



Massachusetts Department of Conservation and Recreation

THE CITIZEN FORESTER

Urban & Community Forestry Program

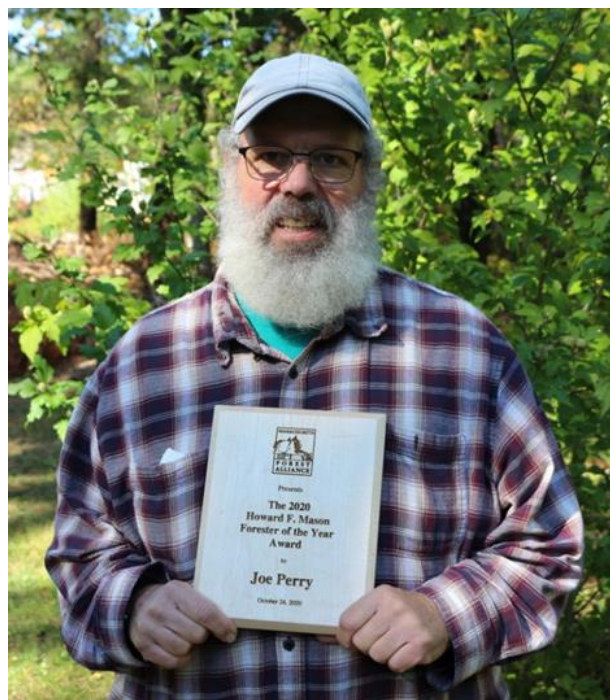
DECEMBER 2020 | No. 245

Joe Perry and Environmental Education in Massachusetts

By Jennifer Fish

Editor's Note: Many of those who have been through the DCR Tree Steward Training know DCR Service Forester Joe Perry. Joe recently retired and we will miss Joe's wealth of knowledge and his enthusiasm for teaching about trees. For many years, Joe taught the Tree Identification session of our annual Tree Steward Training. Many will recall yelling "Yes!" or "No!" in response to Joe's asking, "MADCapHorse?" when teaching about a tree. (MADCapHorse is a mnemonic device to help remember trees and shrubs with opposite branching.) Others may remember playing "Who am I?," his interactive game to illustrate how a dichotomous key works. Others will remember ID tricks that Joe shared to help remember species, some will remember the stories Joe told, and others will remember Joe pulling up to Harvard Forest with his truck jam-packed with twigs and samples, some collected along the way or the day before and others from his vast collection. (And among all those things, I won't forget sweeping up after the Tree ID session on those occasions when weather forced us to be indoors, or of course, the bear hugs.) – Mollie Freilicher

Joe started with the Department of Conservation and Recreation (formerly DEM) at the Young Adult Conservation Corps (YACC) camp in Gardner in the late 70s to early 80s. After the YACC camp ended, Joe moved to Myles Standish State Forest as a supervisor, and started as a Service Forester in Bristol County in the mid 80s. The DCR (DEM) Regional Supervisor for the area at the time was an Arbor Day supporter and required all the foresters to do programs. As a result, Joe did several programs at local schools and continued to expand his interests into environmental education. By the 90s he was assigned to be the Bureau of Forestry representative to the Massachusetts Envirothon committee. Joe took the assignment and ran with it, leaving a trail of friendly bear hugs in his wake. Since 1998, Joe Perry has been the much-loved Forest Station leader for the Massachusetts Envirothon program. Over the last 22 years, 150 schools have fielded Envirothon teams from across Massachusetts, from North Adams to Wellfleet, from Rockport to Springfield. Envirothon organizers estimate that over 4,000 high school age youth have participated in his workshops and tested their skills at his Envirothon station. According to Will Snyder, UMass Extension, "No one else has introduced more young people to the world of forestry than Joe and he has done it in a way that they'll always remember. Joe has a genuine love for the young people he works with, and it is reflected in how they respond to him. His workshops



Joe Perry with the 2020 Howard F. Mason Forester of the Year Award from the Mass. Forest Alliance.

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Joe Perry and Environmental Education in Massachusetts

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always overflow with kids who want to learn about tree ID and tree measurement, but also just love to be with him. He has kept the curriculum simple and engaging, wanting every kid to have a friendly, non-intimidating encounter with forestry. At the same time, he has always wanted his teams to do well. When he bought ice cream for the Massachusetts team upon their return from the national competition, he was being sociable. But he was also pumping them for information about what was expected at the national competition so that he could better prepare future Massachusetts teams.” The Newton North team took 4th place overall in Missouri in 2015, when the national Current Issue was “Urban & Community Forests.”

Over the same time period, Joe has put his passion for forestry and tree identification into the Junior Conservation Camp, running the Forestry Class and staying on site each summer with the campers for their two-week journey into natural resource management and outdoor



Joe's truck, packed with tree ID samples for a Tree Steward Training.



Joe at the Tree Stewards Training in 2019.

recreation. Joe has also stayed involved with UMass, his alma mater, enthusiastically teaching tree ID workshops to students. Joe gets all the senses engaged when talking about trees and forestry. Joe's big smile and down to earth way of communication appeal to young people. His humble Arbor Day programs have continued through the decades, often bringing his joy to a larger effort. In 2018 the Sun Chronicle ran a nice article that featured a DCR Arbor Day program with Joe spreading his knowledge to literally the next generation from his beginnings in the 1970s.

Joe's efforts were recently recognized with The [Howard F. Mason Forester of the Year Award](#) from the Massachusetts Forest Alliance for his tireless work in the forestry community, including countless landowners and consulting foresters.

Joe retired from DCR in November. He will be greatly missed, but we know his legacy lives through the next generation and the understanding of trees and forests he planted in our minds.

