Massachusetts Urban & Community Forestry Program

The Citizen Forester

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Pollinators in the Urban Landscape II: Diversifying our Plant Selection

By Mandy Bayer and Rick Harper

With nearly two-thirds of our urban street tree populations here in Massachusetts being *Acer* spp. (maple) or *Quercus* spp. (oak), it is abundantly clear that our urban forests lack biodiversity. The risks associated with this lack of diversity become especially evident when we examine how an invasive insect like Asian Longhorned Beetle (*Anoplophora glabripennis*) has been responsible for the loss of tens of thousands of urban trees, that once the comprised the (mostly maple) urban forest cover in the City of Worcester. In addition to widening our planting palate with the intention of *preventing* invasive pest infestations, what about diversifying urban planting selections to *attract* beneficial insects – namely some of the proven performers that include pollinators.

Plant-Pollinator Interactions

Plants and pollinators have evolved over time to adapt morphological features to ensure pollination (plants) and to better harvest and increase the supply of food sources (pollinators). Floral features, such as shape, color, scent, nectar amount, pollen amount, and nectar guides, influence what pollinators are likely to visit. Flower shapes influence the accessibility of nectar and pollen, along with creating landing pads or perches. Long tubular flowers can exclude insects that are not good pollinators. Pollinators with the ability to hover, such as hummingbirds, often visit long tubular flowers while less graceful pollinators visit more open or bowl-shaped flowers. Bees pollinate shallow tubular flowers with landing platforms.

Up Ahead:

Eastern swallowtail butterfly on mountain laurel.

Birds pollinate funnel shaped flowers or cup-shaped flowers that have a strong perch support. Beetles often pollinate more open flowers while butterflies visit narrow tubular flowers with landing pads. Flies pollinate shallow flowers that are funnel-like or flowers with floral features that trap the flies. Moths pollinate tubular flowers without a lip.

Floral features can also protect nectar from non-pollinating insects by keeping nectar deep within the flower. Deeply hidden nectar can also be a strategy for increasing pollen contact with pollinators. Pollinators that have other food sources, such as flies and beetles, visit flowers with little or no nectar. The amount of pollen that contacts and sticks to different insects varies, as does the amount of pollen produced by a flower. Some flowers have two types of pollen, one that is a food source and a second for pollination. Nectar guides, which are areas of ultraviolet reflectance that can't be seen by humans, are generally present on brightly colored flowers to help direct the pollinator towards the center of the flower and the pollen. Flowers that attract with scent are usually dull in color, relying on scent to attract pollinators. These plants are usually white to dull green or dark purple to dull red to brown. Night blooming plants are pollinated by nocturnal pollinators such as moths and bats and are commonly strongly scented. Bees are generally more attracted to purple, blue, and yellow flowers, while birds and butterflies are attracted to red, orange,

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and yellow. Dull white, green, purple, and brown flowers are generally pollinated by flies, beetles, moths, and bats.

Mimicry can be used by plants to attract pollinators either by scent or by shape. Some flowers produce a scent similar to rotten flesh in order to attract pollinators, especially flies, which will visit these flowers to eat the rotting flesh or to lay their eggs near a food source. The pollinators will unintentionally pollinate the flower while laying its eggs or looking for food. Other flowers, such as some orchid varieties, can mimic the shape of female insects and produce a scent similar to female pheromones. Males will visit the flower, attempting to mate with the female, and in the process often pollinate the flower or transport pollen.

A bee foraging on flowers of Japanese tree lilac (*Syringa reticulata*).

Entrapment uses a mix of pollination strategies to attract pollinators. Plants may use pools of fluid, closing flowers, or movement of one flower part is response to pollinator presence on another to trap the pollinator within the flower. This ensures that either the flower is pollinated or that the pollinator becomes covered in pollen when looking to escape.

The flowering of plants at different times of the year is also an evolutionary process applied to attract different pollinators, or to attract pollinators during a time when there is less competition.

Who are the Pollinators?

