

# The Citizen Forester

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## Book Review: Branching Out: Features from the Past for the Future

By **Rick Harper** Intended for technical practitioners concerned with the management of ornamental trees and shrubs, including arborists, urban foresters, and green industry professionals, *Branching Out: Features from the Past for the Future* is a compilation of 18 years of feature articles appearing in the ever-popular newsletter produced by Cornell University, *Branching Out: An Integrated Pest Management Newsletter for Trees and Shrubs*. As an extensively-developed technical publication, this 296-page, spiral-bound resource is informative, enlightening, and practical. Through years of careful observation and experience, O'Brien and Hudler earned their positions as two of the foremost authorities on pest management in ornamental landscapes. This publication leverages their experience and perspective to help plant health care professionals manage existing pest-related outbreaks.

Laid out in a user-friendly manner with an easy-to-readable table of contents, this book quickly sets the tone behind the authors' motives to create a resource that not only synthesizes the feature articles from *Branching Out*, but also references further information in two internationally-renowned texts, also produced by Cornell University: *Insects that Feed on Trees and Shrubs* (2<sup>nd</sup> ed.) by W.T. Johnson and H.H. Lyon and *Diseases of Trees and Shrubs* (2<sup>nd</sup> ed.) by W.A. Sinclair, H.H. Lyon, and W.T. Johnson. A description of the 50°F threshold as being the basis for Growing Degree Day (GDD) calculations is also outlined early in the text, as GDDs are generally considered a reliable environmental marker relative to pest development throughout the growing season. The authors also take the opportunity to let the reader know that pesticide recommendations that may normally be found in *Branching Out* articles have

been removed, as pesticide labels and regulations may vary from state to state and even change.

The book is divided into three practical sections with further subdivisions: Insects (and other arthropods), Diseases, and Management.

Insects are initially discussed under the heading "Host Specific Pests," and some of the most well-known (and timely) insects are highlighted in this section, including emerald ash borer (*Agrilus planipennis*), birch leafminer (*Fenusa pusilla*), bronze birch borer (*Agrilus anxius*), hemlock woolly adelgid (*Adelges tsugae*), and viburnum leaf beetle (*Pyrrhalta viburni*). Pests under the "General Interest" heading include well-known actors like ambrosia beetles (*Xylosandrus* spp.), Asian longhorned beetle (*Anaplophora glabripennis*), black vine weevil (*Otiorhynchus sulcatus*), white pine weevil (*Pissodes strobi*), as well as sawflies, scales, and a well-known arthropod pest, spruce spider mite (*Oligonychus ununguis*).

"Host Specific Diseases" include beech bark disease (*Nectria* spp.), bleeding cankers on European beech (*Phytophthora* spp.) and horsechestnut (*Pseudomonas* sp.), oak wilt (*Ceratocystis fagacearum*), and thousand cankers (*Geosmithia morbida*). "Diseases of General Interest" detailed include Armillaria root rot (*Armillaria* spp.), bacterial leaf scorch (*Xylella fastidiosa*), and a plethora of general canker diseases (e.g. *Botryosphaeria* spp., *Eutypella* spp., *Nectria* spp., *Cytospora* spp.), needle rusts (e.g. *Coleo-*



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## Book Review: Branching Out

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*sporium* spp., *Pucciniastrum* spp., *Uredinopsis* spp., *Milesina* spp.), cedar rusts (*Gymnosporangium* spp.), and the much-talked-about generalist-pathogen, verticillium wilt (*Verticillium dahliae*). Of particular interest to commercial arborists and community foresters concerned with urban risk tree issues, this section closes with a list of “Top 8” wood decay fungi that features excellent color photos and succinct descriptions for easy identification.

The “Management” section of this compilation covers some little-discussed topics pertaining to ornamental landscape pest management, including the use of alternative insecticides, organic products, how to attract natural enemies, and the use of biocontrols, like nematodes. Of particular use to any reader would be the “commonly observed beneficial insects” write-up, which also includes 18 color photos of known beneficials, like the assassin bug (Family: Reduviidae), damsel bug (Family: Nabidae), flower fly (Family: Syrphidae), minute pirate bug (Family: Anthocoridae), lacewing (Family: Chrysopidae), spined soldier bug (Family: Pentatomidae), and others. This resource facilitates the quick ID of any of these insects that practitioners would naturally want to conserve and encourage on landscapes. Additionally, the section on insect traps details traps available for purchase and set-up. The inherent variability in ornamental landscapes may make trapping insects much more difficult than in traditional field crops settings or greenhouses that are more uniform in nature; practitioners should take note, however, that some clientele may be willing to pay for a pest trapping program to avoid a conventional pesticide application.

