

# LANDOWNER UPDATE: HYPOXYLON CANKER

Hypoxylon canker is a fatal disease of red oaks that is common in Delaware. While it also affects beech, white oaks, and other species, it is most commonly seen on trees within the red oak group, including northern red, pin, black, willow, southern red, and scarlet oaks. Red oak trees all have leaves with small points at their tips.

Caused by the fungus *Hypoxylon atropunctatum*, this disease only affects stressed trees. Trees can become stressed by various agents, but the most common cause is drought. Delaware has experienced summer droughts for several consecutive years, so trees are now predisposed to disease development. This is the reason foresters from the Delaware Forest Service have diagnosed much more Hypoxylon canker disease in the past two years.

Hypoxylon canker is a vascular disease, meaning it affects a tree's "plumbing system." The tissues that conduct water from the soil to the leaves are damaged by the fungus, and as a result these tissues begin to die. Initially, landowners may notice that their trees have branches that do not have leaves or have small or discolored leaves. Eventually, the bark over the affected areas on the trunk and large branches will drop off, revealing a distinctive fungal tissue known as stroma (Figure 1). Stroma is most commonly battleship gray in color, and relatively smooth, with a paintlike appearance. Stroma may also be black or tan-brown. Small black fungal fruiting bodies may be visible on the surface of the stroma.

The presence of Hypoxylon stroma indicates that a tree will die. Studies have shown that pruning branches that display stroma does little to change disease progression. Trees will typically die within one or two growing seasons. Trees near houses, play areas, or other potential targets should be removed as



Figure 1. Hypoxylon stroma (L) and lichens (R).

quickly as possible to prevent property damage or injury.

Landowners should be sure not to confuse fungal stroma with lichens. Lichens are usually light green and have a rough texture, as opposed to the smooth texture of stroma. Lichens do not harm trees.

While there is no cure for this disease, it can be prevented by preventing stress. The best way to do this is to water trees, if possible, during hot summer months without rain. Water with a garden hose at least once per week. Also, avoid injuring trees with improper pruning or trenching through rooting zones.

**Contact the Delaware Forest Service (698-4500) or an ISA-certified arborist if you need a professional diagnosis.**