Bees and butterflies receive much attention regarding pollination and pollinator health; however, there are also a number of lesser-thought-of pollinators that are important to pollination. Flies may have been the first pollinator, and are second to bees in terms of increasing flower diversity throughout evolution. Nectar is not the primary food source for flies. Flowers with foul-scented flowers generally attract flies, and the flies are often trapped or forced into the flower to ensure pollination. Some common flowers that use bad smells to attract flies and insects for pollination include *Arisaema triphyllum* (Jack-in-the-pulpit), *Asimina* (paw-paw), *Crataegus* (Hawthorn) and *Trillium erectum* (red trillium). Although, not grown in New England, *Theobroma cacao* (chocolate) is only pollinated by flies, (specifically tropical midges).

Fruits of horse chestnut (*Aesculus* spp.), thanks to insect and bird-assisted pollination of the flowers.

Beetles are another of the first pollinators, having pollinated some of the earliest angiosperms over 120 million years ago. Although beetle pollination is more common in tropical areas, there are a number of common temperate ornamental plants that are beetle pollinated. Flowers commonly visited by beetles are generally more primitive and include white to green colored, bowl-shaped flowers open during the day. Some of these plants that grow in New England include *Magnolia*, *Asimina* (paw-paw), *Crataegus* (Hawthorn), *Sassafras*, and *Calycanthus* (sweetshrub). Beetles can be attracted by a variety of scents including spicy, sweet, or fermented. It is common for beetles to eat through petals and other flower parts in order to get to nectar, giving them the nickname of "mess and soil pollinators." The sheer number of beetle species also makes them an important pollinator worldwide.

Other less common pollinators include wasps, ants, moths, and birds.

References:

Shepherd, M., S.L. Buchmann, M. Vaughan, and S. Hoffman Black. 2003. Pollinator Conservation Handbook.

The Xerces Society. Portland, OR.

Committee on the Status of Pollinators in North America. 2007. Status of Pollinators in North America. The

National Academies Press. Washington, D.C.

USDA Forest Service. Plant Pollinator Strategies. http://www.fs.fed.us/wildflowers/pollinators/Plant_Strategies/index.shtml

USDA Forest Service. Pollinators. http://www.fs.fed.us/wildflowers/pollinators/animals/

Pollinators in the Urban Landscape II (continued)

Floral Traits for Attracting Pollinators*

	Flower Shape	Color	Scent	Nectar Guide	Nectar
Bees	Shallow, landing platform	White, yellow, blue, purple	Fresh	*	Limited, often sticky
Butterflies	Narrow tubular, landing pad	Red, orange, yellow, purple	Fresh	*	Deeply hidden
Birds	Funnel or cup shaped with perch	Red, orange, yellow, white	None		Deeply hidden
Beetles	Open, bowl shaped	White or dull green	Spicy, sweet, or fermented		Not hidden when available
Flies	Shallow or flowers with trapping features	Dull brown or purple	Foul-scented		Absent
Moths	Tubular	Dull green or brown	Sweet; at night		None

*adapted from http://www.fs.fed.us/wildflowers/pollinators/What_is_Pollination/syndromes.shtml

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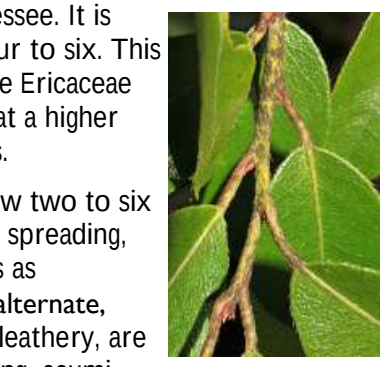
Species Spotlight—Mountain pieris, *Pieris floribunda*

By Mollie Freilicher, DCR Community Action Forester

Though it has much to offer the landscape, mountain pieris is perhaps less well known in New England than its relative, Japanese pieris (*P. japonica*). Also known as fetterbush and mountain andromeda, mountain pieris is native to forests and rocky, exposed hilltops from Virginia to Georgia and west to West Virginia and Tennessee. It is hardy in USDA zones four to six. This evergreen member of the Ericaceae family can tolerate soils at a higher pH than its brethren, such as Japanese pieris.

Mountain pieris is a small shrub that can grow two to six feet tall and about as wide. It has an upright, spreading, rounded form, which Michael Dirr describes as "handsome." Leaves of mountain pieris are alternate, simple, and evergreen. They feel somewhat leathery, are elliptical in shape and one to three-inches long, acuminate, and fringed with small hairs at the margin. They are shiny, dark green above and are paler in color below. As with Japanese pieris, one plants mountain pieris for its flowers. They appear in upright panicles, bloom in April or May, and are urn-shaped, fragrant, and white. The flower buds are present throughout winter, becoming progressively whiter as the bloom time approaches. The fruits of mountain pieris are small brown capsules that can remain on the plant through winter. Bark of mountain pieris is gray-brown, with vertical fissures. Leaves and other parts of mountain pieris (as well as other *Pieris* species) are toxic and should not be eaten.