Environmental Education Resources in Massachusetts

[Massachusetts Envirothon](#)

[Massachusetts Environmental Education Society](#)

Species Spotlight

Paper Birch, *Betula papyrifera*

By Mollie Freilicher

Many of us can recognize paper birch (*Betula papyrifera*) by its white, papery bark. It's a tree we can often find in the woods and, less typically, in our city centers and dense urban areas. Paper birch, also known as white birch and canoe birch, is native to the northern United States and Canada, with some scattered patches to the south. It grows in a variety of habitats, from forests to roadsides, and can be found in pure stands or mixed with other species. In the landscape, it typically reaches heights of 50 ft., and widths of about 35 ft., though in natural settings it may grow



Leaf, [Virginia Tech](#).

taller. As a young tree, it has a pyramidal habit and grows to a more irregular to oval form. The growth rate of paper birch is moderately fast. A tree of northern, cooler climates, paper birch is hardy in USDA hardiness zones 2-6.



Bark, [Northern Forest Atlas](#).

Paper birch is alternate, with simple, ovate leaves with serrate margins. The leaves are pinnately-veined, two to four inches long and about two-thirds as wide, with pubescent undersides. They are dark green in summer and turn yellow in the fall. Buds are long, imbricate, brown-black in color, and diverge from the twig. Twigs are smooth to hairy and red-brown, with lenticels that are lighter in color than the stem.

The bark of young trees is reddish brown with numerous lenticels. After three or four years, as a tree ages, the bark turns a chalky or creamy white after three or four years and begins peeling. When the white outer bark peels, the red-orange inner bark is exposed.

Paper birch is monoecious, with male and female flowers on the same tree. Male flowers are brown, two to four inches long, and in groups of two or three. Female flowers are upright and shorter, one to one-and-a-quarter inch long, and are greenish. The fruit is a small nutlet in drooping catkins that are one to two inches long. The seeds shed in the early fall and the bare axis of the catkins will persist on trees.

Wondering about the etymology of the word catkin? Wondering if it has anything to do with cats? It sure does! The term, referring to these types of flowers, first appeared in 1578 and comes from the old Dutch word *katteken*, diminutive of the word *katte* (cat, aka 'kitten'), for the flower's resemblance to a kitten's tail. Does any other inflorescence have a more



Form, [Virginia Tech](#).



Flowers (catkins), [Yale.edu](#)

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Paper Birch, *Betula papyrifera* (continued)

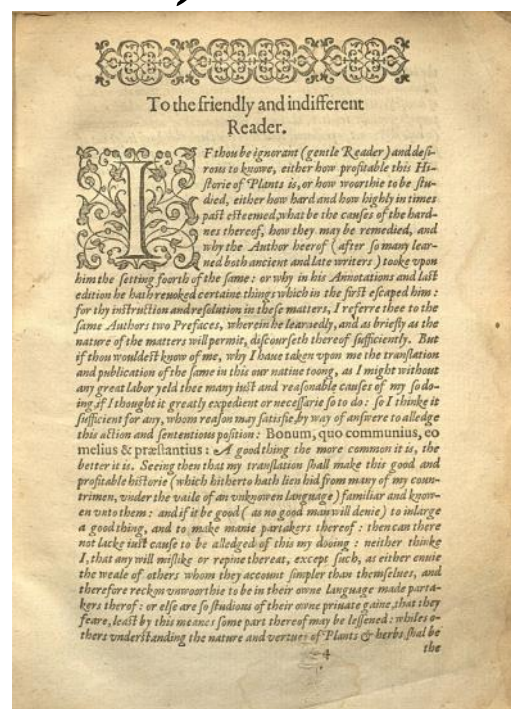
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adorable etymology? I don't think so, but let me know if you know of one! The English language debut of catkin took place in Henry Lyte's translation of Rembert Dodoens's *Cruydeboeck*. Lyte translated the French version into English and added his own annotations and corrections. Dodoens was a Flemish botanist and physician, and Lyte, an English botanist. The *Cruydeboeck* was notable for dividing plants into six groups based on plant properties, rather than presenting them in alphabetical order and it also included a lot of information on medicinal herbs. Lyte's translation was called [A Nieuwe Herball or Historie of Plants](#) (which I keep reading as "A New Hairball," perhaps because of all the cat talk). The book includes information on many kinds of plants, including many trees with non-standardized spelling: Acatia, Hawthorne, Apple, Orenge, Peare, Peach and Abrecok, Mulberrie, Plumme, and Chestnut, among others. *A Nieuwe Herball or Historie of Plants* was one of several herbals that would be published in English in the 16th and 17th centuries.

Paper birch is easy to transplant and will grow in a variety of soils, though it does best in soils that are cooler, moist, and well-drained. Paper birch does not tolerate urban conditions, particularly heat and drought, so it is not a good choice for a street tree, but it may be okay in park and park-like settings outside of urban centers. Its white bark is striking in the landscape and it is one of our birches that is most resistant to borers when planted in low-stress environments. There are a few cultivars of paper birch, but it is often sold as seed grown.

References

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- Lyte, Henry. 1586. *A Nieuwe Herball or Historie of Plants*. London: Ninian Newton. Accessed November 6, 2020, <https://archive.org/details/mobot31753000811148>.
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A Nieuwe Herball or Historie of Plants.

Following a four-page address to Queen Elizabeth, there follows this note "To the friendly and indifferent reader" in which Lyte explains that if you don't speak Flemish, Latin, or French and want to know more about plants, this book is for you, gentle reader.



"Catkin" inspiration.
([Treehugger](#))

From the Woods

Comfort in Wood

By **Chris Capone**

It's that time of year again. The once-green leaves and warm temperatures of summer have fallen many weeks ago, and winter is returning. With its return comes not just a chill to the air, but also the occasional wafting scent of wood smoke. In my mind, there are few comforts able to compete with those provided by a wood burning stove during the cold winters we're accustomed to here in New England. Radiating the warmth of a burning log or two throughout a room, woodstoves have and will continue to provide an inexpensive and reliable escape from the cold. A woodstove's lingering hints of smoke and its glowing fire add much more to a room than heat. As we find ourselves retreating to the indoors more often during the winter months, having a warm and comfortable atmosphere to spend time in is that much more important.

We've come a long way when it comes to heating, with an ever-growing array of increasingly efficient and cost-effective methods to warm the home now on the market. But, even with this widening array of modern home heating systems, for varying reasons, many still prefer the old-fashioned woodstove. Some like the ambiance it provides, some its reliability, while others enjoy the work of preparing firewood for



Seasoning cordwood

the next burning season. I'd be remiss not to mention the old popular adage, "Chop your own wood and it will warm you twice." Before the invention of the woodstove, a lot more wood had to be chopped to warm a home.