The final pages of the book are dedicated to miscellaneous plant health-related problems. Though these types of scenarios may not garner the “glam” and “fame” associated with insects or diseases of intrigue, they often comprise a majority of plant-related samples that a given diagnostic lab may receive. Thus, the book’s discussion of environmental stress, soil compaction, and site assessment by a renowned researcher like Dr. Nina Bassuk, make this guide all the more valuable and practical for the end user. Information about abiotic conditions like herbicide injury – with numerous high quality specimen photos – and discussion about plant-related problems that ensue as a result of drought conditions, as well as problems that result from improper mulching, are of

great importance. Finally, any individuals who have interacted with plant or soil lab diagnosticians or who have been on the receiving end of the sample submission process can appreciate just how important, and even limiting, a sample can be if it is not properly taken, packaged for transport, and delivered in a timely manner. This book addresses this by clearly outlining how to produce high-quality photographs of insects and diseases to submit for diagnosis.

In summary, this extensive compilation represents an important step in addressing the key need of enabling practitioners to have an arms-length resource available that will help them formulate answers to important and sometimes complex questions, aiding them in making informed decisions about pest management strategies. Differing from traditional fact-sheets or white-papers, the diverse array of contributing authors that includes on-campus researchers and field-based extension specialists who are able to do more than simply illustrate pests and detail life cycles – have the freedom to develop the Integrated Pest Management (IPM) concepts that are the foundation of the management strategies of the many pests outlined in this book. In addition to formal research conclusions, the authors also identify their personal, experientially-based findings, and how these might contribute to potential pest management recommendations. This book is filled with high-quality photos with helpful captions, and titles depicting pests and plant-problem scenarios. *Branching Out: Features from the Past for the Future* would make an excellent addition to the library of any professional with urban or ornamental plant health care interests.

**Rick Harper** is Extension Assistant Professor of Urban & Community Forestry in the UMass Department of Environmental Conservation.

## Species Spotlight—Pagoda dogwood, *Cornus alternifolia*\*

By Mollie Freilicher,  
Community Action Forester

Pagoda dogwood, also known as alternate-leaf dogwood, is a member of



the dogwood family, Cornaceae, and is native to Massachusetts. It ranges from Manitoba to Newfoundland, south to West Virginia (and along the Appalachians to northern Florida), and west to Arkansas and Minnesota. Where it occurs naturally, it prefers moist soils in the understory of mixed woodlands, along streams, and at forest edges. Unlike other members of

the dogwood family, pagoda dogwood has alternate branching—hence the common name “alternate-leaf dogwood.” Pagoda dogwood is large shrub or small tree, reaching 15-25 feet tall, with a spread that is equal to, or greater than, its height. It is known for its spreading, horizontal habit. Hardy in USDA zones three to seven, pagoda dogwood is suitable for all parts of Massachusetts.



Leaves of pagoda dogwood are alternate, simple, and ovate, and can be two-to-five inches long and one-to-two-and-a-half inches wide. The leaves are clustered at the end of twigs, giving the tree a whorled appearance. There are five or six curved veins from the mid-vein, and the leaves are green above and paler below. In fall, the leaves can turn yellow to

purple, but it is not usually notable.

Twigs are slender, shiny, and greenish, but can also be purplish or purple-brown. The flower buds are valvate, a quarter-inch long, red-purple in color, and hairless at the base and fuzzy toward the tip of the bud. Vegetative buds are also valvate, and smaller.

Pagoda dogwood flowers in late spring, with fragrant, white, four-petaled flowers that are borne in upright clusters at the



ends of twigs. The fruit is a dark blue-black drupe, up to one-third inch across, that matures in September and October. The fruit stalk, which starts as green, turns to red, providing a nice contrast. The fruit provides food for small mammals and several species of songbirds.



In the planted landscape, pagoda dogwood is well suited for natural settings, massed plantings, borders, around utility lines, and also on its own as a specimen. Because of its horizontal, spreading habit, pagoda dogwood is often used for hedges and screening. It does best in moist, acidic, well-drained soils and will thrive in full sun or part shade. It is not tolerant of salt spray or drought and is susceptible to leaf spot and twig cankers. G. B. Emerson describes it as “A beautiful plant, with a great variety of character.” And Nathaniel Lord Britton in his 1908 tome, *North American Trees*, states, “The striking form, beautiful foliage, profusion of bloom, pretty red-stemmed, blue fruit, and autumnal coloration, make this a most desirable small tree in any situation.” Pagoda dogwood has much to offer in all seasons and would make a great native addition to the planting palette of communities in Massachusetts.

\* The genus *Cornus* has been reorganized and some plants, like pagoda dogwood, are now in the genus *Swida*. We are using the “traditional” taxonomy here.

### References

Dirr, Michael A. *Manual of Woody Landscape Plants*. 5<sup>th</sup> ed. Champaign, IL: Stipes, 1998.  
*Forest Trees of Massachusetts*, 7<sup>th</sup> Ed., Massachusetts Department of Conservation and Recreation, 2016.  
Virginia Tech Dendrology Factsheets: <http://dendro.cnre.vt.edu/dendrology/factsheets>

Pictures (Clockwise from top-left): Flower, fruit, bark, twig, leaf: Virginia Tech.





