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Tree Times

Hypoxylon Canker and Stressed Oaks

It has been an almost daily event for me over these last thirty-three years to visit a site and then, after inspecting the trees there, step back to give the owner a quick overview of what I saw and what I think. And it is not uncommon at all to report that evidence of Hypoxylon Canker is present on one or more of his oaks. "*Hypoxylon what*?" he'll say and then furrowing his brow, ask "What does that mean? Is it bad?"

Hypoxylon Canker (*Hypoxylon atropunctatum* and other spp.) is usually a secondary complicating issue that appears on and in trees made susceptible through stress, trunk and branch wounding and significant grade changes. And at the time of this writing, one of the very significant sources of stress for our trees is the drought condition we endured through the last part of this summer. This naturally leads us back to the topic of supplemental watering that is so necessary during most summers and the discussion of the *how-to's* that appeared in my last newsletter.

One unnecessary source of trunk wounding is seen all too often in the improper use of climbing spurs during pruning operations. Climbing spurs as used in tree care are justified only in the case of tree removals or in emergency rescue situations.

The photograph in this article shows the usually gray or black surfaces of the reproductive spores of Hypoxylon Canker. These spores are spread by means of rainwater running over the surface and can also be windblown to nearby trees where infection can occur again. Establishment of the disease in a tree system results in rapid tissue drying and yellowing and dying of leaves.

Because this fungal disease is so contagious, it is important to quickly identify infected areas and remove them before spreading can occur. Prevention is always best and is accomplished by encouraging optimum tree health, which in turn (and as with many things) amounts to a higher resistance against invading organisms. Avoiding piling fill dirt around trees is another way to possibly sidestep this problem.

Hypoxylon Canker can also be found on other species as well but it is on our oaks that we encounter this nemesis most often in the Mid-South area. Maybe that is in part because we are blessed with so many of these sturdy and valuable giants spreading their shady canopies over the places we live.

Tree Issues Above and On the Ground

After living in the areas of Memphis and Shelby County for even just a short time it is almost impossible not to notice that red oaks are the undisputed signature tree for our region. Sometimes it seems that nearly everybody here that has a tree *at all* has an oak tree. As trees go, oaks are strong, long-lived, and beautiful. As they grow larger they can often be a prime contributor to curb appeal, site amenity, and resale values. Rightly placed, their expansive shade canopies can as well, year after year, provide significant economic savings on utility bills. In short, they can be an asset on several levels.

However, as time goes by and these oaks increase in size, they can also become simultaneously problematic in a couple of ways. Above the ground their expanding scaffolds and horizontal limb structures can become a safety hazard to property. This may require periodic pruning and weight reduction. For tree owners, these operations are a normal maintenance item that usually occurs on a three to five year cycle.

A second issue can arise when large oaks have been growing up near walks, driveways, and footings. The clay nature of our soil and the consequent tendency for large roots to grow near or

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at the surface . . . and to grow toward moist soil areas . . . can cause hard surface disturbances and damage that can be unsightly, a nuisance and worse case, unsafe.

The photo in this article clearly shows one example of this. Over the years I have received many calls from folks who report having trouble getting in and out of their drive because of concrete slabs pushed out of level by large misbehaving tree roots. Or calls from others who regularly trip on up-lifted sidewalk sections. Or calls from homeowners who fear that roots from a nearby tree – usually an oak – will crack their house footing.

In the case of the last situation . . . cracked footings . . . it is not likely that tree roots will do this sort of damage if . . . big *IF* here . . . the areas under the house are and have been historically dry. In that case, roots will typically turn to run parallel to footings in order to stay in rain-watered soil. However, a periodic inspection of the veneers around the building perimeter and footing can discover new hairline cracks long before they become a structural problem.

For walks and driveways that have sustained root damage, it is often preferable to use creative patching versus cutting out large percentages of a tree's feeder system and then repouring or repaving a new surface. Aside from potential major tree damage, the same wet soil area beyond the drive or walk will only incite the advance of new roots and ultimately, a repeat performance. While ramped patches may not offer the very best in aesthetic appearance, choice of that option *can be huge* in keeping a major feature in optimum condition.

The question always comes up: "Well then, how many roots can I cut?" And the correct answer in most cases is " . . . as few as possible and preferably none." Except in extreme cases, most folks can execute a neat repair, alleviate much of their complaint and come out miles ahead.

Alternative Ways To Skin A Cat

I was driving back from a property inspection the other day in an East Memphis neighborhood when I came upon the horrific sight pictured at right. It jolted me. My first thought was to wonder why anyone would knowingly authorize such a blatant crime against their own self interest and against an oak that has been years developing into the asset that now provides amenity and economic value for the property. But then "knowingly" may be a word that does not apply at all. And of course in this case I did not have opportunity to speak with the owner or anyone else to get the details and to fully understand the pressingly necessary need to dig that trench. I can imagine that sewer issues . . . and other issues . . . can indeed be pressing issues. But I also wondered if all the options for repair had really been explored before the fact . . . or had even been presented. When this photo was made not only had this oak been seriously jeopardized in its ability to survive, but the massive loss of mechanical anchorage now greatly elevates its potential for blowing down in a storm.

Far too often I have stood in amazement, listening while a contractor who evidently had only one habitual way of doing things, stood and proclaimed to his potential client that this or that procedure that he was recommending had never hurt any tree nearby *his* work. During such proclamations I have to wonder if that contractor ever gets back to take a look one or two years later. And even if he does, whether he puts two and two together.

So the other day, after pulling over to the curb and reaching for my camera, I got out and got a close look at the massive amount of root severance that had taken place. The trench you see in the photo is less than 30" from the tree's collar. No doubt, this valuable oak is headed for serious trouble within another year. Some of the roots in the photo were four and five inches in diameter and there was a vertical bank loaded up with smaller severed . . . actually *ripped off* . . . root ends. The majority were within eight inches of the surface because that's about the limit of the depth to which most moisture and all air can get in our clay soil.

As I was getting back into my car to drive away the back hoe operator returned from his lunch break in his (intentionally unidentified here) service truck. Suddenly I found myself resisting the strong urge to get back out and walk over to offer a friendly no-charge lecture on tree anatomy and function. I did not do that, but I knew that this photo (one of four that I made) had to go into this newsletter. It had to because such as this still happens in your neighborhood, and in mine.

Okay, sometimes there may be no option or alternative to such radical damage. But very often there is. So if you ever come to the point where digging close to a large important tree seems to be imperative, talk to someone first about alternative ways to skin a cat. You might ask about boring as an alternative to trenching. Or ask about rerouting a new line as opposed to repairing the old one. Ask what options there may be to severing tree roots in a particular space or along a particular line. You may be very glad you did.