

# TREE TIPS

TREE & SHRUB CARE FROM BARTLETT TREE EXPERTS

## Organic disease management by Drew Zwart, PhD

Whether in the grocery store or the landscape, the last decade has seen a dramatic rise in interest in “organic” products and services. A common assumption with organically registered products and materials is that they are healthier, safer, or are produced in a more sustainable or environmentally friendly manner. This, however, is often not the case. It is important to consider that “certified organic” does not always mean “safer” and certainly does not mean “chemical free”. Often, organically produced fruits or vegetables actually need more treatments in a growing season than if grown using standard practices. The same is true in the landscape: whereas most common foliar diseases can be managed using certified organic materials, in some cases doing so will result in lesser control of target organisms, increased number of required treatments, or increased effect on non-target organisms.

The true “safest” or most environmentally responsible method

for managing landscape disease employs an integrated combination of cultural practices and preventive treatments. Addressing adverse growing conditions, practicing sanitation when pathogens are present, and choosing appropriate plant species for a given region are all “organic” practices that can limit landscape disease. In addition, using “bio-rational”, or naturally derived materials—those that are produced in nature but altered slightly for landscape use—is another environmentally sound practice to manage disease while minimizing the number of applications and the potential effects on non-target organisms. Purely organic disease management programs are available, but for a true sustainable and ecologically beneficial landscape, an integrated approach using a combination of biological, cultural, and chemical (organic or otherwise) options is often the best practice.

Our goal is a sustainable, ecologically beneficial landscape.

## Keeping your apples scab-free

by Andrew Loyd, PhD

Apple scab is one of the most devastating diseases of flowering apples and crabapples, and is caused by the fungus *Venturia inaequalis*. The fungus can infect leaves, petioles and fruit, where it causes



A crabapple with scab leaf spots.

leaf spots, petiole lesions and spots on fruit.

In early stages, the infection sites will appear raised, sooty and gray, which is direct evidence of the fungus. If left untreated, infected leaves will defoliate early, and can

serve as a source of infectious spores for secondary infections as the growing season progresses. In addition, infected fruit will turn into “fruit mummies”, and persist to the following season during which they will serve as an inoculum source.



An apple with fruit spots caused by scab.

Successful management programs involve tree resistance, sanitation (e.g., pruning out infected tissues), and applications of protective products. Removal of defoliated leaves and pruning out “fruit mummies” from trees will reduce the amount of

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## Honoring Bruce Fraedrich, PhD



For most of the past 43 years, Dr. Bruce Fraedrich has been at the helm of the operations at the Bartlett Tree

Research Laboratories in Charlotte, North Carolina. And what a time it's been! As vice president and chief scientist, he has helped to research and develop so many of the products and services you read about in this newsletter that it would take a page and a half to list them all.

Dr. Fraedrich has dedicated his career to advancing arboriculture and keeping Bartlett as the leader in our industry. It has been our privilege to work with him and to learn from his vast knowledge.

As a main contributor and editor of *Tree Tips*, Dr. Fraedrich distilled scientific information and made it accessible for our readers. His articles have always educated us and enabled us to more fully understand the complexities of tree and shrub care.

The International Society of Arboriculture gave Dr. Fraedrich its highest honor, the Award of Merit for "outstanding, meritorious service in advancing the principles, ideals, and practice of arboriculture."

We wish Dr. Fraedrich all the best in his retirement.

## Soil sampling – we make informed recommendations

Each year the Bartlett Research Laboratories process the results from more than 15,000 soil samples submitted by Bartlett Arborist Representatives from client properties. Before any fertilization is performed, soil samples are taken from the property, analyzed in the lab, and recommendations are written for clients by our laboratory scientists. The resulting soil care programs are some of the most intensive in the landscape industry.

Every soil, in every geographic location and property, is different. That means that fertilization for any location can be different. We offer more than 15 different blends of our own Boost® fertilizers as well as custom blends for each site, or even for individual plants.

Our scientists have developed and implemented a system of review and delivery of soil analysis reports to clients and Arborist Representatives. Those reports help us to make educated decisions about client property care and to obtain maximum results for our clients' landscapes!