# Revisiting our March Species Spotlight for Edibility



## Yellow Birch (*Betula alleghaniensis*)

Our frequent contributor on edibility, Russ Cohen, has written about what you can make with yellow birch (and black birch) in this post: [Tasty Teas \(and more\) from Trees: Black and Yellow Birch](#). Thanks Russ!

## Grants

### DCR Urban and Community Forestry Challenge Grants

#### Deadline: November 1 (Full Application)

Challenge grants are 50-50 matching grants (75-25 for environmental justice projects) to municipalities and nonprofit groups in Massachusetts communities of all sizes for the purpose of building local capacity for excellent urban and community forestry at the local and regional level.

The USDA Forest Service provides funding for the grant program, and DCR administers the grants with guidance from the Massachusetts Tree Wardens' and Foresters' Association. The DCR Urban and Community Forestry Program assists communities and nonprofit groups in their efforts to protect and manage community trees and forest ecosystems, with the ultimate aim of improving the environment and enhancing the livability of all of Massachusetts's communities.

#### Project areas include:

- Building and Strengthening Citizen Advocacy and Action Organizations
- Securing or Training Professional Staff
- Developing and Implementing Systematic Urban Forestry Management through tree inventory and analysis, resource assessment, and development of plans
- Attaining a Tree City USA Award, Growth Award, Tree Campus USA Award, or Tree Line USA Award
- Completing strategic community tree plantings and "heritage" tree care projects
- Other projects

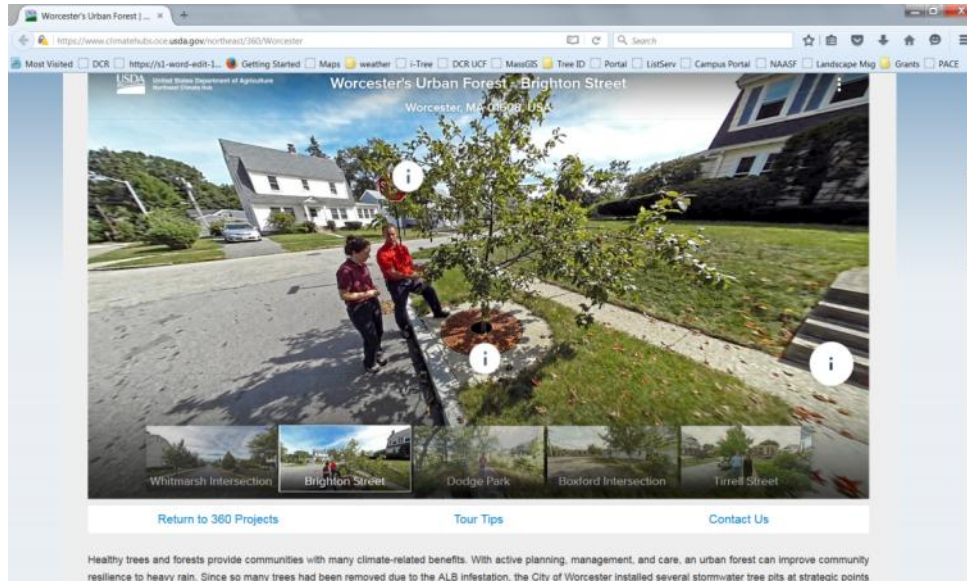
**NOTE:** In 2016 we implemented **new guidelines** for strategic planting grants.

Grant Funding Request	Eligibility
\$1,000 - \$7,000	All communities may apply
\$7,001 - \$20,000	Community must be a Tree City USA
\$20,001 - \$30,000	Contact DCR Urban and Community Forestry to discuss

Start planning for the next round! Read the complete guidelines and download the news application at: <http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/urban-and-community-forestry-challenge-grants.html>.

For more information on the Challenge Grants, including our National Grid Partnership Grants and Eversource Go Green grants, contact Julie Coop at 617-626-1468 or [julie.coop@state.ma.us](mailto:julie.coop@state.ma.us) or Mollie Freilicher at 413-577-2966 or [mollie.freilicher@state.ma.us](mailto:mollie.freilicher@state.ma.us).

## Growing Greener—in Worcester



The City of Worcester was recently the subject of a project undertaken by the USDA Northeast Climate Hub to explore local adaptations to climate change. The project utilized a 360-degree camera to capture a few different areas and embeds information, resources, tools, and interviews into the experience. From the project: A changing climate poses risks for urban forests. Some forest pests may benefit from warmer temperatures, leading to tree damage and mortality. Heavy rain events and some types of storms may also increase in the coming decades, which can increase stormwater runoff, flooding, and tree breakage. Adaptation actions, such as tree species diversification and improved stormwater management can help reduce these risks. Explore the project here: <https://www.climatehubs.oce.usda.gov/northeast/360/Worcester>.

