

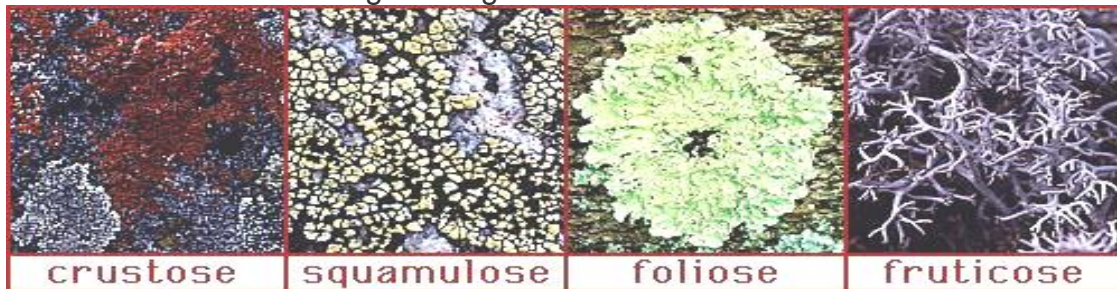
Liking Lichens

S. Petersen, Lamprey Rivers Advisory Committee

Lichens are partnerships between fungi and algae or cyanobacteria (formerly called blue-green algae). The fungi provide a home matrix and the algae or cyanobacteria make the food. Lichens sometimes look like fungi, but often they look like small, pastel-colored seaweeds. People often assume that lichens are parasitic, because they tend to be found on older trees. They are not parasites and they are not merely bumps on a log; in fact, they make a significant contribution to the health of ecosystems where they are found.

Lichens are often the only organisms that can make use of soil-free surfaces. They can grow on bare rock, sand, and tree bark. They can withstand extreme temperatures and drought. Their main requirements are light, moisture, and time to grow undisturbed. Where they are present and form a diverse community, the ecosystem is robust; when they are absent, the ecosystem has been disturbed physically or is subject to air pollution.

Lichens have one of four general growth forms.



photos from <http://www.ucmp.berkeley.edu/fungi/lichens/lichenlh.html>

Crustose lichens form crusty patches. Squamulose lichens have small, overlapping scales. Foliose lichens are leaf-like. Fruticose lichens form small twig-like structures. Lichens species that resemble one another are not necessarily related; in fact, related species might look completely different. With 3600 species in the US and Canada, identifying which species is which can be tricky.

Lichens are important to nature and people: they provide food for reindeer and some insects; they provide nesting material for birds; they absorb chemicals in the air and serve as an early warning system when air is polluted; they stabilize and add nitrogen to sandy soil; their slow growth can be used as a natural clock to date significant geologic events; they are used as dyes and medicines in many traditional cultures.

Lichens are present year-round, but winter is an especially nice time to observe these marvels. While the ground is covered by snow and the tree canopy is bare, lichens are on tree trunks and branches offer a rich, colorful bonanza to explore and enjoy. Why not see how many different kinds you can find?