthesis, allowing for the lichen to capture energy from sunlight and convert it to energy for the lichen. The fungus provides the organism with water by retaining the small amounts of moisture like a sponge. In dry times, the lichen can draw on the moisture it retains in its fungus component.

There are about 3,600 species of lichens in North America and those are just the ones we know about! New discoveries are being made every year. Lichens are found all over the world in a vast diversity of habitats and climates, from deserts to tropical rainforests and Alpine tundra. By most biological categorizations, lichens are bizarre organisms and no two are alike. While many lichens have green plant algae partners, others have photosynthetic cyanobacteria which are blue-green. Yet, lichens are given a genus and species name, just like our aspen is a *Populus tremuloides*.

There are three types of lichen – foliose, fruticose and crustose lichens. We are familiar with the crustose lichens growing on rocks in Summit County. They form a crust over a surface, like any rock, and can be bright colors like red, orange, yellow or gray and green. They are pressed closely against the substrate, commonly rocks. Foliose lichens have very flat leafy like sides like a lettuce commonly full of ridges and bumps. Fruticose Lichens are shrub-like. They can tangle up with each other, and commonly hang from a tree.

Lichens are interesting, but so what? They are actually very important food sources for many animals. The reindeer lichen gets its name from the reindeer that rely on it as their primary food source during the winter months. Local creatures that feed on lichens include pronghorn, deer, bighorn sheep, elk, moose, mountain goats, rodents and insects.

The natural world is mind bogglingly complicated and amazing. It is fun to look closely, ponder, and enjoy!





Karn Stiegelmeier

“Get Wild” publishes on Fridays in the Summit Daily News. Karn Stiegelmeier is the chair-elect of Eagle Summit Wilderness Alliance, an all-volunteer nonprofit that helps the U.S. Forest Service protect and preserve the wilderness areas in Eagle and Summit counties. For more information, visit EagleSummitWilderness.org.

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