

Leaf Notes

Spring 2016

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DROUGHT CONDITIONS PERSIST



Over the past seven (7) years our area has been under drought-like conditions. We have seen some cold, snowy winters that led to cool moist springs, but overall, rainfall in our area has been very limited. Drought is very damaging to trees and shrubs. Drought can cause a variety of problems for the trees including: smaller leaves, wilting, leaf scorch, insect and pest outbreaks, slowed growth and even death of the plant. For example, if you completely ignored your potted plants that are sitting on your porch, what would happen? The root system would quickly die back and the foliage of the plant would wilt. The same thing happens to trees and shrubs during drought conditions. One great way to help

plants deal with drought is through supplemental watering. A good rule of thumb for watering is to look at the diameter of the tree, multiply that by five (5) and that equals the time (in minutes) it takes to water the tree. So, if you have a 10-inch diameter tree, you would need to water that tree for 50 minutes each week (if we do not get rain). But what if you have a 40-inch tree? That tree would require 200 minutes of watering each week, which is not a realistic idea. Nobody has time to water a tree that much. You can help those large mature trees by watering, but you can also help those trees by having their root systems inoculated with mycorrhizal spores. In their natural environment, the tree's root systems have many types of beneficial fungi growing on them. These fungi obtain water and nutrients from the soil, and then they pass some of that water and nutrients on to the trees. In other words, instead of the tree only having thousands of feeder roots absorbing water and nutrients, it has potentially hundreds of thousands of feeder roots absorbing the water and nutrients from the soil. In the urban environment, the conditions of the landscape are not conducive to the mycorrhizal spore growth and longevity. So these spores must be introduced to the tree's root systems. We generally recommend live spore treatments after periods of drought, or after any type of root system stress, such as construction damage or compaction of the soil. Most of our clients are on a two-year cycle of live spore treatments, but if you are not and you think your trees could benefit from this treatment, please contact your arborist today.

BEWARE OF THE BOTRYOSPHAERIA CANKER DISEASE

Botryosphaeria canker is an opportunistic fungus that caused many issues last year in the urban landscape. Most commonly planted trees and shrubs in the urban landscape are found to be susceptible. The fungus causes stem cankers that can lead to branch dieback. Since the fungus is an opportunistic pathogen, it only impacts plants that are under stress. Last year's weather proved to be very stressful. We experienced extremely cold winter temperatures, record spring rainfall, which transitioned to another summer drought. Compacted soils, improper pruning, excessive mulching and improper planting depth can also further increase plant stress, leaving them vulnerable to disease.



BEWARE OF THE BOTRYOSPHAERIA CANKER DISEASE CONT.

Symptoms of Botryosphaeria canker disease are commonly seen as wilting of a single branch or branches that previous to the infection looked healthy. Upon closer inspection to the cankered area you will find brown to reddish-brown coloration to the wood instead of the normal white coloration of a healthy stem. This fungus overwinters as fruiting bodies on dead tissue and colonizes plant tissue through wounds, leaf scars, and lenticels on the bark. Spread of this fungus occurs through air movement, dispersal of spores from rain and cross contamination from pruning tools. At this time there are no effective fungicides labeled to control this issue.

The best defense against this common disease is to keep your landscape growing vigorously through proper fertilization and

irrigation and to plant the right plant in the right place. Every plant requires specific cultural conditions and when planted outside those optimal conditions, their stress levels will increase, leaving them vulnerable to this disease and many other opportunistic organisms.

If you suspect your landscape plants are struggling after this past growing season, please let your arborist know. We can identify the issue and formulate the proper corrective measures to keep your landscape healthy and better equipped to deal with the stresses that will inevitably happen. We can hope for better weather this year, but as long as we remain diligent in caring for and maintaining our landscape, we'll be ready for whatever Mother Nature has in store.

MISTLETOE: FRIEND AND FOE

On a recent trip to the Eastern Shore, I noticed small pom-poms of evergreen leaves scattered in the canopies of many trees along Route 50. This caught my eye because the trees were dormant and the clusters stood out against the grey backdrop of the sky behind them. At first glance I thought they were squirrel nests but upon a closer look I realized they were plants: mistletoe to be exact.

My knowledge of mistletoe was limited to it being the Christmas plant that sits atop folks who must kiss if they are underneath it. But, what exactly is mistletoe?

It has a long history, dating back to the Vikings. It has been used as a healing plant, to increase fertility and its even been used to ward off evil spirits. Mistletoe is actually very interesting in the plant world because it is considered to be a partially parasitic or a hemi-parasite. Like other parasitic plants, it grows on the trunks or branches of trees and gets its nutrients from roots that it sends out and penetrates into the tree's vascular tissue. However, mistletoe is unlike other parasitic plants because it is able to grow on its own and produce food through photosynthesis. While the plant sends roots out into its host, it is unlikely that a tree infested with mistletoe will die as a result of the plant's feeding strategy. The main issue is that the host tree is being depleted of its

nutrient reserves, which can reduce overall tree health, leaving the tree vulnerable to secondary invaders.



Though mistletoe is a parasitic plant, they do have attractive flowers that range in color from red to yellow and have white or red berries. There are over seventy species of mistletoe, but there are only two main varieties. The most common and widely used at Christmas time is *Pharadendron falvenscens*. It is native to North America and can be found growing from New Jersey to Florida. Another common variety is *Viscum album* and it is native to Europe. They both can be found growing on oaks, elms, apples, firs and pine trees. However, one should remain cautious when handling this plant because it can be harmful and even fatal if ingested; and it's toxic to small animals.

While there are many myths and folklore surrounding mistletoe that date back to the Vikings, I would keep with tradition and look to score a kiss or two, over the next holiday season. Don't forget to look up, the next time you're heading to the beach, and admire these often overlooked Christmas plants!



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