



## Growing Degree Days for Management of Insect Pests in the Landscape

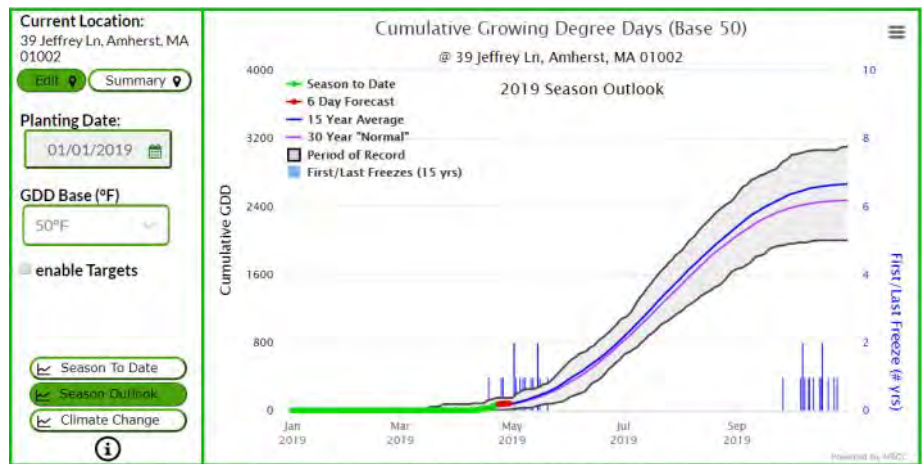
By **Tawny Simisky**,  
Extension Entomologist,  
UMass Extension

### What are Growing Degree Days?

**Growing degree days** (GDDs) are a unit of measure used to calculate the amount of heat required, between a lower and upper threshold, for an organism (such as an insect) to develop into the next life stage. With insects, for example, GDDs

can help us to estimate when the eggs of a particular pest are going to hatch (and subsequently when larvae or immatures are going to begin feeding) or approximately when vulnerable stages of certain insects, such as the crawlers (or immatures) of certain scale insects will be present.

GDDs are a much more accurate method of estimating insect growth and development and the timing of insect life cycles than using the calendar method of estimating insect activity. The calendar method is based on historical records or past experience when a certain insect is present in the landscape. This can be very different year-to-year, as we know some springs are warmer or cooler than others are. Therefore, basing management decisions off a specific calendar date might lead to incorrect timing because of “out of the ordinary” seasonal temperatures.



This [tool](#) from Cornell University calculates cumulative growing degree days, provides a six-day forecast of GDD accumulation, and charts historic averages.

GDDs may be thought of as accumulated heat units, as they are an accumulated product of time and temperature between developmental thresholds per day. Each insect species might require a different amount of accumulated heat or physiological time to develop from one life stage to another (egg to larva to pupa to adult in the case of insects with complete metamorphosis). A key piece of calculating growing degree days for a specific insect is the insect’s **developmental threshold**.

### What is a Developmental Threshold?

For simplicity, we will focus on the lower developmental threshold of insects when calculating growing degree days. This is the temperature below which development of the insect does not occur (stops). This temperature is dependent upon the individual organism’s physiology (normal functioning) and does not change even when using different methods to calculate growing degree days.

Controlled laboratory and field experiments have been done to determine the developmental threshold temperature for certain different species of insects, but not all.

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Therefore, this information might not yet be available for certain pests of concern. To simplify the calculation of growing degree days, we will use a developmental threshold (baseline) temperature of **50°F**. 50°F is used for insect and mite pests of woody ornamental plants in the Northeast as most of these plants initiate their growth between 45°F-55°F in our region. If an insect's true developmental threshold is much farther from 50°F, the growing degree day estimates may be inaccurate, however using GDDs has still been shown to be more accurate in estimating insect pest activity than simply relying on calendar dates.

## How Do I Calculate Growing Degree Days?

A simple way of calculating growing degree days is sometimes referred to as the "Average Method":

$$\begin{aligned} & \text{Average Daily Temperature} \\ & - \text{Baseline Temperature (Developmental Threshold)} \\ & = \text{Growing Degree Days Gained} \end{aligned}$$

Ignore any negative answers to this above equation, as insect growth will not reverse as a result. Here is an example:

$$\begin{aligned} & \text{April 1st High Temperature: } 70^\circ \text{ F} \\ & \text{April 1st Low Temperature: } 60^\circ \text{ F} \\ & \text{Average Daily Temperature for April 1st} = (70^\circ \text{ F} + 60^\circ \text{ F})/2 = \mathbf{65^\circ \text{ F}} \text{ in our example} \end{aligned}$$

Using the developmental threshold of 50°F, the growing degree day calculation would be:

$$\begin{aligned} & \text{Average Daily Temperature (} \mathbf{65^\circ \text{ F}} \text{)} \\ & - \text{Baseline Temperature (Developmental} \\ & \quad \text{Threshold) (} \mathbf{50^\circ \text{ F}} \text{)} \\ & = \text{Growing Degree Days Gained (} \mathbf{15 \text{ GDDs}} \text{)} \end{aligned}$$

Each day's total is added together if the GDD amount is positive (negative values are not subtracted). Growing degree days can be calculated starting on January 1<sup>st</sup>, or closer to the start of the growing season when accumulated heat units are more likely to occur above 50°F

(such as March 1<sup>st</sup> in Massachusetts). When using the 50°F base, GDDs in Massachusetts generally range from 0 GDDs in the beginning of March to 500 GDDs by the end of April-beginning of May to 1000 GDDs between June and July and finally 3000 GDDs by October.