Woodstoves have been a popular choice for heating ever since around the time of the industrial revolution, when far fewer heating options were commonly available. Before the wood burning stove, an open-hearth fireplace was the most commonly found heat source in Massachusetts homes. These open hearths are still found in many modern houses, but are mostly used for ambiance and decorative purposes. Because of the large draft created by an open hearth, much of the warmth generated inside is lost. This means that more wood needs to be burned to keep the climate comfortable using a traditional fireplace.

Although he wasn't the first, in 1742, Benjamin Franklin set out to find more efficient methods to heat the home using wood than the traditional fireplaces that had been utilized for centuries. This effort was spurred when Philadelphia experienced a wood shortage in the



Harvesting cordwood

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'Franklin' Stove ([cbsnews.com](https://www.cbsnews.com))

1740s. Forest Management Plans help in scheduling and planning timber harvests while keeping long term goals and sustainability in mind, preventing the over harvesting of wood and even increasing the production and quality of fuelwood and timber. Today, many forested parcels in Massachusetts are managed by professional foresters and are under some type of Forest Management Plan. Currently in Massachusetts, far more wood is grown each year than is harvested. To learn more about Forest Management Plans, contact your local Service Forester!

Benjamin Franklin's innovation many years ago was somewhat simple, essentially consisting of a basic iron box with an open front. This box would act like an insert, lining the inside of the existing open hearths so commonly used at the time. Many cite this as the beginnings of the modern woodstove, as this design was continually improved upon over the years, laying the groundwork for the enormously more efficient wood burning stoves we benefit from today. Did you know that many new woodstoves use a form of secondary combustion, essentially re-burning the smoke before it heads out the chimney, to achieve higher efficiency and output less smoke overall?

In the United States, the U.S. Environmental Protection Agency (EPA) sets performance standards that must be met or exceeded by woodstove manufacturers. Some towns and cities may also have laws regarding wood-burning appliances. When wood is burned, the resulting smoke contains fine particulate matter, which in excess amounts can be harmful to human health and the environment. All newly manufactured woodstoves should meet the EPA Performance Standards of 2020, which limit emissions of fine particulate matter to no more than 2.0 grams per hour. These standards were updated from the previous standards set in 2015 of 4.5g/hr, making newer models contribute far less smoke and burn more efficiently. The efficiency of a woodstove will also depend on what kind of wood is being burned inside it. Did you know that different species have different burning characteristics, or how much wood is in a cord?

In New England, we measure and purchase firewood in units called cords. It's not unusual to hear firewood sometimes referred to as cordwood. When someone says a "cord" of wood, they are referring to a neatly stacked pile of wood that equals 128 cubic feet in volume. When you purchase or cut a cord of wood, you should have a well stacked wood pile that is 4'x4'x8' in size. You can purchase this wood already dried and ready for burning, or "seasoned." Alternatively, you can purchase at a discounted rate freshly cut, or "green" wood for future use. Many households that rely solely on wood for heating their living spaces will burn through several cords each



Burning firewood

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Comfort in Wood

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heating season. This will depend on many factors, including the size of the space to be heated, how mild the winter is, and the wood being burned.

When purchasing or cutting for cordwood, it's important to keep in mind that tree species matter. Only hardwoods should be used for indoor firewood, as softwoods burn inefficiently and produce more ash and creosote. Buildup of creosote in the chimney or stove pipes can lead to dangerous conditions if not addressed through proper and regular cleaning. The stove, chimney, and stove pipes should all be regularly checked and cleaned.

Some species of hardwoods burn better than others, in terms of cleanliness, intensity of heat, and burn time. These attributes are mostly related to the density of the wood that is being burned. Dense, slow growing species, such as pignut hickory or red oak, will burn hotter and longer than less dense tree species such as white ash or paper birch. We have many species that are commonly available throughout New England perfectly suitable for use in a wood stove, each having their own burning characteristics.

Hickory, oak, locust, beech, and maple are capable of producing over 30 million BTUs per cord. They have long burn times, don't spark often, and have excellent coaling qualities. An excellent coaling quality means the wood will leave behind a hot bed of coals, making restarting an unattended fire much easier. The downside to this dense wood, is that the initial start can be more difficult, and it takes a longer time to become seasoned. Oaks often take two years to become properly seasoned.

Less dense hardwood species such as ash, birch, cherry, walnut, and alder, can produce between 20-30 million BTUs per cord. These species will still provide good heat and are a bit easier to get started in a woodstove. They have a good coaling quality, shouldn't spark much, and



Processing cordwood

will season more rapidly - often within a year. Softwood tree species and lighter hardwoods such as aspen, willow, and cottonwood, will all produce fewer than 20 million BTUs and should be avoided if possible. Because of their variety in burning characteristics, if available, it is usually best to burn a mix of tree species that balance these factors. More tips for efficiently burning wood can be found by following the link to the Massachusetts Guide to Heating Your Home with a Wood Burning Appliance, found at the end of this article.

Any cordwood that is harvested or purchased should be locally sourced. It is especially important not to move firewood far from its origin in order to help prevent the spread of pests in and around Massachusetts. Some areas within the state, such as within the Asian Longhorned Beetle quarantine zone are highly regulated when it comes to moving wood products. Firewood should not be moved across state lines without first checking both state and local regulations of the wood's destination. Many neighboring states require special permitting and/or treatment of firewood before it is transported.

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Comfort in Wood

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Much of the cordwood produced in Massachusetts is a byproduct of harvesting larger timber used for lumber, furniture, flooring, and other long-term wood products. A great source of sustainably sourced local cordwood is a Massachusetts Licensed Timber Harvester. A link to the list of Massachusetts Licensed Timber Harvesters can be found at the end of this article. Many sustainably harvest cordwood from local woodlots that are under long term forest management, ensuring the increased quality and quantity of wood products for years to come.