Mountain pieris can be difficult to transplant and this is, perhaps, one reason why we do not see it utilized more in the landscape. While somewhat adaptable, mountain pieris does best in locations with part shade to almost full sun. Locations that are extremely dry and hot should be avoided. It prefers soils that are well-drained. Unlike Japanese pieris, mountain pieris is not as affected by lacebugs. Mountain pieris is a great plant for a mass planting, for naturalized areas, and for foundation plantings.

(Photos, clockwise from top-left: leaves, flowers, fruit, twig, and form, John Seiler, Virginia Tech)

Species Spotlight—Revisiting Black Locust

Thanks to Russ Cohen, naturalist and wild food enthusiast, (and long-time supporter of this newsletter!) we are revisiting black locust, our February Species Spotlight, with an eye toward edibility. Russ has shared his recipe for black locust fritters with us. Try these later this month or in early June, when black locust is in flower.

Black Locust Fritters
Recipe by Russ Cohen, from *Wild Plants I have Known…and Eaten*

Left: black locust flowers; above: black locust fritters. (Photos by Russ Cohen)

INGREDIENTS
2 cups Black Locust flowers (raw or frozen)
2 eggs, separated
1 Tbsp melted butter
2/3 cup milk
1 cup all-purpose flour
1/4 teaspoon salt
1 Tbsp granulated sugar
1/2 cup orange juice
confectioner's sugar

PREPARATION:
Beat together egg yolks, melted butter, and milk in a bowl. In a separate bowl, mix together flour, salt, and granulated sugar. Combine all ingredients; cover, and allow to sit at least two hours in the refrigerator (overnight is OK). Remove from refrigerator and beat well until smooth. Whip the two egg whites until they are stiff and gently fold them into the batter. Add about 2 cups of the Black Locust flowers (stripped off their central stalks first) and mix until blended. (If using frozen flowers, it is not necessary for them to thaw first.) Fill a large skillet with cooking oil about 1/4" deep, and turn stove on to a medium-high heat (about the same temperature you would cook omelettes or pancakes). Once the oil is hot, drop in large spoonfuls of the fritter batter and fry for a minute or two on each side until they are golden brown. Remove and pat dry with a paper towel; squeeze a little orange juice on each fritter, dust with confectioner's sugar, and serve while warm. Leftover fritters can be frozen and reheated in a toaster oven. Makes about 15 fritters.

Workshops in Connecticut this June

Great Mountain Forest in Connecticut will be sponsoring two weekend workshops this June, led by special guests Robin Kimmerer and Tom Wessels. "Plants as Teachers: How Can We Be Better Students?" will be led by Dr. Kimmerer the weekend of June 3-5. "Reading the Forested Landscape" with Tom Wessels will be held June 24-26. The workshops will take place at the Yale Forestry Camp, a rustic lodge in the center of Great Mountain Forest's 6,300 acres. All meals from Friday dinner through Sunday lunch are included, as well as overnight accommodations for $475 per person. For more information and to make reservations, contact via email or call (860) 824-8188. Seen in the *Northern Woodlands* newsletter.

Documentary on DC Green Jobs Airs

NEW YORK--The documentary film "City of Trees" is based on a USDA Forest Service Northeastern Area State and Private Forestry American Recovery and Reinvestment Act grant to Washington Parks and People. The grant provided training and employment in green jobs to 150 residents from Southeast DC. Produced by Meridian Hill Pictures, the film has been receiving critical acclaim at film festivals. "City of Trees" will be broadcast nationally on public television on Tuesday, April 19, at 8:00 p.m. on America Reframed, which offers an unfiltered look at people rarely given a voice on national television. After the broadcast (check local listings), the film will be available to stream for free for 90 days on www.worldchannel.org.