Other, much more mathematically complicated methods of calculating growing degree days are available and are used by entomologists to more accurately track pests. A great explanation of these different methods of calculating growing degree days may be found at the following University of California web page: <http://ipm.ucanr.edu/WEATHER/ddconcepts.html>.

## How Do I Use GDDs in Management?

Tracking growing degree days throughout the growing season can help you to track insect pest activity and better time monitoring and management activities. This will allow you to use temperature to track the development of these insects and monitor for them close to when any detrimental or otherwise significant activity might occur based on their life cycle.



Newly-hatched larvae of gypsy moth *Lymantria dispar*. (Photo: [Ohio State University](http://ohio-state-university.edu))

Using gypsy moth or (*Lymantria dispar*) as an example, egg hatch for this moth caterpillar is known to occur roughly between 90 and 100 GDDs when using a base 50°F developmental threshold. For our example, consider that egg mass numbers from the previous season are present in the landscape in high numbers, defoliation was extensive in your area last year, and there is solid evidence this season that caterpillar numbers might be high again. You also have high value ornamental plants that are favored hosts for gypsy moth that you wish to protect.

By tracking growing degree days, you can then plan to monitor (in the field) egg hatch once you locally accumulate 85-90 growing degree days and closely watch caterpillar development. Once hatched

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# Growing Degree Days for Management of Insect Pests

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caterpillars begin dispersing to the canopies of their host trees and settle to feed, you will be prepared to apply biorational insecticides, according to your IPM plan, such as *Bacillus thuringiensis* Kurstaki (Btk), at the time caterpillars are first feeding and while caterpillars are still young (when they are between ¼ - ¾ inch in length). This will increase the likelihood of the success of your application. Btk only works on Lepidopteran (butterfly and moth) caterpillars and only when they ingest this bacteria-based toxin. It also works best on younger (smaller) caterpillars. If you had not been tracking growing degree days early in the season, you may not have noticed gypsy moth caterpillar feeding until the larvae were too large to treat with Btk.

## Where Can I Find GDDs for My Area?

UMass Landscape Message: <https://ag.umass.edu/landscape/landscape-message>

## Network for Environmental and Weather Applications

Applications: <http://newa.cornell.edu/index.php?page=growing-degree-days>

USPEST.org: <http://uspest.org/>  
[Printer-friendly version](#)

Read the original article on the [UMass Extension website](#).

Network for Environmental and Weather Applications Growing Degree Day Website

## Other Resources

Common names, scientific names of insects, and growing degree days (GDD) affecting ornamental plants:

<http://ccetompkins.org/resources/using-growing-degree-days-for-insect-management>

## Climate Smart Farming Growing Degree Day Calculator

<http://climatesmartfarming.org/tools/csf-growing-degree-day-calculator/>



## Species Spotlight—Scarlet Oak, *Quercus coccinea*

By Mollie Freilicher,  
Community Action  
Forester, MA-DCR

Native to Massachusetts, scarlet oak (*Quercus coccinea*) is one of several species of oak found naturally in the Commonwealth. Scarlet oak is a tree in the 'red oak group.' Oaks are broadly characterized as 'red' or 'white' based on a few traits. That is, scarlet oak can be generally characterized by having bristled lobes, acorns that require two growing seasons to mature, acorns with thin cup scales, and heartwood with open vessels. Scarlet oak is native from southwest Maine to Georgia, west to Mississippi, and north to Missouri and Indiana. There are also some disjunct populations in Michigan.



Form ([Northern Forest Atlas](#))

Scarlet oak can be found naturally in Massachusetts in a variety of soils, including poor and sandy soils of uplands and slopes, often with other species of oak. A large tree, scarlet oak can grow to 60 to 80 feet, with a spread of 40 to 50 feet in the landscape, but can grow taller in the wild. At maturity, scarlet oak has a rounded, open crown. It is hardy in USDA zones four to nine.

Leaves of scarlet oak are alternate, simple, and oblong, three to six inches long and two-and-a-half to four-and-a-half inches wide, with seven deeply divided lobes (rarely nine), with bristles at the tips. The leaves are lustrous and dark green above and are shiny and yellow-green below. Fall color, as you may have deduced from the common name, is scarlet, though Michael Dirr notes that some trees are more russet – or don't have red color at all. The color often develops late. Like other oaks, scarlet oak may hang onto its leaves well into winter.



Bark ([Virginia Tech](#))



Fruit ([Northern Forest Atlas](#))

Buds of scarlet oak are scaled and blunt, about one-quarter to three-eighth inch long, and Michael Dirr describes the shape as like a rugby ball. Bark of scarlet oak is light brown to reddish brown, becoming rough and furrowed with age. The fruit of scarlet oak is an acorn, one-half to one-inch long and egg-shaped. Acorns mature to brown and have two to four faint rings. The cap is top-shaped and thick, with tight scales. They take two years to mature.