Woodstoves have stood the test of time as a preferred heating source by many and are continually improving, holding their place in a world with so many other quality alternatives. Also continually improving are the methods and silvicultural techniques used by foresters to ensure that our forests continue to provide us with the comfort we seek during these times. Not just the comfort provided by knowing that the active sequestration of atmospheric carbon helps drive the growth of these products, or the comfort in knowing this carbon can someday be stored for the long term in wood. Wood also provides us with the comfort of the homes we live in, the furniture we sit in and around, and if you choose, the glowing warmth in the air around you.



A woodstove devotee, finding comfort in wood and a modern stove with secondary combustion. (Mollie Freilicher)

Chris Capone is a Service Forester and covers south-central Massachusetts.

Links and References

DCR Service Forestry Program:

<https://www.mass.gov/service-details/service-forestry>

Find a MA Licensed Timber Harvester:

<https://www.mass.gov/doc/directory-of-licensed-timber-harvesters/download>

Massachusetts Guide to Heating with a Wood Burning Appliance

<https://www.mass.gov/guides/heating-your-home-with-a-wood-burning-appliance#-government-regulation->

2020 EPA Performance Standards

<https://www.epa.gov/residential-wood-heaters/final-2020-new-source-performance-standards-residential-wood-heaters>

EPA Burn Wise

<https://www.epa.gov/burnwise/energy-efficiency-and-your-wood-burning-appliance>

Growing on Trees

Tree City USA, Tree Campus Higher Ed., and Tree Line USA Applications Due: December 31

A few tips for applicants:

Applicants are strongly encouraged to apply online. Instructions posted [here](#) or [download our PDF](#).

For all recognition programs, the Arbor Day observance and proclamation requirement has been waived for 2020. You may leave this section blank. If you were able to have some sort of observance this year, hooray! You may include that information in this section like you would in any other year.

For **Tree Campus Higher Ed**—the service learning project is still required, though not the Arbor Day observance.

For online **Tree City USA** applicants reapplying this year—you will see all your 2019 attachments in the portal. Ignore those and upload new documents where required.

NOTE — you do not need to re-upload your ordinance or bylaw if that is unchanged since the last time you applied.

Find this year's application instructions at The DCR UCF [website](#).

Questions? Contact Mollie Freilicher, 508-726-9255 or mollie.freilicher@mass.gov.



2021 DCR Arbor Day Poster Contest Theme The Trees Out Our Window

Fifth grade classes from schools across the Commonwealth are encouraged to participate in the annual Arbor Day Poster Contest by having fifth-grade students create posters highlighting this year's theme, **The Trees Out Our Window**, and then hosting a school poster contest. The winning poster from each school can be submitted to DCR. Home-schooled or non-participating school students may submit their posters and enter the contest individually.

The Arbor Day Poster Contest is sponsored by the Department of Conservation and Recreation, the U.S. Forest Service, and the Massachusetts Tree Wardens' and Foresters' Association.

For complete rules and guidelines, go to the [Arbor Day Poster Contest page](#) on the DCR website.

Growing on Trees—Webcasts and Online Events

DCR Forest Health Webinars

Free. Registration required. ISA, MCA, and pesticide credits available. To register, email Eric.Peterson@mass.gov. Find out more on [this flyer](#) and at mass.gov.

Gypsy Moth and Hardwood Defoliators of Massachusetts

Tuesday 12/1/20 | 12:00 - 1:00 p.m.

Register by 11/27. Presenter: Felicia Hubacz, DCR Forest Health Specialist

Beech Leaf Disease in Massachusetts

Thursday 12/3/20 | 7:00 - 8:00 p.m.

Register by 11/30. Presenter: Nicole Keleher, DCR Director of Forest Health

Emerald Ash Borer in Massachusetts

Tuesday 12/8/20 | 12:00 - 1:00 p.m.

Register by 12/4. Presenter: Eric Peterson, DCR Forest Health Specialist

Identifying Oak Wilt Disease

Thursday 12/10/20 | 7:00 - 8:00 p.m.

Register by 12/7. Presenter: Nicole Keleher, DCR Director of Forest Health

Asian Longhorned Beetle

Tuesday 12/15/20 | 12:00 - 1:00 p.m.

Register by 12/11. Presenter: Felicia Hubacz, DCR Forest Health Specialist

Southern Pine Beetle

Thursday 12/17/20 | 7:00 - 8:00 p.m.

Register by 12/14. Presenter: Nicole Keleher, DCR Director of Forest Health

Urban Forestry Today

December 3, 2020 | 12:00 - 1:00 p.m.

Introduction to Mapping & Spatial Data Applications for Arborists

Forrest Bowlick, Ph.D., University of Massachusetts

To attend, you can register [here](#) or visit: www.joinwebinar.com and enter the code: 193-492-139 at noon on December 3.

For more information and to view archived webcasts, go urbanforestrytoday.org.

Ecological Landscape Alliance Plant Conference

December 4, 2020 | 8:00 a.m. - 4:00 p.m. (EST)

Five experts will invite us to examine different attributes, uses, and values of plants and the insects that inhabit our gardens.

Early registration through November 4. Find out more and register at ecolandscaping.org.

ISA International Conference

December 7-11, 2020

A mix of live and pre-recorded sessions – so you can tune in live or when your schedule allows.

Early bird registration (\$129 ISA member/\$199 non-member) through November 13. Find out more at isa-arbor.com.

Mass. Tree Wardens' and Foresters' Assoc. Conference

January, 12-13, 2021

Introducing a different format this year: a **bundle of Zoom webinars** will replace the annual in-person conference but continue the tradition of quality professional education you've come to expect and value. The online events will all take place within the same two-day time period as the traditional gathering in Sturbridge. See the [conference webpage](#) for the details, program, and schedule, and then [register here](#). **Please note that each person must register from a unique email address.** Each registered attendee will be sent two Zoom links, one for each day. To earn CEUs you must be logged into the webinar the entire time AND you will be asked to answer intermittent quiz questions as proof of attention.

For current paid members for 2020, it's free! The non-member fee of \$85 includes a one-year membership for 2021.

