

Lichen Communities on Hemlock Trees

Lichens are the symbiotic association of fungi and algae to produce a stable thallus with a diverse microbiome. They are virtually everywhere on terrestrial ecosystems, but their diversity is mostly overlooked by amateurs and experts alike. Hemlock trees - unrelated to the infamous poison hemlock - are coniferous trees. The Carolina hemlock (*Tsuga caroliniana*) is endemic to Southern Appalachian cliff tops, while the Eastern hemlock (*Tsuga canadensis*) is common along valleys and streams across the East coast. Bubba documented the lichen communities growing on the trunks of *T. caroliniana* growing on Bluff Mountain and those on the trunks of *T. canadensis* at Appalachian State's environmental studies area. Bubba found more than a dozen lichen species growing on hemlock trees at each site. Additionally, the Lichen communities at each site were unique, with very little overlap in the species composition at both sites. The conservation of trees is also the conservation of diverse assemblages of lichens and microbes that live in and on them.

Bubba Pfeffer, Appalachian State University

Corticolous Lichen Communities on Two Hemlock Populations. Advisors: Dr. Coleman McCleneghan and Dr. Michael Madritch