At maturity, scarlet oak resembles pin oak (*Q. palustris*), though Dirr notes that it does not tolerate adverse conditions as well as pin oak, and red oak and may be harder to find in the trade. Doug Tallamy, Professor of entomology at

the University of Delaware and author of *Bringing Nature Home*, writes that, "The value of oaks for supporting both vertebrate and invertebrate wildlife cannot be overstated. Since the demise of the American chestnut, oaks have joined hickories, walnuts, and the American beech in supplying the bulk of nut forage so necessary for maintaining populations of vertebrate wildlife. [...] What we have underappreciated in the past, however, is the diversity of insect herbivores that oaks add to forest ecosystems. From this perspective, oaks are the quintessential wildlife plants." Scarlet oak can not only be a handsome addition to the landscape, but an important functional one as well.

### References

Dirr, M.A. 1998. *Manual of Woody Landscape Plants*. 5<sup>th</sup> Edition. Champaign, IL: Stipes.

Tallamy, D.W. 2007. *Bringing Nature Home*. Portland, OR: Timber Press.



Fruit ([Virginia Tech](#))



Leaf ([Virginia Tech](#))



Buds ([Virginia Tech](#))

# Growing Greener—Challenge Grant Awards Announced

April 23, 2019 – The Baker-Polito administration announced \$140,270 in 2019 Urban and Community Forestry Challenge Grants to fourteen municipalities. The grants will assist the communities as local officials seek to maximize the social, economic, and environmental benefits of trees within their communities.

The majority of funds for the matching grant program are provided by the United States Department of Agriculture Forest Service and the Massachusetts ReLeaf Trust Fund, and are administered by the DCR. Three of the fourteen grant awards were funded from the Mass ReLeaf Trust Fund utilizing donations from the National Grid Corporation and Eversource Corporation. The three grants for community wood banks were funded by the Mass Clean Energy Center.

The following proposals were awarded 2019 Urban and Community Forestry Challenge Grants:

**Applicant:** City of Framingham, Community & Economic Development Division  
**Project:** Downtown North Strategic Tree Planting  
**Amount Awarded:** \$11,000

**Applicant:** Town of Athol  
**Project:** Community Wood Bank  
**Amount Awarded:** \$2,000

**Applicant:** Town of Deerfield  
**Project:** Deerfield Strategic Tree Planting and Environmental Education  
**Amount Awarded:** \$4,800

**Applicant:** Town of Maynard  
**Project:** Maynard Shade Tree Inventory and Management Plan  
**Amount Awarded:** \$20,100

**Applicant:** Town of Lanesborough, Tree and Forest Committee  
**Project:** “King Elmer:” The Lanesborough Elm  
**Amount Awarded:** \$1,200

**Applicant:** City of Medford  
**Project:** Medford Canopy Improvement Initiative  
**Amount Awarded:** \$20,000

**Applicant:** Town of Millbury  
**Project:** Street Tree Planting  
**Amount Awarded:** \$5,670

**Applicant:** Town of Montague, Tree Advisory Committee  
**Project:** Montague Wood Bank Improvement Project  
**Amount Awarded:** \$2,000

**Applicant:** Town of Natick  
**Project:** Natick Tree Health Survey  
**Amount Awarded:** \$7,000

**Applicant:** Town of Needham  
**Project:** Needham Tree Protection Health Planning and Planting Project  
**Amount Awarded:** \$10,000

**Applicant:** City of Northampton  
**Project:** Transforming Downtown Heat Island with Proper Plantings  
**Amount Awarded:** \$30,000

**Applicant:** Town of Palmer  
**Project:** Community Wood Bank  
**Amount Awarded:** \$2,000

**Applicant:** Town of Plainfield, Historical Society for the Plainfield Tree Alliance  
**Project:** Pittsfield Community Wood Bank  
**Amount Awarded:** \$2,000

**Applicant:** City of Springfield  
**Project:** Forest Park Neighborhood Urban Forest Assessment  
**Amount Awarded:** \$22,500

Currently, the Department of Conservation and Recreation is accepting project grant proposals for calendar year 2020. Please visit the agency’s Urban and Community Forestry Challenge Grants [webpage](#) for additional details.

## Growing on Trees

### UMass Arboriculture & Urban Forestry Wins 1st Place in Arboriculture Techniques at the 43rd Annual National Collegiate Landscape Competition

March 20 - 23, 2019—The University of Massachusetts Arboriculture Team competed in the 2019 National Collegiate Landscape Competition in Ft. Collins, CO, and was awarded first place in the arboriculture techniques competition. The UMass team was competing against 68 other colleges and 844 students.

Michael Tilton, Stockbridge Arboriculture & Community Forestry 2018 / UMass Urban Forestry 2019, partnered with Cory Rebello, Stockbridge Arboriculture & Community Forestry 2018 / UMass Urban Forestry 2020, making up the UMass team.

The objective of this event is to evaluate the skills and knowledge of the participants on general and accepted arboricultural practices. The competition is intended to be competitive and educational for all students, regardless of their skill level.

The competition is split up into three areas: Knowledge Exam, Climbing Skills, and Throw Line Skills. A two-person team will perform the three areas, with each team member taking the exam, and then one team member performing the climbing skills, while the other team member performs the throw line skills part of the event.

The same two-person team must perform all areas of the competition. Schools are limited to one two-person team per school.

UMass students have a history of doing well in this national competition, winning or placing in the top three, eight times in the past ten years.

Mike is graduating this spring and will be working with Davey's Hartney-Greymont division. Cory will return to next year's completion and will spend this summer working for a tree care company.