### From UMass Extension

To register or find out more about these and other programs, go to: <http://ag.umass.edu/landscape/upcoming-events>

#### Spring Blooming Tree and Shrub ID Walk

Wednesday, May 10, 2017 - 3:00 p.m. to 5:00 p.m., UMass Amherst

#### Landscape Pests and Problems Walkabout - Insects, Diseases and Weeds

Thursday, May 18, 2017 - 5:00 p.m., Westfield

#### Weed Walkabout

Thursday, June 8, 2017 - 4:00 p.m. – 6:00 p.m., Walpole

#### Landscape Pests and Problems Walkabout - Insects, Weeds and Cultural Problems

Thursday, June 15, 2017, 5:00 p.m. – 7:00 p.m., Beverly

#### Topics in Landscape IPM

Thursday, June 22, 2017 - 8:30 a.m. – 12:30 p.m., Milford

### UMass Summer College—

#### Sustainable Tree Care Program for High School Students & Scholarships

**Scholarships available!** For the past three summers, UMass and Stockbridge have offered a “pre-college” course in Arboriculture & Urban Forestry for high school students. In the course, students get an overview of the Arboriculture & Urban Forestry curriculum that two- and four-year students at Stockbridge and UMass take. The course will run for one week (35 hours of training—in the classroom and in the field) in July 2017. Find out more [here](#) or contact Brian Kane [bkane@eco.umass.edu](mailto:bkane@eco.umass.edu). The New England Chapter ISA is offering a full scholarship. Click [here](#) for more info.

THE CITIZEN FORESTER

## Growing on Trees—Webcasts and Events

### Urban Forest Connections

The USDA Forest Service's Urban Forest Connections webinar series brings experts together to discuss the latest science, practice, and policy on urban forestry and the environment. These webinars are open to all. Past webinar presentations and recordings are available [here](#).

Next Webinar: May 10, 2017

To access the webinar, go to <https://www.fs.fed.us/research/urban-webinars/>.

#### Future webinars:

June 14, 2017

July 19, 2017 – Third Wednesday this month!

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### Harvard Forest Seminar Series

Seminars are Fridays at 11:00 a.m. Eastern Time, unless otherwise noted. They are held at Harvard Forest in Petersham, MA, and also can be joined online via web-streaming. Seminars are free and open to the public; no pre-registration is required. See the full schedule at <http://harvardforest.fas.harvard.edu/seminars>.

#### Friday, May 5, - [Join seminar online](#)

J. Morgan Varner – United States Forest Service  
**Flammability of North American woodlands and Forests**

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### Harvard Forest Job Opportunity: Regional Conservation Communication Manager

Position Summary: [Wildlands and Woodlands](#), a New England-wide conservation initiative of the Harvard Forest and Highstead, seeks a talented communication professional with a background in conservation or other environmental field. The Regional Conservation Communication Manager will work as part of a team to develop and implement communication strategies that inform and inspire conservationists, policymakers, foresters, scientists, funders, and public audiences to work together to protect New England's forests and farms and to promote livable cities and towns that are sustained by thriving natural infrastructure. Check out the full job posting: <http://harvardforest.fas.harvard.edu/employment>.

### Urban Forestry Today Webcast

May 4, 2017, 12:00 – 1:00 p.m.

#### Planting for Success: Selecting Tough Trees for Tough Urban Sites

Jeff Iles, PhD, Iowa State University

Dr. Iles will highlight proven performers and new selections worthy of consideration, as we plant the urban forest with diversity, resilience, and long-term success in mind.

To attend, visit [www.joinwebinar.com](http://www.joinwebinar.com) and enter the ID code **303-654-851**.

This broadcast is free and will offer the opportunity for arborists to earn 1.0 ISA CEU and 0.5 MCA credit. For those who are unavailable to attend the live broadcast, sessions will be archived in the "videos" section at [www.urbanforestrytoday.org](http://www.urbanforestrytoday.org)

*The Urban Forestry Today 2017 Webcast Series is sponsored by the University of Massachusetts Department of Environmental Conservation, in cooperation with the USDA Forest Service, Massachusetts Department of Conservation and Recreation, University of Massachusetts Extension, and Massachusetts Tree Wardens' & Foresters' Association.*

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### Grey to Green Conference:

#### Quantifying Green Infrastructure

Live Webcast - May 9th - 8:30 a.m. - 6:30 p.m.

The 2017 [Grey to Green Conference: Quantifying Green Infrastructure](#) explores the latest in performance, economic valuation, design, policy, and technology from Canada, the U.S., and worldwide. This interdisciplinary conference is the leading forum for designers, policy makers, manufacturers, growers, landscapers, and other green infrastructure professionals to discuss the benefits and growth of the green infrastructure industry.

Visit [GreytoGreenConference.org](http://GreytoGreenConference.org) to register to attend remotely (\$59).