*** MTWFA's educational programs are made possible through a grant from the USDA Forest Service, Urban and Community Forestry Program and the Massachusetts Department of Conservation and Recreation, Bureau of Forestry.

Growing on Trees—Webcasts and Online Events

University without Walls – UMass Amherst

Feb 1, 2021 - May 4, 2021

Sensible Pruning for Beginners and Experts

Planted along roads or in yards, community trees provide many benefits; for every dollar invested in their care, trees provide up to five dollars in benefits. In this class, we will discuss all aspects of pruning - how-to, timing, tools, types, objectives - and how trees respond to pruning. The course is suitable for all levels of experience and does not require any previous knowledge of tree biology. Instructor: Dr. Brian Kane. Find out more at umass.edu.

Community Forestry

The successful practice of urban forest management – establishing and caring for trees in parks, streets and private landscapes – differs from the practice of managing trees that grow in traditional forests. Urban trees feature unique social, economic, political, environmental and operational challenges. This course is designed to explore these challenges, and to highlight, discuss, and learn about the practices and principles required for the sound establishment and management of trees in an urban setting. Instructors: Dr. David Bloniarz, Dr. Richard Harper, and Kristina Bezanson. Find out more at umass.edu.

Harvard Forest Webinar

December 15, 2020 | 4:00-5:30 p.m. (EST)

Saying Yes to Wildlands AND Woodlands

Bob Perschel, Executive Director of the [New England Forestry Foundation](http://NewEnglandForestryFoundation.org), and Jon Leibowitz, Executive Director of the [Northeast Wilderness Trust](http://NortheastWildernessTrust.org) as they share the value and imperative of working together to conserve critical forests in New England and beyond. With Kristin DeBoer, Executive Director of [Kestrel Land Trust](http://KestrelLandTrust.org), facilitating.

Free, register by 12/13.

Find out more at [Harvard Forest](http://HarvardForest.org).

Urban Forest Connections

December 9, 2020 | 1:00 - 2:15 p.m. (EST)

Biocultural Stewardship: Transforming our Urban and Community Forestry Practices

Free. Find out more at the U.S. Forest Service Urban Forest Connections website.

Cornell Cooperative Extension

December 7, 2020 | 5:00 - 6:00 p.m. (EST)

Clearing the Air on Pesticides

December 14, 2020 | 7:00 - 8:00 p.m. (EST)
Establishing a Backyard Ecosystem Using Urban Trees

Free. Find out more at the [Cornell Cooperative Extension of Nassau County](http://CornellCooperativeExtensionofNassauCounty.org).

Native Plant Trust

Check out their schedule for the complete class listing at nativeplanttrust.org

[Winter Botany](http://WinterBotany.org) – Jan. 15

[History and Principles of Landscape Design](http://HistoryandPrinciplesofLandscapeDesign.org) – Starts Jan. 20

[Native Plant Trust Book Club: Around the World in 80 Trees](http://NativePlantTrustBookClub.org) – Jan. 21

[Native Woody Plant Materials](http://NativeWoodyPlantMaterials.org) – Starts Jan. 22

[Plant Systematics](http://PlantSystematics.org) – Starts Feb. 6

[Winter Pruning](http://WinterPruning.org) – Feb. 13 (in person)

[Understanding and Managing Soils](http://UnderstandingandManagingSoils.org) – Feb. 19

[Conservation Biology](http://ConservationBiology.org) – Starts Mar. 7

[Winter Pruning](http://WinterPruning.org) – Mar. 10

[Green in the Winterscape](http://GreenintheWinterscape.org) – Mar. 20

Adaptation Workbook Class

January 25, 2021 to March 15, 2021

Climate Adaptation Planning and Practices Online Course (Register by 12/30. [Find out more](http://Findoutmore).)

Watch the informational webinar on the course on December 16. [Register for webinar](http://Registerforwebinar).

Offered by the Northern Institute of Applied Climate Science and USDA Northern Forests Climate Hub

Growing on Trees—Grants

TD Green Space Grant — A collaboration of TD Bank Group and the Arbor Day Foundation. The 2021 theme for the program is, "Building Resilience: Green infrastructure solutions for communities disproportionately impacted by Covid-19. (Defining communities disproportionately impacted as: seniors, low-income families and individuals, Black, Indigenous and racialized communities, and individuals experiencing homelessness.)

To be eligible for a TD Green Space Grant, the project must take place within TD's footprint in the U.S. or Canada, with priority being given to projects in areas that primarily serve low- to moderate-income residents or take place in underserved communities.

This is a reimbursement grant — funds will be provided upon completion of your project and submission of your final report. No more than 50% of the proposed funding may be used to purchase new trees. For communities applying within the U.S. preference will be given to currently recognized Tree City USA communities or those interested in becoming a Tree City USA community over the next calendar year.

Grant applications will be accepted until December 18, 2020.

Learn more at TDGreenSpaceGrants.com.

The National League of Cities [2021 Leadership in Community Resilience](#) program is now accepting proposals from cities seeking additional funding for resilience-related projects. Each city selected for the 2021 cohort will receive \$10,000 in financial support, and customized support from both NLC and the Resilient Cities Network (formerly 100RC). Apply today! **The deadline for applications is December 23, 2020.**

The Community Forest and Open Space Conservation Program — Due January 11, 2021 — The Community Forest Program is a competitive grant program whereby local governments, qualified nonprofit organizations and federally recognized Indian tribes are eligible to apply for grants to establish community forests that provide community benefits through fee simple acquisition of private forest land. Lands must be private forest that is at least five acres in size, suitable to sustain natural vegetation, and at least 75 percent forested. The lands must also be threatened by conversion to non-forest uses, must be offered for sale by a willing seller, and if acquired by an eligible entity, must provide defined community benefits under CFP and allow public access. <https://www.federalregister.gov/documents/2020/08/14/2020-17838/request-for-applications-the-community-forest-and-open-space-conservation-program>