The National Collegiate Landscape Competition



UMass Amherst students, Michael Tilton and Cory Rebello in Fort Collins, CO

(formerly called Student Career Days) is an annual three-day competition and networking event for students enrolled in horticulture and landscape programs at two and four-year colleges and universities from across the country. More than 750 landscape industry students from approximately 60+ schools demonstrate their skills in more than two-dozen real-world, competitive events coupled with a Career Fair, where students meet with representatives from the top landscape firms from around the nation.

We want to thank all of this year's supporters and hope that you will support next year's team.

Summary provided by Kristina Bezanson.

Learn more about the arboriculture and urban forestry opportunities at UMass-Amherst:

<https://www.umass.edu/ses/program/arboriculture-community-forest-management>



# Growing on Trees

## League of Women Voters of Massachusetts Announces Winner of Climate Change Challenge Student Video Contest

The Climate Change Challenge contest asked students to create a 30-second video about one aspect of climate change and suggest a course of action to help save the planet. The first-place video was all about trees!



First-place video: [“The Urban Shade Tree: Nature’s Air Conditioner”](#) by Madeleine Lombard, Four Rivers Charter Public School, Greenfield.

Watch the video at the above link or watch all the videos on the League of Women Voters of Massachusetts website: <https://lwvma.org/the-climate-change-challenge-lwvma-student-video-contest-winners-announced/>. Congratulations, Madeleine!



Also, check out Madeleine’s recent project for Northampton—[Tree Speak](#), a project designed to increase engagement with trees in the city.

## Harvard Forest Seminars

There are still a few sessions left in the 2019 series. All seminars are open to the public. For more information: <https://harvardforest.fas.harvard.edu/events>

Linda Deegan-Woods Hole Research Center and Bullard Fellow

*Title TBA* - [Join seminar online](#)

Thursday, May 2: 11:00 a.m. - 12:00 p.m.

Qiao Xiujuan-Key Laboratory of Aquatic Botany and Watershed Ecology, Wuhan Botanical Garden, Chinese Academy of Sciences

*Species-area relationship and species-abundance distribution of forest communities in China*

[Join seminar online](#)

Thursday, May 9: 11:00 a.m.- 12:00 p.m.

Kristina Stinson-University of Massachusetts

*Ecology and impacts of the invasive plant, Alliaria petiolate* - [Join seminar online](#)

Thursday, May 16: 11:00 a.m.- 12:00 p.m.

Annie Deslauriers-Université du Québec à Chicoutimi (UQC)

*Carbon contribution in primary and secondary growth under changing environmental conditions and defoliation in boreal forest* - [Join seminar online](#)

Thursday, May 23: 11:00 a.m.- 12:00 p.m.

## Tree City, Tree Campus, and Tree Line USA Programs

Tree City USA, Tree Campus USA, and Tree Line USA are national recognition programs sponsored by the Arbor Day Foundation and are implemented in Massachusetts by the Department of Conservation and Recreation. Detailed instructions for Tree City USA are available on our [website](#), along with links to additional Tree Campus and Tree Line USA information.

Questions? Contact Mollie Freilicher, 413-577-2966 or [mollie.freilicher@mass.gov](mailto:mollie.freilicher@mass.gov).



THE CITIZEN FORESTER

# Growing on Trees—Webcasts and Events

## Urban Forestry Today Webcast

May 2, 2019 | 12:00 – 1:00 p.m. (Eastern)

Emerald Ash Borer Management, Dr. Phil Lewis,  
USDA APHIS

View this archived webinar and earn CEUs by visiting: <http://www.urbanforestrytoday.org/videos.html> at noon on May 2.

*This webcast series is sponsored by the University of Massachusetts Department of Environmental Conservation, in cooperation with the USDA Forest Service, the MA Department of Conservation and Recreation, UMass Extension, and the Massachusetts Tree Wardens' & Foresters' Association.*

## USDA Forest Service Urban Forest Connections

May 8, 2019, 1:00-2:15 p.m. (Eastern)

More than Good Looks: How Trees Influence Urban Stormwater Management in Green Infrastructure Practices (Rescheduled from January 9)

Andrew Tirpak, University of Tennessee  
Lyn Rutherford, City of Chattanooga, TN

To view the webinar and watch past archived webinars, go to <https://www.fs.fed.us/research/urban-webinars/>

## i-Tree Workshop: Trees, Cities, and Benefits

June 4, 2019, 9:00 a.m. – 1:30 p.m. | Acton

Learn about the i-Tree software suite and how you can use i-Tree in your community to connect trees to broad sustainability goals and quantify the benefits of trees.

[Find out more and register.](#) Questions? Contact Mollie Freilicher, [mollie.freilicher@mass.gov](mailto:mollie.freilicher@mass.gov), 413-577-2966.

[www.masstreewardens.org](http://www.masstreewardens.org)

## Soils Conference 2019

May 23, 2019 , 8:30 a.m.—4:00 p.m. | Princeton

USDA NRCS/Worcester County Conservation District

Find out more: <https://worcesterconservation.org/events/>

## i-Tree Webinar

May 23, 2019, 1:00 – 2:00 p.m. (Eastern)

Earth Day Was Excellent – Now What?  
Engagement, Equity and Opportunities with i-Tree

So many i-Tree users celebrate the importance of trees during spring planting events around Earth and Arbor Day. But we know that the challenges of maintenance, stewardship, and health often continue after the big day. Join us on Thursday, May 23 for the next Urban Natural Resources Institute (UNRI) i-Tree Series webinar. We will highlight i-Tree tools and strategies to advance post-planting success and prioritize your program goals.