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### Upcoming Events from the Ecological Landscape Alliance

Eco-tour: Lincoln Park—May 16, Lexington

Eco-tour: Roger Williams Park—Artful Stormwater Solutions—May 23, Providence, RI

Rain Garden Basics—June 4, Framingham

# Growing on Trees

## From BayState Roads

### Wood Chipper Operation & Safety

This program will improve your safety skills and knowledge while operating a chipper. Chipper operator safety depends on the ability to properly maintain and operate equipment, to help avoid serious injury or death. Hands-on training will be provided.

**Who Should Attend:** Anyone who uses a Chipper in their daily/occasional work to maintain property, do storm damage cleanup, right-of-way clearing, etc. can benefit from this workshop.

**Participants must bring the following: PPE - Safety helmet, eye & ear protection.**

### Upcoming Sessions:

Westford—May 15	Bridgewater—June 7
Westford—May 16	Bridgewater—June 8
	Leominster—June 9

## Smart Growth Conference

May 18, 2017, Worcester  
Plenary, breakout sessions, and workshops that include new insights and opportunities for inspiring conversation. Join close to 400 public, private, and civic leaders at the state's premier sustainable development event to explore:

- Achieving a good housing density, income mix, and location
  - Fiscal and economic development strategies for a thriving downtown
  - Communities that are healthy, walkable, diverse, and resilient
- Effective placemaking techniques

Find out more: [www.masmartgrowthconference.org/](http://www.masmartgrowthconference.org/)

## Drought Monitor

Conditions as of April 25, 2017. Check out drought conditions in Massachusetts, New England, and the U.S. In Massachusetts, 26% of the state is categorized as abnormally dry, down from 48% one week ago.

<http://droughtmonitor.unl.edu/>

Massachusetts drought resources may be found here: <http://drought.unl.edu/Planning/DroughtPlans/StatePlanning.aspx?st=ma>

## From the Arnold Arboretum this Spring

Find out more and register at: <http://www.arboretum.harvard.edu/education/adult-education/>  
(Click "list of classes" at left.)

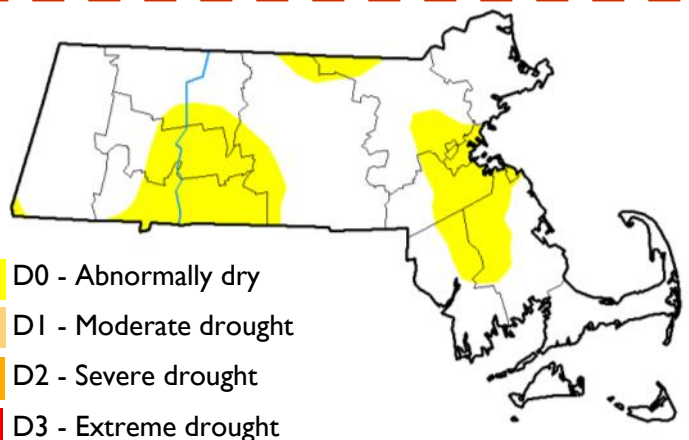
Upcoming lectures and programs:

- Conifer Pollination: Sex among Evergreens – May 3
- Witness Tree: A Year in the Forest – May 5
- Hope in a New Ecology – May 31
- Identifying the 25 Most Common Trees in Boston – June 11
- Warren Manning: Landscape Architect and Environmental Planner – June 15
- In the Groves – June 16 or June 17 (two sessions)

## From the New England Wildflower Society

Some selected upcoming courses are below. For the complete listing, go to: <http://www.newfs.org/learn/our-programs>

- Ice Ages, Climate Change, and Boston's Earthquake Problem – May 4, Framingham
- Plant Identification Tools and How to Use Them – May 6, Framingham
- Wild Edibles Walk – May 24, Lincoln, MA
- Rain Garden Fundamentals – June 4, Framingham, MA
- Wetland Shrubs – June 10, Framingham





## Growing on Trees— Columnist Lilly Lombard: Celebrating Shade Trees in Northampton

By Lilly Lombard

**April 23, 2017**—Three years ago, driven by data showing a steady decline of Northampton’s public shade tree canopy, citizens lobbied the city to adopt a comprehensive municipal shade tree program to enhance our quality of life and strengthen our climate resilience. To kindle public interest in street trees, residents worked with the state’s community and urban forester, Mollie Freilicher, to conduct a highly visible, all-volunteer sample tree inventory.

Citizens also provided credible research to the mayor and City Council about why investing in shade trees as public infrastructure provides impressive financial, health, and ecological return. Finally, they shared as inspiration the example of Amherst’s successful tree program. The city of Northampton listened.

Flash forward to upcoming Arbor Day on Friday, April 28, and thanks to a supportive mayor and City Council, here’s our proud report. Foremost, Northampton has a permanent, qualified tree warden within the Department of Public Works, Richard Parasiliti, who partners with a skilled Public Shade Tree Commission to advance a plan to re-tree our walkable city. Read the full piece at the [Hampshire Daily Gazette](#).