Building Resilient Infrastructures and Communities Grant— Due January 29, 2021 — Federal Emergency Management Agency (FEMA) makes federal funds available through the new Building Resilient Infrastructures and Communities (BRIC) grant program to states, local communities, tribes and territories (SLTTs) for pre-disaster mitigation activities. FEMA encourages reviewing the BRIC NOFO before applying, as it provides detailed program information and other grant application and administration requirements. To apply for funding made available for FY20 through the BRIC program, applicants must adhere to the following application and funding deadlines: application opening - September 30, 2020 and application deadline - January 29, 2021 (3:00 p.m. EST). <https://www.fema.gov/grants/mitigation/fy2020-nofo>

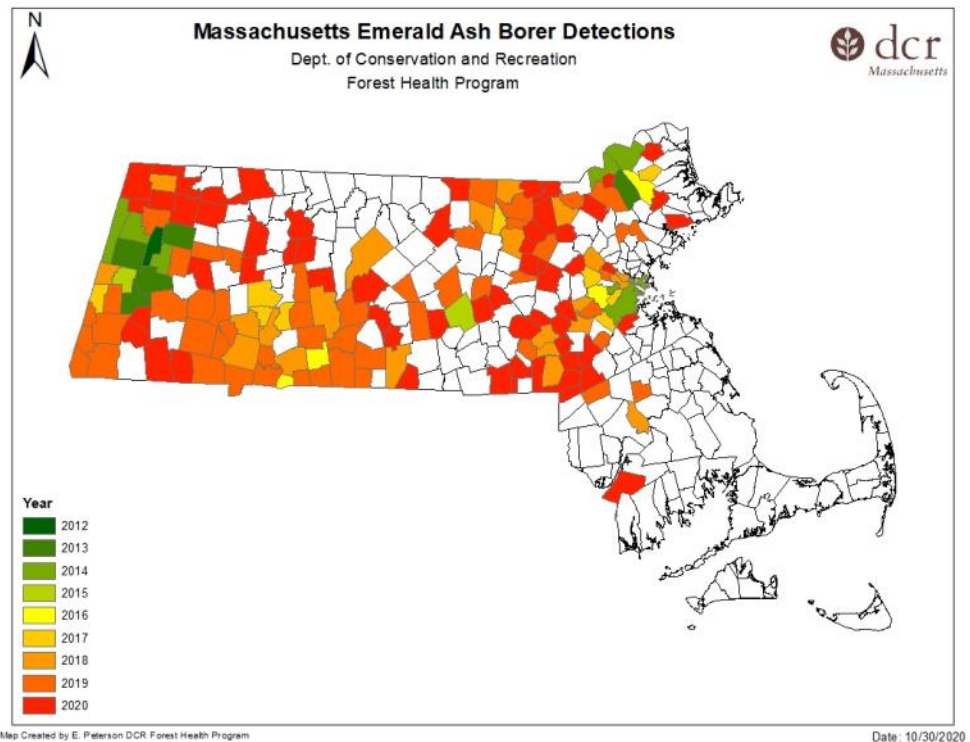
Growing on Trees

Emerald Ash Borer Update

No new update for this month.

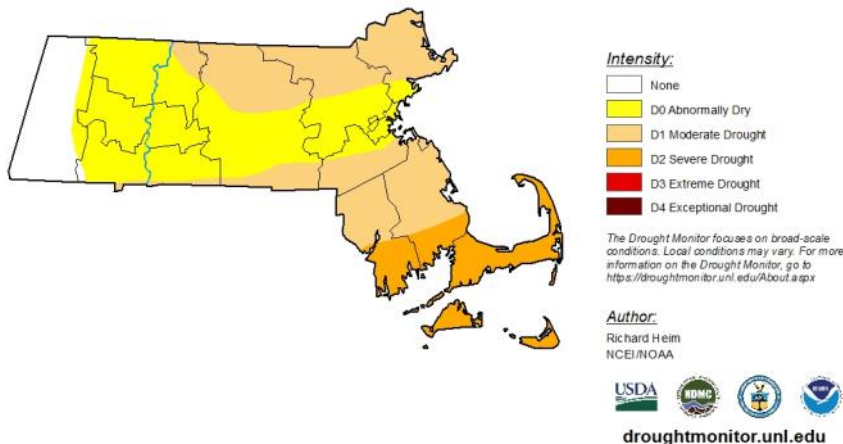
As of October 30, the total number of municipalities with confirmed EAB is 138, with 39 detections in 2020. Barnstable is the only county on the Massachusetts mainland without a known detection of EAB. EAB also has not been detected on the islands.

For information on what to look for go to emeraldashborer.info. Check out [EAB University webinars](#) to learn about EAB and other pests



U.S. Drought Monitor Massachusetts

November 24, 2020
(Released Wednesday, Nov. 25, 2020)
Valid 7 a.m. EST



Weather and Climate

Over the last month, drought conditions have eased across the Commonwealth. Approximately 50% of the state is in Moderate or Severe Drought and 40% is Abnormally Dry. Much of Berkshire County is out of a drought status entirely. Monthly reports from the [Northeast Regional Climate Center](#) show Massachusetts precipitation levels returning to “normal.”

Find out More

[The Northeast Regional Climate Center](#)

[The U.S. Drought Portal](#)

[National Climate Report](#)

[Massachusetts Drought Management Task Force](#)

Growing on Trees

Mass. Tree Wardens' and Foresters' Association

Tree Warden of the Year—Call for Nominations



The Tree Warden of the Year Award recognizes a tree warden who exhibits leadership, dedication, and a commitment to the profession. The annual award is named in honor of longtime member and past president Seth “Swift” Swift, who passed away January 1, 2004. The association invites nominations from Massachusetts residents as well as from city and town officials. Nominations are due by December 1st for the January annual award presentation. **Now – at any time of year – you can [nominate online](https://www.masstreewardens.org).** Find out more at www.masstreewardens.org.

Gleanings

What Is Native?

by Dan Jaffe Wilder

From the Ecological Landscaping Association newsletter

The recent interest in ecologically-minded landscapes has created a growing interest in native plants with more interest comes the question, what exactly does native mean? To simply state a plant is native is to make certain assumptions, and qualifiers are needed in order to make the statement, namely time and place. [Read the article.](#)

Acorns: A Fickle Crop?