Register here: <https://bit.ly/2GvgWK8>.

Learn more about the series here: <https://www.unri.org/itreeworkshops/>.

Archived webinars can be accessed from the [UNRI Resources and Replay](#) page.

## Forestry Webinar

May 28, 2019, 2:00 – 3:00 p.m. (Eastern)

Managing Oak Forests for Northern Bobwhite Quail  
Pre-registration not required. [Find out more.](#) <http://www.forestrywebinars.net>

*Sponsored by: National Bobwhite Conservation Initiative, Oklahoma State University Cooperative Extension, Nc State Extension, and Southern Regional Extension Forestry*

## UMass Extension Events

Landscape Pests & Problems Walkabouts

May 10, 2019, 4:00–6:00 p.m. | Newton

Ornamental Tree and Shrub ID and Insect Walk

June 12, 2019, 2:00–4:00 p.m. | Boylston

Find out more and register at [UMass Extension](#).

## EPA Soak Up the Rain Webinar

May 14, 1:30 - 3:00 p.m. (Eastern)

Reaching Public Consensus: Stormwater Funding in Ashland, MA

Find out more and register:

<https://www.epa.gov/soakuptherain>



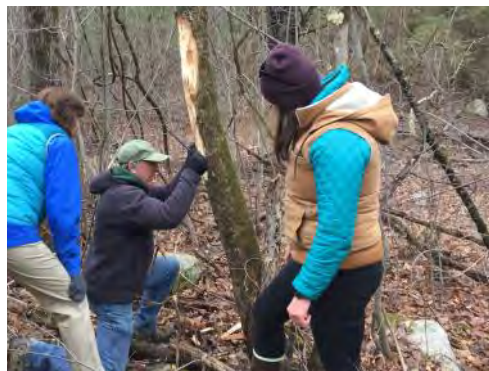
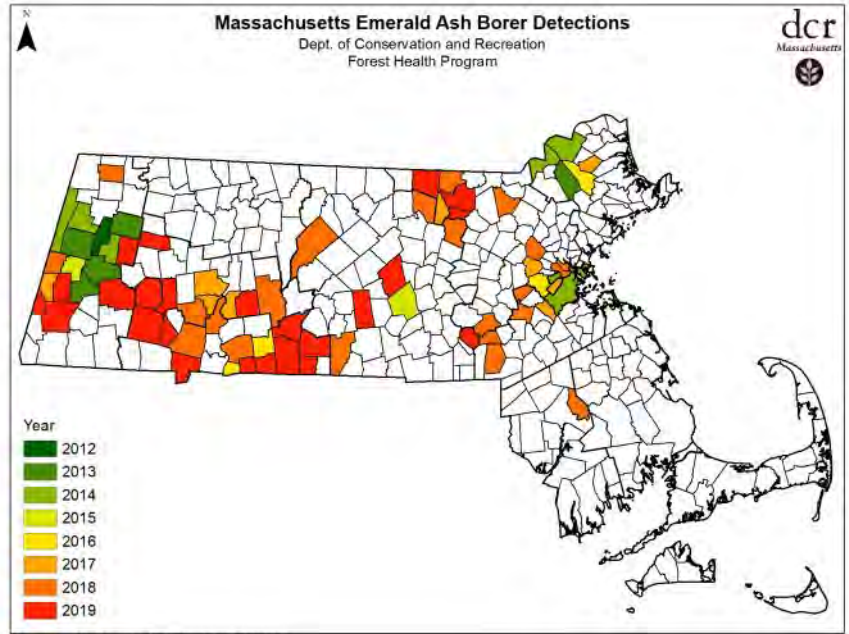
# Growing on Trees

## Emerald Ash Borer Update

As of April 22, emerald ash borer (EAB) has been detected in 73 communities in Massachusetts. New finds include Holden, Peru, Cummington, Granby, and Milford.

## Emerald Ash Borer Workshops

In April, the DCR Forest Health Program hosted two workshops on Emerald Ash Borer in Holliston and South Hadley. Attendees got to see firsthand how to identify a tree infested with emerald ash borer, as well as how to use traps to monitor for the insect in areas where it hasn't yet been detected. Attendees even got to leave the sessions with either purple panel traps or green funnel traps that they can use for monitoring for EAB on public land in their communities.

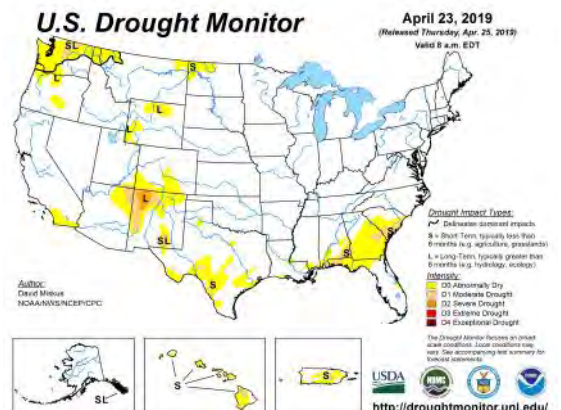


Left to right—Nicole Keleher, DCR Forest Health, shows attendees the green funnel trap for monitoring for EAB; Ken Gooch, DCR Forest Health Program Director, peels bark to look for EAB galleries; EAB gallery.

