

FUNGI - THE WOOD DESTROYERS

Fungi are ubiquitous in our daily environment. In fact, they can be found most everywhere, and they play many different roles in nature. For years, the enzymatic activity of various Fungi has recycled nutrients throughout various ecosystems—ultimately releasing carbon, nitrogen, oxygen and other nutrients back into the soil and atmosphere. Fungi have also been used in the creation of antibiotics (e.g., penicillin) and are still used in many food production systems (e.g., bread, wine, beer and even grown as



Photo 1

some of our most common edible mushrooms). Today, we want to emphasize the role that Fungi play in the breakdown of trees.

One of the more important phyla of Fungi that degrade plant material are in Basidiomycota. Often referred to as the "wood destroyers," Fungi within the phylum Basidiomycota are very effective at degrading lignin and cellulose (two major constituents of plant cells). Through the breakdown of lignin (white rots) and cellulose (brown rots), trees may become structurally

compromised as limbs and/or trunk sections lose strength (Photo 1). This natural degradation process, if neglected, will ultimately lead to limb and/or total tree failures, so action steps must be taken once fruiting bodies have been identified on a tree.

One particularly important area to pay attention to is when Fungi develop on the lower sections of a tree trunk. When fruiting bodies appear on a tree then it is important to know that the true body of the fungus (i.e., the mycelium; Photo 2) has already inhabited the tree. By the time we see the physical fruiting body (i.e., the mushroom or conk), we are only seeing a small portion of the entire fungus. More problematic is when we see numerous fruiting bodies appearing in successive years at the same location on a tree (Photo 3). Unfortunately, there is no effective way to rid a tree of a



wood-decaying organism or reverse the effects of the fungus.

The inoculation of wood-decay Fungi often starts at the site of a wound (usually on the lower trunk



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Photo 2

of the tree and/or on the roots themselves; Photo 4). Therefore, it is important that we protect our trees from mechanical injuries (such as damage from string trimmers, digging within the root zone, and even from large diameter pruning cuts).

Fungi are colorful, they vary in shape and size, they are unique to each environment in which they reside, and they can even be quite captivating upon closer inspection. It is important to know that not all Fungi create hazards. Trees also form mycorrhizal relationships with tree roots-this is a symbiotic relationship that benefits both the fungus and the tree. While trying

to determine what type of fungus you might have, it is imperative to accurately identify the fungus first. Working closely with an ISA Certified Arborist can help to ensure the best management plan is implemented.

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Photo 4