## Trees Have Their Own Songs

By Ed Yong

Just as birders can identify birds by their melodious calls, [David George Haskell](#) can distinguish trees by their sounds. The task is especially easy when it rains, as it so often does in the Ecuadorian rainforest. Depending on the shapes and sizes of their leaves, the different plants react to falling drops by producing “a splatter of metallic sparks” or “a low, clean, woody thump” or “a speed-typist’s clatter.” Every species has its own song. Train your ears (and abandon the distracting echoes of a plastic rain jacket) and you can carry out a botanical census through sound alone.

“I’ve taught ornithology to students for many years,” says Haskell, a natural history writer and professor of biology at Sewanee. “And I challenge my students: Okay, now that you’ve learned the songs of 100 birds, your task is to learn the sounds of 20 trees. Can you tell an oak from a maple by ear? I have them go out, pour their attention into their ears, and harvest sounds. It’s an almost meditative experience. And from that, you realize that trees sound different, and they have *amazing* sounds coming from them. Our unaided ears can hear how a maple tree changes its voice as a soft leaves of early spring change into the dying one of autumn.” Read the full story at [The Atlantic](#).

### Arbor Day in Springfield



Mayor Dominic Sarno (right) reads Springfield’s Arbor Day Proclamation with City Forester Ed Casey (left) during Springfield’s Arbor Day ceremony on April 28 at Forest Park. Learn more at [wwlp.com](#).

### Gordon King Planting, UMass-Amherst



On April 22, UMass-Amherst staff and faculty planted a Japanese elm in memory of Gordon “Prof” King by the Durfee Conservancy on the Amherst campus. The tree was grown from the Japanese elm by South College—the oldest Japanese elm in the United States, and which King and his students helped care for.



## Growing on Trees



### Announcing Municipal Forestry Institute (MFI) Canada 2017

MFI Canada is an exciting, high-level training opportunity educating professionals in the **leadership** and **managerial** aspects of urban forestry. This week-long intensive educational program delivers a challenging opportunity to grow a more successful community tree program. The program will run October 15-20, 2017 in Cornwall, Ontario, Canada! [Just a six-hour drive from Boston!]

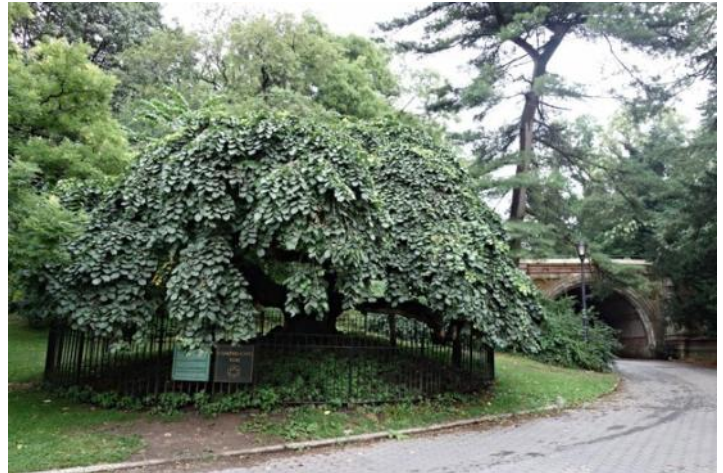
[Register For MFI Canada Now](#)

## On the Trail of New York's Greatest Trees

By Allison C. Meier

In 1967, an aging Marianne Moore wrote a poem to help save a Brooklyn tree. With a Pulitzer Prize and National Book Award to her name, the septuagenarian had attained an improbable height for a modernist poet: public popularity. Newspapers [regularly pictured](#) her in an anachronistic black cape and velvet tricorne hat; the following year she was even invited to [throw out the opening pitch](#) for the Yankees. So it was perhaps no surprise that when the recently-formed Friends of Prospect Park in Brooklyn noticed a rare camperdown elm near the Boathouse [that was](#) “a mere shell, hollow to the base, and further weakened by a great untreated wound,” they asked her for a poem.

Moore penned “[The Camperdown Elm](#),” which appeared in the September 23, 1967 issue of the [New Yorker](#). Its last line was a call to action: “We must save it. It is our crowning curio.” The camperdown campaign was a success, not just to patch the tree and prop up its eldritch limbs with crutches and cords, but to improve visibility for the deteriorated park around it. The elm was the first tree here that made me stop in my tracks, study the bends in its unique branches, and consider it as an individual. It was also my gateway into an ecological scavenger hunt of New York City, where almost every tree is seeded in a human story. Read the full story at [CityLab](#).



Camperdown elm, Prospect Park. Photo by Allison C. Meier

## Gleanings—Oak Wilt in New York State

### From New York Dept. of Environmental Conservation

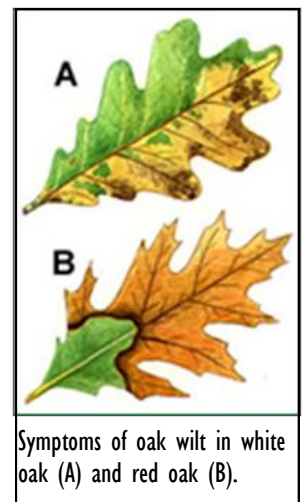
#### What is oak wilt?