## Drought Monitor

As of April 25, 2019, no parts of Massachusetts or the Northeast were classified in a drought status or as abnormally dry. Drought conditions have eased in much of the rest of the continental U.S., with no areas experiencing extreme or exceptional drought.

For complete details, go to the U.S. Drought Monitor: <https://droughtmonitor.unl.edu/>



# Growing on Trees

## From the Mass. Tree Wardens' and Foresters' Association

### i-Tree Workshop: Trees, Cities, and Benefits

June 4, 2019, 9:00 a.m. – 1:30 p.m. | Acton

- Are you looking to justify your tree program with cost/benefit analysis?
- Do you want to help your community understand the contribution trees provide to people every day?
- Are you interested in connecting trees to broad sustainability goals?

This half-day workshop will show you all the latest i-Tree tools and teach you how to use this resource to quantify tree benefits and value.

Who should attend? Tree wardens, city foresters, campus grounds managers, non-profits, state & regional foresters, and anyone who wants to talk benefits of trees!

*The workshop is sponsored by Davey Resource Group, the Massachusetts Tree Wardens' and Foresters' Association, and the Massachusetts Department of Conservation and Recreation, with support from the USDA Forest Service.*

[Find out more and register.](#) Questions? Contact Mollie Freilicher, [mollie.freilicher@mass.gov](mailto:mollie.freilicher@mass.gov), 413-577-2966.



**i-Tree can help!**

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## Workshop: Tree Mapping Technologies for Modern Urban Forest Management

June 5, 2019, 9:00 a.m. – 2:00 p.m. | Lesley University, Cambridge

An interactive, educational workshop where you will learn terms, tools, tricks for cloud-based GIS tree inventory collection, tree care and consulting, data analysis, and work management.

Sponsored by Plan-it Geo. [Find out more and register.](#)

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## Spotted Lanternfly

Be on the lookout for spotted lanternfly this growing season. We do not have any known established populations in the state, though a single dead adult was [found in Boston in December](#) 2018. The finding in Boston, as well as similar findings in other states, have been traced back to material shipped from the area under quarantine in Pennsylvania, where spotted lanternfly was first found in the United States in 2014. Populations of spotted lanternfly have established in Pennsylvania, Delaware, and Virginia.



From USDA APHIS: The Spotted Lanternfly (*Lycorma delicatula*) is native to China and was first detected in Pennsylvania in September 2014. Spotted lanternfly feeds on a wide range of fruit, ornamental, and woody trees, with tree-of-heaven being one of the preferred hosts. Spotted lanternflies are invasive and can be spread long distances by people who move infested material or items containing egg masses. This pest could seriously impact the country's grape, orchard, and logging industries.

There are lots of resources for early detection of spotted lanternfly and for learning how to prevent the spread of spotted lanternfly, including pest alerts in both [English](#) and [Spanish](#) and a 30-second [video](#). Stay up to date with the [USDA-APHIS website](#), [UMass Extension - https://ag.umass.edu/landscape/factsheets/spotted-lanternfly](https://ag.umass.edu/landscape/factsheets/spotted-lanternfly), and the [Mass Introduced Pests Outreach Project https://massnrc.org/pests/pestFAQsheets/spottedlanternfly.html](https://massnrc.org/pests/pestFAQsheets/spottedlanternfly.html)

If you think you have found spotted lanternfly in Massachusetts, [REPORT IT HERE](#)

# Growing on Trees

## From the Ecological Landscape Alliance

<https://www.ecolandscaping.org/>

### Eco Courses Now in Spanish

On April 1, ELA introduced its first ecological landscape classes designed for native Spanish speakers. The nine-part series covers a complete range of land care topics and is being offered at no cost for three months (April, May, and June 2019). Starting July 1st, the classes will remain free for ELA Members and will be available for \$10 per class for non-members.

Click on a title to get started now:

[Calidad del Aire y Jardineria Verde – Air Quality](#)

[Fertilizantes y Hierba Cortada Compostaje –](#)

[Fertilizer and Grass Cycling](#)

[Introduccion A Cobertura \(Mulch\) Y Abono](#)

[\(Compost\) – Introduction to Mulch and Compost](#)

[Introduccion A Suelos – Introduction to Soils](#)

[La Planta Correcta en el Lugar Correcto – Right](#)

[Plant Right Place](#)

[La Poda Para La Salud De La Planta – Pruning for](#)

[Plant Health](#)

[Manejo Integrado de Plagas MIP – Integrated Pest](#)

[Management \(IPM\)](#)

[RIEGO #1 Interaccion Entre Agua – Plantas Y](#)

[Suelos – Irrigation Part 1 of 2](#)

[RIEGO Programacion del Riego – Irrigation Part 2](#)

[of 2](#)

### National Green Infrastructure Certification Program (NGICP) – Class Registration Open Now!

Initiated under the leadership of DC Water and the Water Environment Federation, the National Green Infrastructure Certification Program (NGICP) sets national certification standards for green infrastructure (GI) construction, inspection, and maintenance workers.

Designed to meet international best-practice standards, NGICP certification advances the establishment of sustainable communities by promoting GI as an environmentally and economically beneficial stormwater management option, supporting the development of proficient green work-forces, and establishing a career path for skilled GI workers.

