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MORGAN TREE SERVICE
THE "VITACARE" COMPANY

Tree Times

Fire Blight: Trouble For Ornamental Pears!

As with many other things horticultural, diseases of ornamentals seem to wax and wane from year to year. This can in large part be due to the influence of weather as a facilitator of pathogenic advance and disease symptoms. One bacterial disease that seems almost rampant this year is Fire Blight in ornamental pears. Fire blight (*Erwinia amylovora*) can also be problematic in apple, ash, cherry, cotoneaster, hawthorn, and quince. But it presently seems most evident locally in pear trees, possibly because over the last decade or more pears, due to their uniform dense canopies and dependable spring flowering, have been a favorite planting on ornamental sites.

The disease first infects blossoms and leafy shoots. Spring flowers may appear droopy and water-soaked, then turn quickly brown. Soft recessed lesions on small twigs shut off vascular (cambial) function, seeming to move faster in warm humid weather. Sprinkler irrigation and the springtime use of quick release nitrogen can also function as accelerants for the disease.

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Another diagnostic indicator of the disease is the reddish-brown discoloration of the sapwood of newly infected shoots and twigs. It is here that the disease advances through the tissue. For this reason it is important to prune away the highly infectious material well back . . . at least eight (8") inches . . . behind the visually diseased tissue. If the discolored sapwood remains, the disease remains! In severely infected trees with much of the canopy appearing as though it had been scorched (hence the name Fire Blight),

this hygienic pruning can be worse than the disease, turning the tree into an ugly hulk that may be no longer desirable on the site.

Also, pruning equipment **must** be sanitized after each cut in order not to reinoculate healthy tissue. Use two parts alcohol with one part water or bleach or Lysol for this purpose. Brown fallen leaves and all pruned out material must be collected and removed from the site since this inoculum-laden tissue can itself easily facilitate re-infection. While the best time to undertake this hygienic pruning is in cold dry weather, severity and timing may argue for immediate removal, if such is practically possible.

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In large trees with severe visual disease presence this pruning is tedious, time-consumptive, laborious, and therefore potentially expensive. Consequently, removal of the entire tree may sometimes be recommended as the most viable option, especially since large Bradfords are also prone to mechanical failure as they gain size. Just last week I was invited to visit a property that had for years featured a row of nine pear trees across the front. I could immediately see that these trees had, as a single entity, grown into a beautiful and functional green screen while adding value and interest to the property by breaking the otherwise mundane straight line of the residences beyond. But sadly seven of the nine were significantly infected with this bacterial disease. Although the principals had noticed the problem the year before, they had evidently ignored it since it did not at that time appear to be important. I laid out the program for them, but finding someone who is both capable and willing to perform this tedious time-consumptive work for an acceptable price is not an easy job.

If hygienic pruning is practical, it is also advisable to treat the tree with an antibiotic such as streptomycin. This is most effectively done in the spring at the time of flowering. It is questionable as to whether doing one step without the other is capable of producing an acceptable result.

In any case, my advice is to say that the next time you select an ornamental tree, try to find something other that Bradford pear. And if you are set on a pear, you might ask your nurseryman about resistant cultivars.

From My Journal:

Porches, Journals, Travel, Choices, and Purpose

About three weeks before my 63rd birthday at the end of June I have been here sitting on my porch, listening to the squirrels barking in the treetops across the drive and writing a recent entry in my journal. As I did, it occurred to me again that this particular book is number 54 in a series that dates back to my high school days. While I was still writing in books that were to (subsequently) be numbered "two" and "three" in this life series, I was also spending my late spring afternoons in a sixth period study hall at the Mabel C. Williams High School (a.k.a. Germantown High School). It was in a building that is no longer there and in the days when there were only forty-six of us in the senior class. A third of the boys in fifth period senior English were also members of the local *one-leaky-old-truck* fire department. So for me it was always envy-run-rampant on warm spring afternoons when the fire siren would sound down at the station and this lucky minority would bound from their seats and out the classroom door. Though we didn't know it at the time, that class was destined to become a virtual family.

