



## Fungal Conks on Trees

Fungal Conks, or mushrooms growing from the trunk or base of a tree, are an indication that a rot-inducing pathogen has taken up residence. Some of these fungi are significantly less harmful than others, but all warrant further investigation.

Fungi can become established in tree tissue through a mechanical wound, damaged roots, grafted roots (those growing into the roots of adjacent diseased trees), by insects, birds and airborne spores. There are many species of fungi that can cause decay in living trees. Of primary importance to the homeowner are the various types of heart decay (rot) within the living tree. Heart decay may take place in any tree that has been exposed to infection as a result of injury, broken branches, fire scars, or cultural measures such as improper pruning. Some decay fungi are active only in the butt, while others are capable of causing decay throughout the length of the bole and larger branches. The decay fungi



Ganoderma



Armillaria

reproduce by means of fruiting bodies (conks) that develop on old branch stubs, wounds, or cracks in the bark caused by windshake, heat or cold. These fruiting bodies are hoof-shaped, or bracket-like, and may vary greatly in size, color and texture. The spores of the fungus are produced by these fruiting bodies. Wind, water, animals and insects may all take part in the movement of these spores to a wound in a healthy tree, where infection can then occur. Several years of growth

by the decay organisms are required before new conks are formed. The prevention of wounds caused by fire or mechanical causes is the most effective measure in maintaining a healthy tree. Homeowners should avoid wounding shade trees. Trees with heart decay are very prone to breakage as a result of wind or ice. Wood decay is often described as white or brown rot. Organisms causing white rot break down both the lignin and cellulose, causing the wood to lose its color and appear whiter than normal. Brown rot fungi feed on the cellulose in wood that is a component of the cell wall, leaving the brown lignin constituent in the cell wall. This causes the wood to crack across the grain to form brown cubical pieces. Wood affected by white rot does not crack across the grain as it does in brown rot. Wood decay fungi require moisture for survival and growth. This is the reason most decay fungi will not grow in dry wood.



Trametes

Many of the fungi that appear on branches in the crown are secondary pathogens that are affecting dead tissue created by a separate problem. Large branches that are affected may be dying from Hypoxylon Canker or the effects of a lightning strike.

Whatever type of fungal bodies appear on the trunk of your tree, they bear further inspection by a certified arborist. Only then can you determine the full extent of the infection and assess any decline in structural integrity.