In collaboration with ELA, Trevor Smith offers a 5-day, 35-hour course that provides graduates the skillset needed to design green stormwater infrastructure and to oversee construction, inspection, and maintenance of these projects. [Read more and register.](#)

## From BayState Roads

Find out more about these and other trainings at:

[https://www.umasstransportationcenter.org/umtc/Baystate\\_Roads.asp](https://www.umasstransportationcenter.org/umtc/Baystate_Roads.asp)

### Chainsaw Skills and Safety – 2-Day

May 6, 2019, 7:30 a.m. – 3:00 p.m., Halifax

May 28, 2019, 7:30 a.m. – 3:00 p.m., Winchendon

Topics: basic safety equipment, PPE, saw reactive forces, chain parts, felling, notch, and hinge, cutting techniques, wedging techniques, and calculations. This class is a 16-hour course that would include a hands skills portion where each student fells one tree.

*This event is accessible to people with disabilities and individuals with limited English proficiency. If you need a reasonable accommodation (such as American Sign Language Interpreters, assistive listening devices,*

*handouts in alternate formats, etc.) and/or language assistance (such as translated documents or an interpreter) to fully participate, please contact Brenda Codella at 413-522-6434 or [bcodella@umass.edu](mailto:bcodella@umass.edu) at least 14 days prior to the event. Such services are provided free of charge.*

### Chainsaw Storm Debris Cleanup

May 16, 2019 | Berlin

This class teaches students how to deal with trees that have fallen due to bad weather or other reasons. Topics covered include pressures and binds, rolls, spring poles, hangers and leaners, pulls and splits.

This class is all hands-on after a 1.5 hour classroom instruction. All students will operate a chainsaw. **NOTE: MUST** complete Chainsaw skills and Safety 2-Day prior to taking this class.



# Growing on Trees

## Tree Campus K-12: New Recognition Program for K-12 Schools

The Arbor Day Foundation is launching a new program to recognize K-12 schools for their efforts in tree care. The new program is called **Tree Campus K-12**. Tree Campus K-12 inspires the next generation of tree stewards through experiences that bring the benefits of trees to life both inside and outside the classroom. The program fosters positive connections between youth and the trees in their community and cultivates within its participants a lifelong respect for trees on a global scale. Find out more at <https://www.arborday.org/programs/tree-campus-k-12>

## UMass Extension

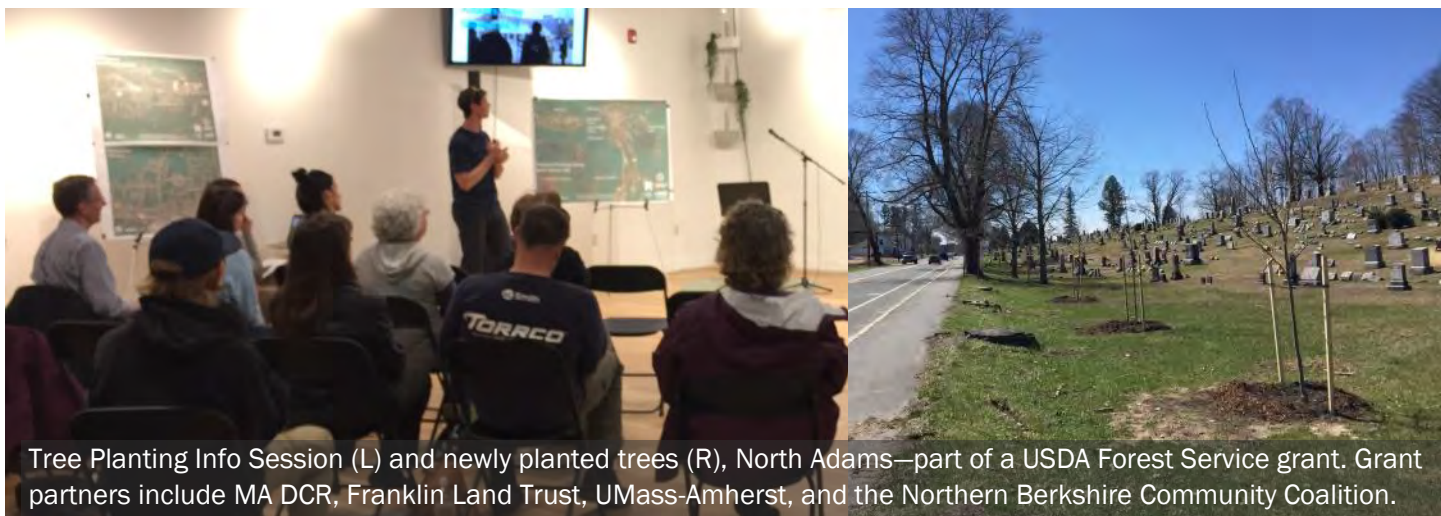
### Diagnostic Services for Landscape and Turf and Soil and Plant Nutrient Testing

The UMass Extension Plant Diagnostic Lab is available to serve commercial landscape contractors, turf managers, arborists, nurseries, and other green industry professionals. It provides woody plant and turf disease analysis, woody plant and turf insect identification, turfgrass identification, weed identification, and offers a report of pest management strategies that are research based, economically sound and environmentally appropriate for the situation. Accurate diagnosis for a turf or landscape problem can often eliminate or reduce the need for pesticide use. For sampling procedures, detailed submission instructions and a list of fees, see [Plant Diagnostics Laboratory](#)

The **University of Massachusetts Soil and Plant Nutrient Testing Laboratory** is located on the campus of The University of Massachusetts at Amherst. Testing services are available to all. The function of the Soil and Plant Nutrient Testing Laboratory is to provide test results and recommendations that lead to the wise and economical use of soils and soil amendments. For complete information, visit the [UMass Soil and Plant Nutrient Testing Laboratory](#) web site. Alternatively, call the lab at (413) 545-2311.