But in those halcyon days, in those glorious spring afternoons I was dreaming anticipatory dreams of soon-to-be graduated freedom, of hitchhiking to the docks of New York (*and it – hitchhiking - was still in those days a doable thing)* and of non-itinerated, free-spirited and shackle-less travel aboard some nameless tramp steamer with only a duffle, a portable typewriter and high expectations. It was my own personal Technicolor dream in the style of Lowell Thomas and Richard Halliburton. In Halliburton's The Royal Road To Romance, my now out-of-print underlined and margin inscripted bible of those days, the author had said that the greatest life in the world is to travel all over the world and make your living by writing about it. How could I have known then in the spring of '62 that I was at the very end of that romantic era, after a second World War ('41-'45) and a police action in Asia ('50-'53) had forever changed the way that we would live and think about things. It was a post DienBienPhu era when there were already U.S. "advisors" in a place called Viet Nam. Most of us had still not yet even heard of that Southeast Asian country.

Choices are unforgiving. I mean that not so much in that they are necessarily bad ones but just that the momentum of them very often makes shifting into reverse darn near impossible. So I graduated and then less than a year later I was enlisted in the Marine Corps, for reasons that even now still surprise me. While that decision turned out in many ways to be a very good one and in fact today has me in touch with a group of men across the country who I love like brothers, that decision also was a major fork in my road that at its end finds me today writing a lot about arboriculture. Indeed, that decision and other subsequent ones have together served in strange ways to place me here on this very porch. And each one of those forks also contains for me a haunting regarding the separate and distinct, albeit forever now unknown, possibilities and destinations that inhabited the alternative choices. That makes me wonder anew at the odd and profoundly mysterious way that God orchestrates our lives.

The love of and fascination with travel has remained with me through all these decades and my wife of thirty-seven years today still shares that love with me. After one of our European trips six or so years ago I constructed a photo-narrative, a storybook, that chronicled that adventure in the way that I imagined that Richard Halliburton might have told it. I entitled it On The Trail Of Bilbo Baggins and I suspect that one day my daughters will treasure it as a favorite coffee table item.

Then on another Caribbean sailing adventure I found myself temporarily sitting alone in an open-air restaurant on St. Barts, catching up my journal with my camera there on the table. When the proprietor, towel in hand, walked up and asked me in an awkwardly accented English if I was a writer, I instantly reverted to some surprisingly out-of-the-blue Walter Mitty mode and answered "Yes, I am." He nodded appreciatively, smiled and there very visibly in his expression was something like a silent "Wow!" I have to confess that I remember feeling very good in the moment of my little instantaneous pretense.

So I was sitting there on the porch wondering just how many more trips are in me. The squirrels across the drive were barking but my legs were also aching in the wake of some recent back surgery. The thought of doing again some of the things that I have done before seemed suddenly like just a little bit too much trouble. And that scared me. Norman Maclean, the author of A River Runs Through It and another late-in-life documentary entitled Young Men and Fire, spoke and wrote in his late seventies about his own "anti-shuffleboard" philosophy. Consequently, he was writing and exploring his expanding purposes right up until the day of his death. And I re-decided one more time that that's how I want to be also.

So I smiled at the squirrels barking across the drive, tucked my journal back into the satchel and took another slow sip of morning coffee.

Girdling Roots: Death By Constriction!

I almost changed this title . . . "Death By Constriction" sounds almost too close to another arboricultural topic: "Death By Construction." It's just one letter difference but that is a wholly separate problem and separate subject that I find myself dealing with all too often as a consulting arborist. This space however is intended for a discussion of girding roots. *That other subject* is dealt with in some detail in the Winter, '06 issue of this letter.

Just like the lead article on Fire Blight, it seems that instances of stressed trees with discovered evidence of circling constrictive roots that are slowly and silently choking the plant have come to my attention in extraordinary numbers this year. So I guess that in some degree I find myself writing about what I am seeing a lot.

A picture is worth a thousand words and the one here is as good an illustration of the problem as I could find. And I'm sure it's worth saying that just because a tree has this issue going on with it does not mean that it will automatically die. Indeed, probably most don't: they just languish. They just hang on from year to year, looking *kinda' puny* as some would say and never really living up to their aesthetic (and hoped for) potential on the site. And not infrequently the cause is never discovered or, maybe worse, it's discovered too late to do anything about it. We've all heard stories of cancer victims who are so far advanced that the surgeons just sew them back up.

When it is not too late, initial investigation may suggest the need to do a little digging below grade and cut away those offenders that are not yet too large and past remedy. Use of an air knife to quickly and easily remove surrounding soil to facilitate inspection and appropriate excision(s) is recommended for larger trees.