Growing on Trees

i-Tree 2016 Webinars

Join us for a comprehensive web-based instructional series that will introduce the latest tools in the i-Tree software suite, as well as bring you up-to-date on the improvements that have been made to the i-Tree collection of inventory, analysis, and reporting tools for urban and community forests. i-Tree is a state-of-the-art, peer-reviewed software suite from the USDA Forest Service and its partners, which provides urban forestry analysis and benefits assessment tools.

All instructional sessions begin at 1:00 PM (Eastern)

May 18, 2015 - i-Tree Roundtable: Answering Your Questions about Using i-Tree
June 15, 2016 - Using i-Tree VUE and STORM
July 20, 2016 - Introducing i-Tree Landscape
August 16, 2016 - What's New in i-Tree ECO
September 20, 2016 - Looking at i-Tree HYDRO
October, 19, 2016 - DESIGN and CANOPY
November 16, 2016 i-Tree STREETS
December 21, 2016 - i-Tree Roundtable: Answering Your Questions About Using i-Tree

CEU Credits: Society of American Foresters CFE units and International Society of Arboriculture (ISA) CEUs are expected to be awarded for attending these online sessions. Each session is planned to last 1-hour.

For more information, go to: http://www.unri.org/itreeworkshops/

Urban Forest Connections

The 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.

May 11, 2016 | 1:00-2:15 p.m. ET

Future Webinars
June 8, 2016, 1:00-2:15 p.m. ET
July 13, 2016, 1:00-2:15 p.m. ET
August 10, 2016, 1:00-2:15 p.m. ET

Monitoring Urban Trees after Giveaway Programs

A recent Urban Forest Connections webinar presented the results of follow-up monitoring after shade tree giveaways. Watch the recorded webinar.

Harvard Forest Seminars

Attend in person or join online.
http://harvardforest.fas.harvard.edu/seminars

Seminars are Fridays at 11:00 a.m. Eastern Time, unless otherwise noted. They are held in the Harvard Forest Seminar Room and also can be joined online via web-streaming. Seminars are free and open to the public; no pre-registration is required.

Friday, May 6 - Join seminar online
Ezra Markowitz – University of Massachusetts
Title TBD

Friday, May 13 - Join seminar online
Cory Merow – University of Connecticut
Linking demography to range dynamics

Friday, May 20 - Join seminar online
Marco Keiluweit, University of Massachusetts
Mineral and redox controls on soil carbon turnover

Urban Forestry Today

Tree Diversity and Exotic Threats: The 5% Solution

May 5, 2016, 12:00 – 1:00 p.m. ET

With increased international trade, our urban forests continue to experience a plethora of stress-factors, including a continuing assault from exotic pest threats. Diversification related to urban tree selection is one important component of plant health care, and Dr. John Ball, of South Dakota State University, will outline proper steps to choosing urban trees with emphasis for diversity being at the genera, not species, level. This presentation will explain why the old "10-20-30 rule" needs to become simply "the 5% solution."

To attend, go to: www.joinwebinar.com, and enter the code: 141-234-395.

For more information, contact:
Rick Harper, Department of Environmental Conservation, University of Massachusetts, Amherst
rharper@eco.umass.edu

The Urban Forestry Today 2016 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.

Growing on Trees

DCR Grants

DCR Urban and Community Forestry Challenge Grants

The most recent recipients for the Urban and Community Forestry Challenge Grant have been announced. Go to: http://www.mass.gov/eea/agencies/dcr/pr-2016/urban-and-community-forestry-challlenge-grants.html.

Next 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.

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

Changes to the DCR Urban and Community Forestry Challenge Grant

In 2016, our Urban and Community Forestry Challenge Grant will move to one grant round per year. The annual deadline will be November 1. This move will enable the program to better review and compare grant proposals. Look for some additional changes to the 2016 program in upcoming issues.

Outdoor Recreation Legacy Partnership Program Grants

Deadline: May 20, 2016

The National Park Service (NPS) announced the opening of the application process for the Outdoor Recreation Legacy Partnership program (ORLP). ORLP is a nationally competitive grant program funded through the Land and Water Conservation Fund (LWCF). NPS will issue $15 million in grants to benefit disadvantaged urban communities.

Congress created ORLP in 2014 to complement the existing LWCF State and Local Assistance Program. This new program seeks to identify and highlight new ways of promoting opportunities for expanding outdoor play in areas with great need, as well as promoting the development of new or enhanced partnerships for outdoor recreation in urban communities across the nation.