### Sign up for the UMass Extension Landscape Message

The Landscape Message is an educational newsletter and update intended to inform and guide horticultural professionals in the management of our collective landscape. Approximately 24 messages are published each year. A new message is available weekly during the heart of the growing season, bi-weekly in mid to late summer, and monthly in the fall. [Subscribe to the UMass Extension e-mail list](#) to receive notification in your inbox when each new message is posted.



Tree Planting Info Session (L) and newly planted trees (R), North Adams—part of a USDA Forest Service grant. Grant partners include MA DCR, Franklin Land Trust, UMass-Amherst, and the Northern Berkshire Community Coalition.

# News

## Baker-Polito Administration Celebrates Planting the 20,000<sup>th</sup> Tree under the Greening the Gateway Cities Program



April 23, 2019 – QUINCY — The Baker-Polito Administration today joined with officials from the City of Quincy and students from North Quincy High School to celebrate the 20,000<sup>th</sup> tree planted under the Commonwealth’s Greening the Gateway Cities Program and to highlight the importance of trees within local communities.

“Healthy, green, and accessible open spaces are an essential component of the public’s well-being and our administration is proud to continue partnering with local municipalities and non-profit groups to ensure that trees and parks remain a priority,” said Governor Charlie Baker.

As a participant of the Greening the Gateway Cities Program, trees are provided free-of-charge and are planted by DCR crews. To be eligible, residents and property owners must agree to a two-year watering commitment to ensure the trees’ survival. Instructions on caring for the new trees are provided by DCR to tree recipients addressing watering, mulching, and pruning. When a potential tree recipient signs up, a DCR urban forester will visit their home to determine the best location and species of tree for energy efficiency. The DCR urban foresters also conduct year-round site visits and are available to answer questions. For more information, please visit the [program’s webpage](#).

Listen to Governor Baker’s remarks and read more about the event at the [Patriot Ledger](#).

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### News Headlines in Brief

[Invasive Plants in Massachusetts: 31 Types That Could Be Growing into A Jungle in Your Backyard](#)  
[Towns on High Alert for Destructive, Yet Beautiful, Lanternfly](#)  
[Spring in CT Brings High Forest Fire Danger](#)  
[Why NASA Wants You to Point Your Smartphone at Trees](#)  
[Framingham’s Downtown Trees Provide \\$400K Economic Boost](#)  
[One Man’s Quest to Protect A Rare Kind of Hazelnut Tree](#)

[Connecticut’s Rapid Loss of Urban Trees Could Have Long-Term Consequences](#)  
[Ten Acres of Freetown State Forest Set on Fire in Controlled Burn](#)  
[Why the Trees of New Bedford Series?](#)  
[Meet the Botanists Who Climb the World’s Tallest Trees](#)  
[Northampton to Celebrate Arbor Day with Tree Tour](#)

# On the Horizon

- May 2** Urban Forestry Today Webinar, [www.urbanforestrytoday.org](http://www.urbanforestrytoday.org)
- May 10** Landscape Pests and Problems Walkabout, UMass Extension, Newton, [www.umassgreeninfo.org](http://www.umassgreeninfo.org)
- May 17** [ASTI Chainsaw Specialist Workshop](#), Hartford, TCIA
- May 23** Know the Soil, Know the Land, Soil Conference, USDA NRCS/Worc. County Conservation District, Princeton, [Find out More](#)
- May 23** i-Tree Webinar, 1:00 p.m. (Eastern), [www.unri.org](http://www.unri.org)
- May 29** TREE Fund Webinar, 1:00 pm (Eastern), [www.treefund.org/webinars](http://www.treefund.org/webinars)
- May 29** Tree City USA Forum and Award Ceremony, Sturbridge
- Jun 1** National Trails Day
- Jun 1** New England ISA Tree Climbing Championship, New England Chapter-ISA, Warwick, [www.newenglandisa.org](http://www.newenglandisa.org)
- Jun 1** ISA Exam, Dighton, (Enroll by May 15), [www.newenglandisa.org](http://www.newenglandisa.org)
- Jun 4** i-Tree Workshop, Mass. Tree Wardens' and Foresters' Assoc., Acton, [www.masstree Wardens.org](http://www.masstree Wardens.org)
- Jun 5** [Tree Mapping Technologies for Urban Forest Management](#), Plan-it-Geo, Cambridge
- Jun 11** Western Mass Tree Wardens Dinner Meeting, Northampton
- Jun 11** TREE Fund Webinar, 2:00 p.m. (Eastern), [www.treefund.org/webinars](http://www.treefund.org/webinars)
- Jun 12** Ornamental Tree and Shrub ID and Insect Walk, UMass Extension, Boylston, [www.umassgreeninfo.org](http://www.umassgreeninfo.org)
- Jun 16-19** [Global i-Tree Science & Users Symposium](#), SUNY-ESF, Syracuse, [www.esf.edu/itree/](http://www.esf.edu/itree/)

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## Bureau of Forestry

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

**Charles D. Baker**, Governor

**Karyn E. Polito**, Lieutenant Governor

**Matthew A. Beaton**, Secretary, Executive Office of Energy and Environmental Affairs

**Leo Roy**, 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](#) or click [here](#).

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