## Apples *(Continued from page 1)*

infectious spores and ultimately slow the disease progress for the following growing season. In addition to these sanitation tactics, protective products are extremely effective, but timing is everything. Applications of products are preventive and should

begin starting at bud break, followed by applications at each flush of growth. Successful management of apple scab will result in ornamental apples and crabapples having great fall color and flower/fruit set.

## Saluting Branches

by Chelsea Fletcher

This past September, our Hooksett, New Hampshire, office participated in the 4th annual Saluting Branches event, as it has each year since this national event began. In honor of American servicemen and servicewomen, arborists unite to provide volunteer tree care services at 53 veterans cemeteries throughout the country.

Bartlett Arborist Representative Joe Davis and crew members Kevin Gelinas, Scott Davis, and Gary Rosato worked at the New Hampshire State Veterans Cemetery in the town of Boscawen. Scott and Kevin pruned trees around flagpoles to allow clearance for the flags. Joe and Gary performed root collar excavations using an air spade.

Overall, the 2018 event was a huge success. It is estimated that approximately \$3 million of tree work was donated throughout the country.



# TREE FOCUS:

## Tupelo/Black gum (*Nyssa sylvatica*)

### History

Tupelo, “black gum”, or “sour gum” (*Nyssa sylvatica*) is a North American tree species native to the eastern United States. The *Nyssa* tupelo genus is the only genus within the Nyssaceae family native to North America. The first tupelo species described grew in swamps, so the tree was named in honor of the mythological Greek water nymph Nyssa. Tupelo is known for its brilliant fall color, with various hues of yellow, orange, bright red and purple. Larger, more mature trees have furrowed bark. This slower-growing deciduous tree has flowers that are excellent sources of nectar for pollinators.

### Culture

- Grows best in moist, acidic, well-drained soils, but can tolerate wet soils or even standing water
- Prefers full sun but will grow in partial shade, so long as the tree receives a 3- to 4-hour period of direct sunlight each day
- Can grow in a variety of climatic conditions (plant hardiness zones 4-9)
- Considered to be a relatively low-maintenance tree

### Concerns

- There are no serious insect or disease problems afflicting tupelo
- Some susceptibility to leaf spots, cankers, and rust pathogens, as well as leaf miners and scales



Tupelo is known for brilliant fall color.



### Bartlett Management Practices

- Structural pruning to promote proper structure when young, and periodically through the life of the tree
- Preventive treatments in the spring for foliar diseases (leaf spots and rusts)
- Regular monitoring for foliar insect pests (leaf miners and scales) and treatment applications when necessary

## Fun with trees Turn a twig into a tree!



To make this cheery springtime tree terrarium, you'll need a glass canning jar, a small twig that fits in the jar, some colored tissue paper—and for assembly, craft glue and a small bit of modeling clay (or for older kids, a hot glue gun). Gather a few twigs in case one breaks in little hands. First make small balls of crinkled tissue and glue them onto your twig to create a spring tree. Next, stand your tree on the inside of the jar lid with the clay, and glue on some crinkled tissue for grass. Then carefully lower the jar over your tree, screw the jar shut and... Tada! You have a tree terrarium!





Ask your Arborist to check the health of your trees and shrubs.

## Pennsylvania's Tyler Arboretum

Located less than an hour's drive from Philadelphia, Tyler Arboretum in Media, Pennsylvania, is open to the public 362 days a year. Among its many features are beautiful exhibits of heritage magnolias, cherries, crabapples, hollies and lilacs, as well as 11 acres of rhododendrons and azaleas. An extensive collection of conifers is displayed in the Pinetum.

Interested in more than trees and shrubs? The Arboretum encompasses 650 acres—there are also historic buildings; 17 miles of hiking trails through woodlands, wetlands and meadows; demonstration gardens; and ten tree houses! The tree houses are open from April to November.

Find out more about visiting this wonderful place at [www.tylerarboretum.org](http://www.tylerarboretum.org).



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