Oak wilt is a disease that affects oak trees. It is caused by *Ceratocystis fagacearum*, a fungus that develops in the xylem, the water-carrying cells of trees. All oaks are susceptible to the fungus, but the red oak group (with pointed leaf tips) often die much faster than white oaks (rounded leaf tips). Red oaks can take from a few weeks to six months to die and they spread the disease quickly. White oaks can take years to die and have a lower risk of spreading the disease.

(Continued on page 10)



Foliar symptoms of oak wilt *Ceratocystis fagacearum* on black oak (*Quercus velutina*) showing bronzing starting at the leaf apices and lobes, and a localized area of green tissue around the base of the midrib. Photo by [C.E. Seliskar, Bugwood.org](#)



Symptoms of oak wilt in white oak (A) and red oak (B).

# Gleanings—Oak Wilt in New York State (continued)

(Continued from page 9)

## Why is oak wilt a problem?

The oak wilt fungus blocks the flow of water and nutrients from the roots to the crown, causing the leaves to wilt and fall off, usually killing the tree. Red oaks (scarlet oak, pin oak, black oak, etc.) can die within a few weeks to six months, and the disease spreads quickly from tree to tree. White oaks (bur oak, scrub oak, etc.), however, often take years to die and the disease usually cannot spread to additional trees.

## Where does it come from?

Oak wilt was first discovered in Wisconsin in 1944, but where it originated is still unknown. It has spread throughout the Midwest and Texas, killing tens of thousands of trees.

## Where is it found in New York State?

In 2008, a small infection was discovered in Glenville, NY. It was quickly dealt with to prevent further spread. The disease resurfaced in the same location in 2013, and additional steps were taken to eradicate the infection. In 2016, oak wilt was discovered in Islip, Riverhead, and Southold in Suffolk County; Brooklyn in Kings County; and Canandaigua in Ontario County.

## How does it spread?

There are two main ways oak wilt is spread: 1) above-ground by beetles, and 2) below-ground through tree roots.

Fungal spore mats form just under the bark of infected red oaks, after they have died from the disease. During the warmer months, these spore mats emit a sweet odor that attracts sap-feeding beetles and bark beetles, which can pick up fungal spores as they crawl around. The beetles are also highly attracted to fresh wounds in other trees, often caused by pruning. In this way, they spread the fungus from infected trees to healthy trees sometimes miles away. Infected firewood and other wood materials also pose a threat because they can harbor the fungus and/or beetles that can spread the disease.

Spreading underground occurs when roots of nearby red oaks graft to each other (fuse together), creating a connection through which nutrients and the disease can move. In the Midwest, large blocks of red oak forests have died from the disease in a single season due to their vast network of interconnected roots. In contrast, white oaks are much less likely to create root grafts, and spore

mats rarely form under their bark, significantly reducing the chance of spread from these trees.

## Symptoms

Symptoms of oak wilt infection are often very noticeable in red oak species, but aren't easily seen in white oaks.

- Brown coloration develops on leaves starting at the outer edge and progressing inward toward the mid-vein of the leaf.
- Branch dieback starts at the top of the tree's canopy and progresses downward.
- Leaves suddenly wilt in the spring and summer and may fall while there is still some green on them.
- Fungal spore mats may develop under the bark of infected trees.

## What can I do?

- Learn to recognize the symptoms of oak wilt, including leaf discoloration, branch dieback, and fungal spore mats.
  - [How to Identify, Prevent and Control Oak Wilt \(PDF, 2 MB\) - a US Forest Service publication](#)
- Avoid pruning or wounding oak trees in the spring and summer, when spore mats are present and beetles are the most active. If an oak wound occurs during spring or summer, it should be sealed immediately with wound dressing. This will slow wound recovery, but also deter beetles from landing on those areas - which will reduce the risk of oak wilt spreading.
- Use qualified tree care professionals.
- If you prune, [learn how to do it properly \(PDF, 380 KB\)](#).
- Purchase and sell firewood locally. Try to avoid moving firewood more than 50 miles to help prevent the spread of forest pests and diseases.

Find out more from this New York State factsheet: <http://www.dec.ny.gov/lands/46919.html>.

## News

### Newton Works to Cut Unhealthy Trees and Replant

By **Laura Lovett**

Newton has always been known for its idyllic, tree-lined streets.

Nicknamed the “Garden City,” at its peak, Newton had close to 40,000 trees. That number has almost been halved, according to city officials, who say storms and poor health have caused trees to fall. But a recent initiative aims to take down the sickly, dangerous trees and plant their replacements. Between FY 2012 and FY 2014, 454 trees fell in Newton, causing scores of power outages and blocked roads. In October 2012, the memorable Halloween snowstorm caused 172 downed trees alone.

