

- 2) Regularly prune your trees to eliminate any weak, dying, or dead limbs.
- 3) Avoid injury to the trunk and limbs of any tree. By reducing injuries, the trees are healthier and the chances of infection are reduced.
- 4) Avoid reductions or additions of soil in a tree's root zone, especially up against the main trunk of the tree. This will keep the bark tissue from breaking down reducing entry wounds from developing.
- 5) Take extreme caution when disturbing the environment of any existing shade tree. A tree becomes much more likely to develop significant problems the older and larger the tree. A mature tree is much less resilient to even minor changes in its environment, than a younger tree. This includes any activities such as landscape additions or modifications and irrigation system updates or installations.
- 6) Consult with your Certified Arborist when changes around your trees are going to occur (irrigation installation, landscaping, paving, or construction).

Just a reminder!

We offer regular and ongoing tree inspections as a courtesy to our existing clients. This can often avoid or at least make you aware of potential or developing problems with your trees.

**Arborilogical[™]
Services, Inc.**



www.arborilogical.com

The Tree Care Experts

©Copyright 2009 by Arborilogical[™] Services, Inc. No Reproduction is permitted in whole or part without the express written consent of Arborilogical[™] Services, Inc.

**Arborilogical[™]
Services, Inc.**

16 Steel Road • Wylie, TX 75098
Dallas 972.442.1524 • Ft. Worth 817.849.1160
Toll Free 866.55.ARBOR



www.arborilogical.com

The Tree Care Experts

HYPOXYLON CANKER OF SHADE TREES



Asexual stage

Ronald F. Billings, TX
Forest Service

There are a number of diseases and maladies that strictly colonize stressed shade trees. One of the most common of these stress related diseases is called Hypoxylon Canker. The specific species of this fungus that appears on Oak trees is called *Hypoxylon atopunctatum*. This species of canker is common in North Texas due to the fact that Live Oak, Red Oak, Blackjack Oak &

Post Oak are very common types of Oak trees making up a significant portion of the urban tree population. Hypoxylon Canker will appear more often on stressed Red Oaks & Post Oaks due to the simple fact that they are particularly intolerant to changes that occur in their environment. Thus they become stressed quite easily as a result of even minor changes around them.

Hypoxylon atopunctatum on Oaks first appears as a light brown or tan colored area (asexual stage) that is dry and dusty when disturbed. These are the spores of the fungus and they can travel far distances in wind driven currents. When these infections first develop, the bark becomes paper thin on the surface of the cankers and flakes off exposing the brown fungal



Sexual stage

Robert L. Anderson, USDA
Forest Service

patch. Within a few weeks, the light brown dusty area will turn a silvery-gray color with scattered black spots (sexual stage) and is no longer dusty but is very hard to the touch.

Hypoxylon atropunctatum is a weak parasite at best and causes no problem to healthy trees. The tree apparently defends against any significant infection with its normal defense mechanisms.

Hypoxylon often appears rapidly on the exterior of weak or dead limbs. In this circumstance the organism lives harmlessly in the very outer bark tissue and aids the tree in quickly shedding or discarding limbs for whatever reason. If Hypoxylon Canker appears on limbs or branches, it is NOT considered lethal and is often eliminated by simply removing the dead or dying limbs.

When the disease appears on the main trunk or stem of a tree, the tree is often dying or is nearly dead. It is extremely rare to observe Hypoxylon Canker on the trunk and the tree recover or survive. The main trunk of a tree actively carries moisture and nutrients up the tree. The outer layer of the trunk, under the bark, is merely a few cell layers thick and constitutes a tree's current growth ring. The appearance of Hypoxylon Canker on this portion of a tree indicates that its main transport system has been severely damaged or is dead, and a tree's basic ability to sustain itself is lost and the tree dies.

The disease does not spread from tree to tree, as many people fear. The fungus already lives in the outer bark

of most healthy Oak trees. It should be noted that any portion of a tree where Hypoxylon Canker appears, the wood will dry out quickly becoming brittle and dangerous.

Arborists will often use the terminology that "Hypoxylon Canker simply finished the tree off", since the organism is ONLY present due to a tree already being severely stressed. It would be inaccurate to say a tree died of Hypoxylon Canker because the disease is NOT considered a primary pathogen and is only present due to the fact the tree has been damaged from some other type of negative impact. This is another of many reasons why urban shade trees sustain significant benefit from ongoing deep root fertilization programs. This activity maintains and improves a tree's ability to naturally defend itself from Hypoxylon Canker and other common stress related problems.

There are no effective means of managing a significant infection of Hypoxylon Canker. Removing dead and weak limbs as well as maintaining overall health and vigor will be the most effective way to reduce the incidence of Hypoxylon Canker on your trees.



Sexual Stage

Robert L. Anderson, USDA
Forest Service

To avoid Hypoxylon Canker from becoming a significant inhabitant of your trees:

- 1) Maintain and improve the overall health and vigor of your trees with regular and ongoing deep root fertilization. More aggressive programs may be required to help rehabilitate stressed or damaged trees.