For reasons that I'm still not presently clear on, maples seem to be especially prone to this problem. Very often you will find a maple tree that is chlorotic (yellowish leaves) or sparse and/or dying back in the top. In such cases, the first place to look is at the bottom, at the ground and below. Very often you will find there roots that have misbehaved and wrapped themselves around, under, across and between other roots and the collar (flare) of the trunk itself. As time passes and size increases, this situation begins to restrict vascular function in much the way that a cord increasingly tightened around your neck would finally restrict function. When this is found, the trunk is usually more compressed than the offending root and food from the top to the other roots is restricted. In severe cases, the trunk can even be susceptible to breakage at the point of girdling.

But maples are not the only tree genus subject to this phenomenon. It can afflict a variety of plants. Also, if you look again at the photo, you can see that the girdling root there is creating a "tucked under" phenomenon at the collar that contrasts with the normal outward flare of the truck at the level of the ground. Even when the root itself is below grade and out of sight, this *tucked* appearance can be a giveaway. Sides of trunks that go straight into the ground or with that tucked effect are always suspect.

For new trees, extra attention and care at the time of planting can go a long way toward preventing this down-the-road trouble. Refer to my article on proper planting in the Fall '06 issue.

Spiders In Your Trees?

Did you know that **Spider Mites** are not really insects since they have eight legs rather than six (family Tetranychidae). But who would know since they are virtually too small to see except with a hand lense or against a good contrast surface such as a white card or sheet of paper . However they can none-the-less wreak damage on conifers and broadleaf trees alike. This is especially true in dry weather such as we have had recently. In such conditions their populations can build rapidly.

The bronzed foliage suggests the presence of spider mites and the fine webbing confirms this.

If you have noticed spider web like structures amid the branch tips and foliage of your trees and/or shrubs, this is likely to be your problem. These sucking-mouth-parts critters will fleck and stipple the foliage as they destroy the chlorophyll in the outer leaf.

Treatment with a miticide such as Kelthane or similar will be necessary to arrest this damaging population in the summer months.

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It's Summertime! Water Your Trees!

As I am putting the final touches on this summer edition of this letter we have been more than a few weeks into a significant rainfall shortage. While droughts can occur at various times of the year, it is in the long days of the summer months that the combination of disappearing rain-loaded frontal systems and long hot hours of soil moisture evaporation place a special stress on important plants, including established trees.

Big trees do not take care of themselves. They need help also when weeks go by without significant rain. Unlike smaller plants, large trees are not so easily replaced and they can be stressed beyond a point of no return at which they become endemically susceptible to a plethora of other troubles.

How to do it? Unfortunately, most irrigation systems that are installed primarily for lawns, shrubberies and ornamental beds are not set to properly water large established trees. In fact, frequent applications (e.g. every other day) of short periods of water (e.g. fifteen minutes) can do as much harm as good for your big trees. In clay soils that need to breathe and aerate, too little water applied too often is tantamount to placing a plastic bag over your head, cinching it at the neck and expecting you to do just fine. The top inch or so that gets wet and stays wet blocks gas exchange.

Instead, water only weekly during periods of less than an inch of rain. Apply water slowly to a given area for two-three hours, allowing it to soak in rather than run off downhill or into the gutter. Soaker hoses set out in circles in the **outer (radial) half of the dripline** work well for this purpose. Sprinklers, even when properly placed, very often apply water too rapidly. As a result, much of it is wasted. And whatever you use, try to keep the water off the trunks as much as possible. Not much can be taken up there and extended periods of wetness at the collar, especially when it is covered with vines, dense shrubberies, etc., can also encourage the beginning of various root rot diseases.

Did you Know . . .

. . . that plants growing in mostly shady environments adapt to minimal amounts of sunlight by growing large, thin, and widely-spaced leaves that have thin cell walls, with usually only a single epidermal layer of cells at the surface. Such leaves are able to make maximum use of limited light. In the nursery, shade-grown plants usually grow more rapidly than plants in the sun, but often have reduced trunk caliper and smaller root systems.
Arboriculture, 3rd ed., Harris, Clark and Matheny

. . . that the International Society of Arboriculture's Certified Arborist Training Program is increasingly becoming the accepted standard for practitioners within most areas of tree care across the country and now, internationally. Credentials earned via this program ensure that knowledgeable and competent technicians are present on your property. You should look for the Certified Arborist logo associated with a company's advertising whenever you solicit tree work.

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