“Citizens were losing power for days on end and property was damaged,” said Mayor Setti Warren about the outages. After a storm in October 2014 where 16 trees were lost, the Warren administration decided to take action and evaluate the city’s tree policies. At the time the city had contractors come in and prune and deal with the downed trees. It cost the city approximately \$200,000 a year for contractors, according to Chief Financial Officer Maureen Lemieux. So the Warren administration decided to hire a full-time tree crew to start addressing the tree issue. As of FY2017, there are six fulltime employees working on trees in Newton. Read the full story at [WickedLocal](#).

### Growing Green: State to Plant 2,400 Trees in Brockton

By **Marc Larocque**

April 20, 2017– More maples, oaks, elms, and other types – such as serviceberry trees, dogwood trees, and flowering cherry trees – will soon be putting down their roots in Brockton. In the next three years, trees from a field of 40 different varieties of tree will sprout throughout an area stretching from downtown Brockton throughout the Campello district, according to state officials. The influx of arbor is being facilitated by the Greening the Gateway Cities Program, through the state Department of Conservation and Recreation. Read the full story at [The Enterprise](#).

### Worshipping Oak Crashes to Ground

By **Mike LaBella**

April 21, 2017 — The people at the Buttonwoods Museum say they hope to capitalize on the loss of their historic and beloved “Worshipping Oak” tree by possibly turning it into pieces of art to be sold as a fundraiser to support the museum. The Worshipping Oak, believed to be the place where the community’s first settlers in 1640 held worship services before they could build a church, fell to the ground Thursday night. Museum officials said they are mourning the loss of the tree because of its historical significance. They said the tree was like part of their family. “It’s a sad day,” said Jan Williams, head of the museum. A plaque in front of the tree notes that early in the 1600s, settlers to the area came to the Oak tree to worship and that it was the site of a Sabbath meeting place until the year 1648. The plaque also notes that the tree was listed as a white oak, but there were papers indicating it was a red oak. Read the full story at the [Eagle Tribune](#).

### News Headlines in Brief

[Trees Will Stay Standing Outside Silver Restaurant in Downtown Bethesda, MD](#)—highlights the importance of standing up for urban canopy and working with planners and business owners

[World Is Home to '60,000 Tree Species'](#)  
[Dan Rodricks: Up Next, The Baltimore Flowering Tree Trail](#)

[Forget Roses And Birds: These Folks Like Their Big Trees](#)

[Polish Law Change Unleashes 'Massacre' of Trees](#)

[Offspring Of 600-Year-Old N.J. Oak Tree Planted at Church \(watch the video!\)](#)

[The Trees That Make Southern California Shady And Green Are Dying. Fast.](#)

[Tree-Cutting West Seattle Homeowners Fined \\$440,000; City Warns It Could Have Been Even More](#)

[To Save Forests, Cut Some Trees Down, Scientists Say](#)



# On the Horizon

- May 4** Urban Forestry Today Webinar, 12:00 p.m. (Eastern)  
[www.joinwebinar.com](http://www.joinwebinar.com)  
and enter the ID code 303-654-851.
- May 10** Urban Forest Connections Webinar, 1:00 p.m. (Eastern)  
<https://www.fs.fed.us/research/urban-webinars/>
- May 16** MTWFA Chainsaw Safety PDS, Wellesley,  
[www.masstreewardens.org](http://www.masstreewardens.org)
- Jun 2** NEC-ISA Master's Challenge Invitational Tree Climbing  
Competition, Attleboro, [www.newenglandisa.org](http://www.newenglandisa.org)
- Jun 3** ISA Certification Exam, Dighton,  
[www.newenglandisa.org](http://www.newenglandisa.org)
- Jun 7** Tree City USA Forum and Award Ceremony, Arlington
- Jun 20** Western Mass. Tree Wardens Dinner Meeting,  
Northampton, [www.masstreewardens.org](http://www.masstreewardens.org)
- Jul 9-15** UMass Summer College Program in Sustainable Tree  
Care, contact [bkane@eco.umass.edu](mailto:bkane@eco.umass.edu).
- Jul 19** MNLA Down to Earth: Annual Summer Conference &  
Trade Show, Princeton, [www.mnla.com](http://www.mnla.com)
- Aug 2** Mass. Certified Horticulturalist Exam, Elm Bank,  
Wellesley, [www.mnla.com](http://www.mnla.com)



Want to find out how  
**your community,**  
**college or university, or utility**  
can become a Tree City,  
Tree Campus, or Tree Line USA?  
Contact Mollie Freilicher,  
[mollie.freilicher@state.ma.us](mailto:mollie.freilicher@state.ma.us),  
413-577-2966.



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[www.mass.gov/dcr/urban-and-community-forestry](http://www.mass.gov/dcr/urban-and-community-forestry)

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If you have a topic you'd like to see covered or want to submit an item to *The Citizen Forester* (article, photo, event listing, etc.), contact [Mollie Freilicher](mailto:Mollie.Freilicher@state.ma.us) or click [here](#).

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