From Penn State University

By Jim Finley

Much research has sought to predict mast years when big acorn crops occur and shed light on what leads to poor years or early acorn abortion (or abscission) like you may have seen this season.

In so many ways, this has been an interesting year! We are fortunate to live in Pennsylvania with sylvan landscapes where we can distance ourselves among the trees. Some folks are observing early acorn drop. This raises questions about this fickle crop and what may explain what keen observers are seeing.



Acorn of red oak (*Quercus rubra*) Mollie Freilicher

Oaks are economically important tree species in Pennsylvania and across the East. Acorns, or mast - a word derived from old English which means forest food, are important to wildlife. Oak-borne mast production varies from year to year. Much research has sought to predict mast years when big acorn crops occur and shed light on what leads to poor years or early acorn abortion (or abscission) like you may have seen this season.

This story starts by recognizing that oaks separate into two groups popularly referred to as red and white. Learning to identify the difference between the two groups is easy. Red oaks, for example Northern red oak, pin oak, scarlet oak, and black oak, have small “bristles” on the lobes and tips of their leaves. White oaks, for example white oak and rock, or chestnut, oak, lack these bristles and have rounded leaf lobes. There are other differences that are more difficult to recognize such as acorn structure and wood anatomy. Read the full article at psu.edu.

Growing on Trees

Baker-Polito Administration Announces Expansion of Greening the Gateway Cities Program

Grants Also Awarded to Support Tree Planting in Urban Communities

BOSTON – November 23, 2020 – The Baker-Polito Administration today announced the expansion of the Greening the Gateway Cities Program (GGCP) to the cities of Fitchburg, Lowell, Salem, and Westfield, and awarded \$370,000 in grants to 11 cities and 10 non-profits to support tree planting in urban communities through the program. Through GGCP, the Department of Conservation and Recreation works with 18 Gateway Cities throughout the Commonwealth to increase tree canopy cover in urban residential areas, especially Environmental Justice neighborhoods.

“The Greening the Gateway Cities Program serves as an excellent example of a strong partnership between state government, local municipalities, and dedicated organizations working together to benefit Massachusetts residents for generations to come,” said **Governor Charlie Baker**. “Increasing tree cover in our Gateway Cities helps to both address climate change and create a healthier environment for urban residents, and we are proud to add these four cities to this program.”

“By adding the cities of Fitchburg, Lowell, Salem, and Westfield into the Greening the Gateway Cities Program, our Administration continues to invest in the future of these cities and further enhance our environmental resources,” said **Lieutenant Governor Karyn Polito**. “We look forward to working with these cities to plant thousands of trees, delivering significant benefits to residents in these communities and helping the Commonwealth make progress toward its long-term climate goals.”

The Greening the Gateway Cities Program seeks to reduce energy use, reducing flooding from stormwater runoff, and improve the quality of life in these cities, especially during the increasingly hot summers in Massachusetts,

through the planting of thousands of trees. Trees have the ability to cool neighborhoods and reduce the “urban heat island” effect where large areas of pavement cause significantly hotter living conditions.

The plantings will be focused in Environmental Justice neighborhoods, which include areas with over 25% of residents who are low income, minority or non-English speaking. DCR foresters will work with neighborhood non-profit organizations to help with outreach and community support.

“With the expansion of the Greening the Gateway Cities Program, we are improving equity in communities with significantly less greenery and shade, improving the quality of life for residents by providing cooler neighborhoods and lowering energy bills,” said **Energy and Environmental Affairs Secretary Kathleen Theoharides**. “A significant expansion in trees also means cleaner air, less flooding, more beautiful neighborhoods, and a boost to the local economy by creating jobs at local nurseries and within the neighborhoods for tree planting.”

To support the GGCP, the state will invest over \$5 million over the next year in state capital and energy efficiency funds to plant over 8,000 trees averaging six feet in height within the 18 Gateway Cities. The program will train crews in proper tree planting and care, and many employees find permanent work in the landscaping industry. The GGCP is expected to yield more than twice the investment made by the Administration as the trees mature.

The announcement also includes the launch of two new grant programs, the Greening the Gateway City Municipal Grant Program and Greening the Gateway City Non-Profit Grant Program, which make funds available to

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Expansion of Greening the Gateway Cities Program

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Gateway Cities and local non-profits for program assistance. By lessening local costs, municipal grants give public works resources they need to plant in collaboration with DCR.

“The Department of Conservation and Recreation is proud to support this worthwhile program by partnering with cities throughout the Commonwealth, including our new partners in Fitchburg, Lowell, Salem, and Westfield,” **said DCR Commissioner Jim Montgomery.** “This program stands as a wonderful example of the Baker-Polito Administration’s dedication to developing the necessary tools to effectively implement an urban forestry plan and protect our environment.”

The Administration is awarding grants to 10 local non-profits in the Gateway Cities to support outreach and tree care, and to 11 municipalities to support public tree planting with the removal of pavement and other impervious material, and the addition of soils and permeable material. Cities and non-profits are also working on locating and restoring vacant lots to ready them for tree planting.

The following awards are being announced today:

Greening the Gateway City Municipal Grant Program

\$20,000 for each municipality for public tree planting support.

- Chelsea
- Fitchburg
- Haverhill
- Holyoke
- Lowell
- Lynn
- Pittsfield
- Quincy
- Revere
- Salem
- Westfield

Total support: \$220,000

Greening the Gateway City Non-Profit Grant Program

\$15,000 for each non-profit for outreach, tree education, and care.

- | | |
|--|--|
| Downtown Pittsfield Inc. and Berkshire Environmental Action Team | Lowell Parks and Conservation Trust |
| Fall River Tree Planting Committee | Making Opportunities Count - Fitchburg |
| Groundwork Lawrence - Haverhill | Salem Sound Coastwatch |
| Groundwork South Coast – New Bedford | Valley Opportunities Council |
| Growing Places - Leominster | Wildlands Trust Inc. |

Total support: \$150,000

With a defined goal to increase the urban tree canopy to 5-10 percent in select neighborhoods in each Gateway City, the program is expected to reduce heating and cooling costs by approximately \$230 a year for an average household, once the trees reach maturity. To date, the program has planted over 27,000 trees in 14 Gateway Cities – the equivalent of adding 550 acres, or nearly one square mile, of new forest to these cities. Planting will continue in those cities in addition to the new cities being added this fall. Residents who sign-up for the GGCP will be provided planted trees at no cost as long as they commit to water the trees for two years.