For more information about the grant program and a list of previously funded projects, click here. To view the posting and pre-application materials, click here: ORLP Grant.

Growing Greener—in Greenfield

The Franklin Regional Council of Governments (FRCOG) was recently awarded an Urban and Community Forestry Challenge Grant for their project "Trees and Social Equity in Greenfield." From their application: *This environmental justice-focused project aims to build and strengthen citizen involvement in Greenfield's urban forest, particularly that of low-income and disadvantaged populations.* With the grant, the FRCOG will plant shade and fruit trees in Environmental Justice areas of Greenfield. Prior to planting, the FRCOG will hold neighborhood gatherings to involve the community in the project and to gain support and stewardship for the trees. They will create designs for planting in the environmental justice areas that can be shared with neighboring towns. The project also includes an analysis of the 2013 baseline inventory to help determine next steps in developing a management plan. Interested in applying for a DCR Urban and Community Forestry Challenge Grant? Check out information on our website or contact Julie Coop, julie.coop@state.ma.us or 617-626-1468 or Mollie Freilicher mollie.freilicher@state.ma.us or 413-577-2966. The next application deadline is November 1, 2016.

Growing on Trees

For Students UMass Summer College

Pre-College Program for High School Students

July 24 – July 30, 2016—UMass-Amherst

This program covers a number of earth science-related topics, including: botany, physiology, soil composition, run-off, and pollution. Students will also receive hands-on experiential training in: identifying trees, identifying disease in trees, climbing trees (knot tying, ascension, limb-walking, tree worker safety), pruning, plant health care, and pest management. There are currently multiple career opportunities for graduates with either a two- or a four-year degree in Arboriculture at UMass Amherst. For more information, go to: http://www.umass.edu/summer/precollege.html.

Past participant. (Courtesy of Brian Kane)

From UMass Extension

More information at: https://ag.umass.edu/landscape/upcoming-events

Landscape Pests and Problems Walkabout
Thursday, May 19, 2016 - 5:00 p.m., Arnold Arboretum, Boston
Get some hands-on experience scouting and identifying landscape diseases, insects, weeds, and abiotic problems.

Identifying Freshwater Wetlands in the Landscape Training 1: Inland Wetland Plant Identification
Thursday, May 26, 2016 - 9:00 a.m., UMass-Amherst
Training 1 in the Identifying Freshwater Wetlands in the Landscape series is an introduction to inland wetland plant identification and begins with an overview of the major characteristics of woody and non-woody vegetation used for identification in most plant keys.

Identifying Freshwater Wetlands in the Landscape Training 2: Identifying Inland Wetland Soils
Thursday, June 2, 2016 - 9:00 a.m., UMass-Amherst
In Training 2 of the Identifying Freshwater Wetlands in the Landscape series, participants will be introduced to some of the fundamental characteristics of soils that are used to identify hydric (wetland) soils in the field, including soil texture, color, horizon type, and redoximorphic features.

Weed Walkabout
Thursday, June 9, 2016 - 4:00 p.m., Walpole
Correct weed identification is an important first step in the development of an effective weed management program. Join Randy Prostak, Extension Weed Specialist, on a walk through the landscape for an up-close look at weed problems in diverse habitats in the park.

Check out the classes and workshops from these organizations:

The New England Wildflower Society

For more information, go to:
http://www.newenglandwild.org/learn/our-programs

The Arnold Arboretum

For more information, go to:
http://my.arboretum.harvard.edu/Info.aspx?EventID=1

Baystate Roads

For more information, go to
http://baystateroads.eot.state.ma.us/workshops/

Leadership at All Levels: Baystate Roads is pleased to announce a new program, "Leadership At All Levels," for municipal public works departments and MassDOT personnel. The program consists of four sessions: "Personal Leadership," "Interpersonal Leadership," "Group Leadership," and "Organizational Leadership." Each session builds on the previous one in a progressive approach to skills-building.

May 6, 2016 • Hilton Garden Inn, 1032 South Street, Pittsfield

Gleanings

New: "We All Need Trees" Materials, Free Online

WASHINGTON--The National Association of Conservation Districts has developed high-quality materials for their 2016 Stewardship and Education Program and made them available for free electronic download. Both high- and low-resolution files are available, along with printing specifications. This project is a collaborative effort with the USDA Forest Service and Project Learning Tree. Access the materials at the National Association of Conservation Districts Web site.

