

Right in Your Own Backyard!

The Wild, Weird, and Wonderful World of Fungi

Notable notes in forest research at Oregon State University College of Forestry



Mycologist Nancy Weber (Affiliate Faculty, Forest Science) travels far and wide to study fungi. But perhaps her favorite research site is somewhere very close to home—her own backyard. She has explored about 88,000 cubic feet of the wooded property, and, over the past few years, has even begun investigating species that fall from the treetops.

Most of us wouldn't think of looking for mushrooms in the canopy. For a long time, neither did Dr. Weber. Mycologists who specialize in mushrooms generally work beneath the trees studying fungi that inhabit the soil or take hold on woody debris and other substrates on the forest floor. In recent years, however, scientists have begun to look more closely at fungi that are endemic to the canopy. After a storm several years ago, Weber started collecting freshly fallen branches with obvious fungi on them. She found tiny cup mushrooms, shelf fungi, and some interesting "jelly" fungi on the branches. During the dry season, some jellies look like small flat patches or chips of rough brown paint along a branch. But when rains or sprinklers hit them, they swell up like magic sponges, forming large gelatinous blobs many times their original size. Then they shrink back down again in dry weather.

Including the branch fungi, Weber has found 340 different species in her backyard alone. These range from "The Prince" (*Agaricus augustus*)—"cousin" to the familiar, commercially cultivated mushrooms often found topping pizza—to the downright weird "noose" fungi and other nematode trappers. Weber has found this species growing on deer droppings. Its common name comes from some unusual activity: the noose fungus makes little loops out of its hyphae to snare nematodes. After it catches a nematode in a noose, the fungus eats it! People, deer, mice, slugs, and many other animals may eat fungi, but the noose fungus is at least one species that "bites" back.

Besides cataloguing species, Weber records details about each species she finds. Sometimes she measures cap diameter or height at the same time each day for fruiting bodies of a species. She notes how they change as they mature, how long they last, and what fungivores graze on them. Scientists still have much to learn about these organisms, their habits, and their life cycles. But Weber's backyard research is adding to the knowledge of what has been called the "neglected kingdom" of fungi.

