

Lichens

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Lichens are unusual creatures that often get mistaken for a harmful fungus or algae that kills our beloved trees. The truth is that lichens are not single organisms, but rather a combination of two organisms which live together in a mutually beneficial, symbiotic way. There are over 20,000 different kinds of lichen, most of which are composed of a fungus and a type of green algae. In some cases the two individuals can be found living in nature without its partner, but most lichens consist of a fungus that cannot survive on its own. Since the fungus is unable to produce food through photosynthesis, it is dependent on its algal partner which can produce enough food for both to survive. In turn, the alga receives water and nutrients from the fungus. Thus, lichens growing on trees are not parasites and do not harm the trees in any way. They are only using the tree as a home.

Lichens occur in one of four basic forms: crustose (crust-like, growing tight against the substrate), squamulose (tightly clustered and slightly flattened pebble-like units), foliose (leaf-like, with flat sheets of tissue not tightly bound), and fruticose (free-standing branching tubes). Colors range from white to gray, green, red, yellow, and black. Lichens commonly found in our area are in the crustose, foliose, or fruticose form, and are white, gray, or gray-green in color.



Lichens will grow almost anywhere: on soil, rocks, woody debris, tree bark, tree leaves, and on other lichens. Unlike most plants, they can grow in extremely adverse environmental conditions including scorching deserts, frosty tundra, coastal cliffs, and even on lava rock after an eruption has occurred. Lichens are also very different from plants because they can survive a complete loss of body water. During this time, brittle pieces that flake off can later grow into new lichens. When moisture becomes available again, the lichen absorbs water and returns to their fleshy form.

Because lichens produce chemicals, they have very few natural predators. However, the most serious threat to lichens is air pollution. Most lichens will not grow in a polluted atmosphere and therefore you should be glad to see lichen here or there in your yard, as this is an indication that the air is relatively clean.



These lichens were found living on some of the Crape Myrtles planted outside the Baker County Extension Office.

