

# FOREST HEALTH ALERT

From the Missouri Department of Conservation

## Hypoxylon Canker



**Tree species affected:** Hardwoods, especially the red oak group

**Concerns:** Early leaf browning, branch dieback, bark sloughing, death

**Description:** Hypoxylon canker is a common disease of hardwoods, especially species in the red oak group. This disease is caused by the fungus *Biscogniauxia atropunctata*. It is often one of several factors ultimately responsible for tree death. A disease of the inner bark and sapwood, Hypoxylon damages tissues used by the tree to conduct water from soil to the leaves. Vigorous, healthy trees are colonized by the fungus, but only damaged or stressed trees develop cankers and are killed. Outbreaks of this disease follow severe drought.

**Symptoms and Signs:** Initial symptoms of the disease include a noticeable thinning of the crown, small patches of brown leaves, and branch dieback. As the disease advances, large areas of bark fall off the branches and trunk, revealing a thick, dusty fungal mat with tan spores (Figure 1). Eventually the fungus turns silver or grey as it matures, giving the appearance of thick paint on the side of the tree (Figure 2). Old infections may appear black. Black zone lines may appear in the sapwood as rapid decay occurs, leaving the tree in a very brittle state (Figure 3).

**Recommendation:** Unfortunately, there is no treatment for Hypoxylon canker. Once a tree is showing symptoms of the disease, it is too late—the tree will die. Healthy trees are often already colonized by the Hypoxylon fungus, so removing infected trees may not protect nearby trees. However, in high traffic and residential areas, remove infected trees as soon as possible to avoid damage caused by falling limbs. Firewood from trees infected with Hypoxylon canker is safe to burn. Firewood movement should only occur locally to prevent movement of invasive forest pests.

**Prevention:** Maintaining tree vigor is the best way to prevent Hypoxylon canker. Practice good forest management. Avoid damaging trees during construction and logging activities. Water high-value trees during drought periods.



Questions? Contact your local Resource Forester or Urban Forester with the Missouri Department of Conservation. Find contact information for your county and more at [mdc.mo.gov](http://mdc.mo.gov).