Radical Forest Changes Projected For Next 50 Years

What we do now will count and will determine how forests change in the next 50 years, says a new report from USDA Forest Service scientists and partners. "This research is vital to everyone concerned about sustaining diverse, healthy, productive forests and the associated ecosystem services, commodities, and jobs our forests provide," Tony Ferguson of the Northern Research Station and the Forest Products Laboratory said. "It provides a scientific foundation for exploring and discussing the future of forests, and it underscores the role of management in making forests healthier and more resilient." That new report is called "Future Forests of the Northern United States." Research for it began in 2009, and it analyzes how our past and present actions could influence northern forests in coming decades. Read the report: http://www.fs.fed.us/nrs/pubs/gtr/gtr_nrs151.pdf

EPA Green Infrastructure Resources

EPA Blog about our world; Our Planet, Our Home.
https://blog.epa.gov/blog/category/ourplanetourhome/

EPA Green Infrastructure Webpage; Learn more at www.epa.gov/greeninfrastructure

2016 Green Infrastructure Webcast Series for in-depth presentations throughout the year;
https://www.epa.gov/green-infrastructure/green-infrastructure-webcast-series

Publication; Tools, Strategies and Lessons Learned from EPA Green Infrastructure Assistance Projects
https://blog.epa.gov/blog/wp-content/uploads/2016/01/green-infrastructure-tech-book-photo.jpg

i-Tree Lessons Pilot Program

The new iTreeLessons.com Pilot Program is a project that incorporates i-Tree Canopy and i-Tree Design into middle school science classroom lessons. Although there are a number of resources that exist which use i-Tree as an educational tool for children, these lessons are intended for in-classroom instruction that fulfill required teaching standards. Find out more: https://www.itreetools.org/resources/itreelessons.php.

New Publication: Urban Tree Mortality: A Primer on Demographic Approaches

Lara A. Roman, John J. Battles, Joe R. McBride

Realizing the benefits of tree planting programs depends on tree survival. Projections of urban forest ecosystem services and cost-benefit analyses are sensitive to assumptions about tree mortality rates. This report is a primer on demographic concepts applied to urban trees, with terms and analytical methods adapted to the cultivated urban landscape. Download the publication at: http://www.nrs.fs.fed.us/pubs/50688.

News

Trees Deal with Climate Change Better Than Expected

By Tatiana Schlossberg

March 16, 2016—The bend-don't-break adaptability of trees extends to handling climate change, according to a new study that says forests may be able to deal with hotter temperatures and contribute less carbon dioxide to the atmosphere than scientists previously thought. In addition to taking in carbon dioxide during photosynthesis, plants also release it through a process called respiration. Globally, plant respiration contributes six times as much carbon dioxide to the atmosphere as fossil fuel emissions, much of which is reabsorbed by plants, the oceans, and other elements of nature. Until now, most scientists have thought that a warming planet would cause plants to release more carbon dioxide into the atmosphere, which in turn would cause more warming. But in a study published Wednesday in *Nature*, scientists showed that plants were able to adapt their respiration to increases in temperature over long periods of time, releasing only 5 percent more carbon dioxide than they did under normal conditions. More: *New York Times*.

Springfield Set To Create Arboretum at Forest Park

By Peter Goonan

April 3, 2016—SPRINGFIELD – ReGreen Springfield will join forces with the city park officials, various organizations, and volunteers to create a Forest Park arboretum – literally a "living museum for trees" to promote the public's educational and visual enjoyment. The Park Commission voted unanimously last week to authorize the arboretum project to be developed over a three-year period. The process will begin with the training of volunteers in April on how to help identify and record information about the first 200 trees that will be archived, said David Bloniarz, president of ReGreen Springfield. Read the full story at masslive.com.

Leominster Plans Large Tree-Planting Effort

By Peter Jasinski

March 17, 2016—LEOMINSTER—Winter was dealt one final blow Wednesday with the city's announcement of a new planting program that will place hundreds of new trees in the ground every year for the next three years starting in April. "I drive by streets where we've planted trees in the past and what a difference it makes. It cuts down on air-conditioning costs, it makes the city look good, it makes the neighborhood look good. There are so many benefits," Mayor Dean Mazzarella said when announcing the program at Evergreen Cemetery Wednesday morning. Through a grant from the state Department of Conservation and Recreation, the city will plant trees on both residential and commercial properties as part of the state's Greening the Gateway Cities program. Read more: at the Sentinel and Enterprise.

