



Pest e-alerts



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Bisogniauxia (Hypoxyton) Dieback and Canker of Pecan

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The most common disease of pecan is scab, but there is a new disease that is threatening trees in Oklahoma. This disease is common on other hardwood trees including oak, hickory and hackberry. Recently, we have observed *Hypoxyton* dieback and canker on pecan trees in Oklahoma. This disease has been a problem in East Texas for some time, so it is not surprising that the disease has shown up in our area. The disease is caused by the fungus *Bisogniauxia atropunctata* (formerly *Hypoxyton atropunctatum*). The common name for the disease is *Bisogniauxia* or *Hypoxyton* canker. I will refer to it as *Hypoxyton* canker since it is the older, more common name for the disease.

Hypoxyton dieback and canker is caused by an opportunistic fungus. The fungus will colonize outer and inner bark, and wait for an opportunity to invade the sapwood. As long as trees have adequate moisture and minimal stress, they are able to resist invasions by the fungus. When trees are stressed (particularly drought stressed), they are unable to resist the invasion.

Trees affected by *Hypoxyton* dieback and canker may die quickly or after several years. As the canker (sunken or swollen area on a branch) develops, water and nutrient movement is slowed so that leaves may yellow and prematurely drop. Dieback may be visible in the upper branches (Figure 1). Over time, the canker will girdle the branch and it will die. Often, one or a few scaffolds are killed before the main trunk becomes affected (Figure 2). If the disease were noted at this point, it may be possible to stop the disease by removing symptomatic branches. Once the main trunk is diseased, it is only a matter of time before the tree dies.

The *Hypoxyton* fungus spreads by wind-blown spores and the fruiting structure will appear when the branch or trunk is near death. The outer layers of bark will fall off and a discolored area will be visible (Figure 3). This is the stroma (fruiting structure) of the fungus. The stroma may be visible in small patches and overtime, the area will enlarge. Depending on the maturity of the fungus, the color of the stroma may be white, tan, brown or black. In pecan, the stroma is usually black when it becomes visible. The stroma releases spores which are blown to other

susceptible trees in the area and new invasions are initiated. Trees under stress are more likely to become diseased than trees that are healthy and well-cared for.



Fig 1. Dieback in a native pecan tree due to Hypoxylon canker.

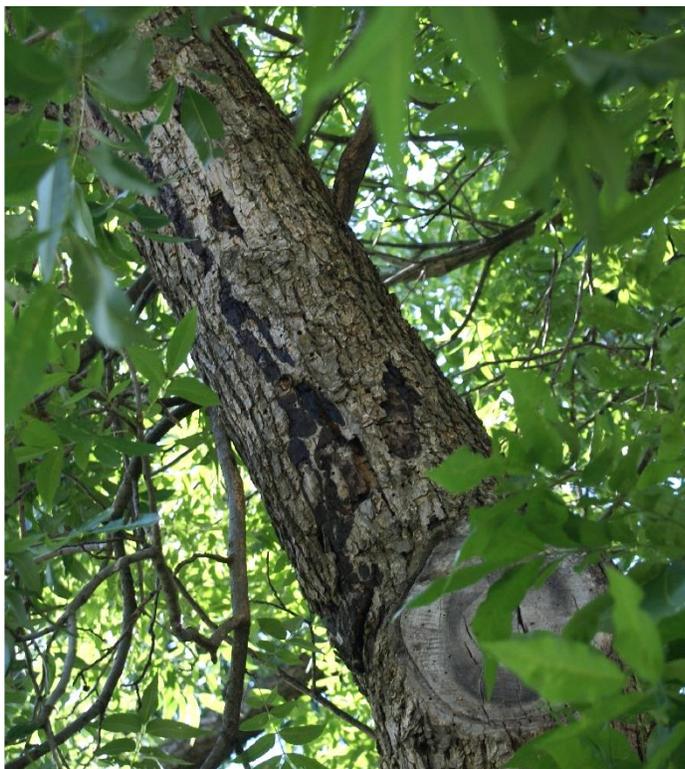


Fig 2. One limb was killed by Hypoxylon canker and subsequently removed. The adjacent limb is in decline and the stroma (fruiting structure) of the fungus is visible.

Management of Hypoxylon canker begins with prevention. Trees should be watered during periods of drought. Avoid injury to the trunk during mowing operations and practice proper pruning techniques. Remove dying and dead branches as they appear. Diseased wood should be disposed of by burning or burial.

If you suspect that your trees have Hypoxylon canker and you would like to have the disease confirmed, please contact your local county extension educator. They can take digital images of the tree which will be submitted to the Plant Disease and Insect Diagnostic Laboratory (PDIDL). In cases where branch or trunk sections are available, they can arrange for the submission of samples to the PDIDL for microscopic examination.

For more information, see: [EPP-7620, Biscogniauxia \(Hypoxylon\) Canker and Dieback of Trees.](#)

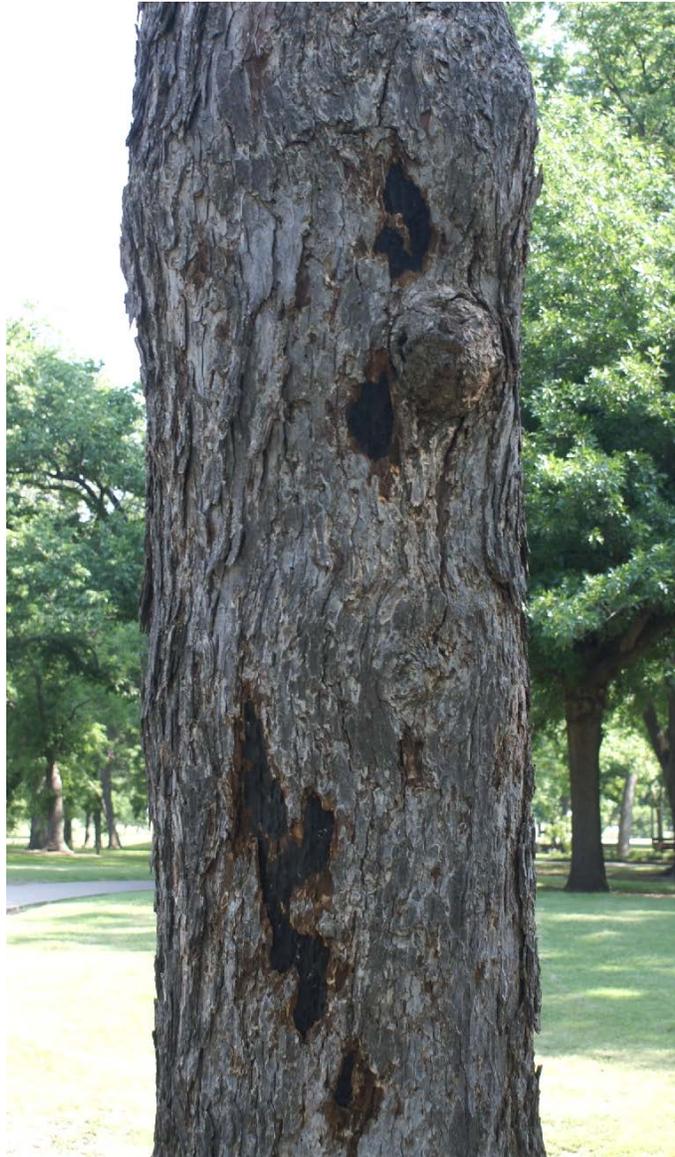


Fig 3. This native pecan tree has been killed and the black stroma (fruiting structure) of the fungus is visible on the trunk.

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