In Chelsea, over 2,200 trees have been planted so far with over 8,195 residents living within 50 feet of these trees. Recent interviews with nearly 200 residents in six cities who are caring for trees planted in their yards have found over 90% are very happy about their trees and value the beauty, shade and birds trees bring to neighborhoods. More than two thirds of the residents have reached out to neighbors to encourage them to join the tree planting program.

“Over the past several years Salem’s commitment to our public trees has grown substantially,” **said Salem Mayor Kim Driscoll.** “From major increases

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Expansion of Greening the Gateway Cities Program

(Continued from page 16)

in our tree planting and maintenance budgets, to the comprehensive tree ordinance and Tree Commission, to our grant-funded city-wide tree inventory and maintenance plan, we are committed to keeping our community green as an important measure to address air quality, water resources, personal health and well-being, energy use, and protection against extreme heat and flooding. I am grateful to the Baker-Polito Administration for this grant so we can continue that dedication to expanding our urban tree canopy.”

“I’m incredibly grateful that the expansion of the Greening the Gateway Cities Program will allow Salem to create a greener, more beautiful city for all who live there,” **said Senator Joan B. Lovely (D-Salem)**. “The planting of trees will certainly lead to better air quality and less flooding, but it will also help to create jobs at a time when many are looking for work. I also know that Salem Sound Coastwatch will be an excellent partner as it continues its work to protect Salem’s coastline and watersheds.”

“I commend and thank the Baker-Polito Administration for this grant which will not only enhance the streetscape in Salem, but will help our environment for generations to come,” **said Representative Paul Tucker (D-Salem)**. “These resources allow Salem to beautify our city and complement the historic nature of our neighborhoods.”

Read the original press release [here](#).

Find out more about Greening the Gateway Cities at mass.gov and at maurbancanopy.org

Headlines in Brief

[East Hampton, NY's Battle Against Pine Beetle Resumes](#)

[This Year's Drought Will Slow Tree Growth Next Year](#)

[Climate Change Closes In On Lebanon's Iconic Cedar Trees](#) (and check out the December 2019 [Species Spotlight](#))

[Amid Drought, How Brookline Can Help Trees Survive](#)

[Blanchard Lab at UMass-Amherst Leads National Soil Microbiome Investigation](#)

[Climate Change Hits Rock and Roll as Prized Guitar Wood Shortage Looms](#)

[Mount Grace Discusses Management of Song Memorial Forest in Warwick Following 2019 Windstorm](#)

[Tree Inequity in Rhode Island is a Stark Problem](#)

[Google's New Tool Helps Cities Plant Trees to Combat the Climate Crisis](#)

[The First Step to Bridging the Urban 'Canopy Gap'? Counting and Mapping Trees](#)

[Vermont Modernizes its Tree Warden Statutes](#)

[A Forest in The Sky Is Coming to London](#)

On the Horizon

- Dec 1 Webinar: [Invasive Woody Plant Management](#), 2pm, EPA
- Dec 1 [DCR Forest Health Webinar Series](#) begins
- Dec 2 [Urban Tree Summit](#) (Virtual), Casey Trees
- Dec 3 Webinar: [An Intro to Mapping & Spatial Data Applications for Arborists](#), 12pm, Urban Forestry Today
- Dec 4 [ELA Ecological Plant Conference](#) (Virtual)
- Dec 7-11 ISA Annual International Conference and Tradeshow (Virtual), www.isa-arbor.com
- Dec 7 Webinar: [Clearing the Air on Pesticides](#), 7pm, Cornell Cooperative Extension
- Dec 9 Webinar: [Biocultural stewardship: Transforming our urban and community forestry practices](#), 1pm, US Forest Service, Urban Forest Connections
- Dec 14 Webinar: [Establishing a Backyard Ecosystem using Urban Trees](#), 7pm, Cornell Cooperative Extension
- Dec 15 Webinar: [Saying Yes to Wildlands AND Woodlands](#), 4pm, Harvard Forest
- Dec 15 [CTSP Workshop](#) (Virtual), Tree Care Industry Association
- Dec 16 [Informational webinar](#) about Climate Adaptation Course, 1pm
- Dec 30 Webinar: [Effect of Invasive Species on the Urban Forest](#), 7pm, Cornell Cooperative Extension
- Dec 31 **Deadline** for Tree City USA, Tree Campus, and Tree Line USA Applications. Contact Mollie Freilicher, 508-726-9255 or mollie.freilicher@mass.gov for details.
- Jan 12 Webinar: [IPM After the Storm – Vector Considerations, Part 1](#), 2pm, EPA
- Jan 12-13 Mass. Tree Wardens' and Foresters' Association Annual Conference (Virtual), www.masstreewardens.org
- Jan 13 TCIA Virtual Summit, www.tcia.org
- Jan 19 [Arborist Short Course](#) (Virtual), Penn State Extension
- Mar 15 **Deadline** for [DCR Arbor Day Poster Contest](#)

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Bureau of Forestry

Department of Conservation and Recreation

251 Causeway Street, Suite 600
Boston, MA 02114

Julie Coop, Urban and Community Forester
julie.coop@mass.gov | (617) 626-1468

Mollie Freilicher, Community Action Forester
mollie.freilicher@mass.gov | (413) 577-2966

www.mass.gov/dcr/urban-and-community-forestry

Charles D. Baker, Governor

Karyn E. Polito, Lieutenant Governor

Kathleen A. Theoharides, Secretary, Executive Office of Energy and Environmental Affairs

Jim Montgomery, Commissioner, Department of Conservation and Recreation

Peter Church, Director of Forest Stewardship, Department of Conservation and Recreation

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) or click [here](#).

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