Scientists Have Discovered the Oldest-Known Fossil of a Pine Tree

The charred pine twigs date back 140 million years to a time when fires raged across large tracts of land.

Pine trees now dominate the forests of the Northern Hemisphere. The research suggests the tree's evolution was shaped in the fiery landscape of the Cretaceous, where oxygen levels were much higher than today, fuelling intense and frequent wildfires. "Pines are well adapted to fire today," said Dr Howard Falcon-Lang of Royal Holloway, University of London, who discovered the fossils in Nova Scotia, Canada. "The fossils show that wildfires raged through the earliest pine forests and probably shaped the evolution of this important tree." Read the full story at bbc.com.

Saugus Gets a Green Thumb

SAUGUS —Located off Auburn Street, down a walk-through driveway, over a railroad track and down a dirt road, the town's Tree Farm will soon flourish. Saugus was awarded a $22,500 Urban and Community Forestry Challenge Grant through the Department of Conservation and Recreation (DCR) to plant more trees to maximize social, economic, and environmental quality. The town will contribute $7,500 toward the project's $30,000 cost. The grant will aid the Saugus Tree Committee in revitalizing the Tree Farm by funding site preparation for nursery beds and the purchase of planting soil and equipment for the tree nursery. Saugus will also purchase and plant seedlings to grow new saplings in the farm. An arborist will be hired with the money who provides advice on proper techniques for maintaining the farm and planting nursery specimens. "Receiving this grant is a truly exciting opportunity for the Tree Committee, and for the town of Saugus as a whole," said Nancy Prag, chair. "This award will help the committee accomplish an essential revitalization of the tree nursery, which will, in turn, help revitalize the community." Read the full story at itemlive.com.

On the Horizon

May 3	Alliance for Community Trees Webinar, https://attendee.gotowebinar.com/register/6659653242700234755
May 5	Urban Forestry Today Webcast, Tree Diversity and Exotic Threats: The 5% Solution, www.joinwebinar.com, code: 141-234-395
May 5	Webinar: The Value of Environmental Health Services, http://smartgrowth.org/webinar-value-environmental-health-services-may-5/
May 11	Urban Forest Connections webinar, http://www.fs.fed.us/research/urban-webinars/
May 14	Tree Climbing Championship, New England Chapter – International Society of Arboriculture, Portland, ME, http://newenglandisa.org/tree_climbing_championship
May 18	i-Tree webinar series, i-Tree Roundtable, http://www.unri.org/itreeworkshops/
May 19	Landscape Pests and Problems Walkabout, UMass Extension, www.umassgreeninfo.org, Arnold Arboretum, Boston
May 26	Identifying Freshwater Wetlands in the Landscape Training 1: Inland Wetland Plant Identification, UMass Extension, www.umassgreeninfo.org, UMass-Amherst
June 2	Identifying Freshwater Wetlands in the Landscape Training 2: Identifying Inland Wetland Soils, UMass Extension, www.umassgreeninfo.org, UMass-Amherst
June 2	Massachusetts Smart Growth Conference, Worcester, MA, www.masmartgrowthconference.org/
June 7	Western Mass Tree Wardens meeting (more information to follow)
June 8	Urban Forest Connections Webinar, http://www.fs.fed.us/research/urban-webinars/
June 9	Weed Walkabout, UMass Extension, Walpole
June 15	SAVE THE DATE- Tree City/Line/Campus USA Awards Ceremony
June 15	i-Tree webinar series, Using i-Tree VUE and STORM, http://www.unri.org/itreeworkshops/
Jul 13	Urban Forest Connections webinar, http://www.fs.fed.us/research/urban-webinars/
Aug 18-19	Advanced Tree Risk Assessment , Level 3, New England Chapter-ISA, Hanover, NH, www.newenglandisa.org
Oct 14-15	DCR Tree Steward Training, Petersham, MA
Oct 19-21	Certified Arborist Prep Course, New England Chapter-ISA, Acton, MA, www.newenglandisa.org

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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.), please contact Mollie Freilicher or click here.

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