



# BARAK

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## CELEBRATIONS!

January Conference in Sturbridge and  
UMass Tree Conference &  
Association Dinner Gala in March  
Mark the 100th Anniversary of MTWFA



The Massachusetts Tree Wardens' and Foresters' Association celebrated the Centennial with not one but two major events. The highly successful January conference in Sturbridge was followed a short two months later by a celebration at UMass Amherst.

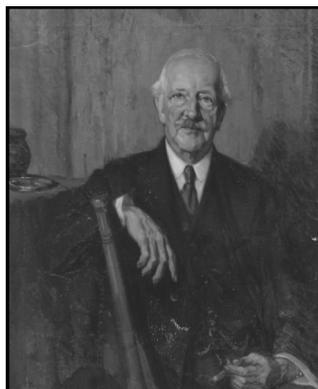


UMass Professor Emeritus Gordon King received the Stone Award in 1989 (above). Prof. King could not be present on March 12th but sent his best wishes to all.

The March event began with the UMass Tree Conference, the successor to George Stone's first workshop for professionals, a "School for Tree Wardens and City Foresters" at the Massachusetts Agricultural College on March 26-27, 1913.

Highlights of the 2013 UMass event on March 12th included a strong speaker lineup, the presentation of annual scholarship awards, and

an evening dinner gala hosted by the Association at the top of the Campus Center.



Dr. H. Dennis Ryan, UMass professor of arboriculture, welcomed the crowd from behind a podium flanked on one side by an original 1935 oil portrait of Dr. Stone and on the other side by a 1913 photograph of the founders. The short program included congratulatory remarks and the gift of a handsome tree book from the Massachusetts Arborists Association; remarks by Peter Church, Department of Conservation and Recreation, speaking of the long and fruitful partnership of DCR with the Association; and a brief but moving account of Association history and tradition by MTWFA Past President Patrick Ellis.



Jazz music by a student ensemble, balloons and festive centerpieces with seedlings, a sumptuous buffet dinner, a centennial cake, and the distribution of the 100<sup>th</sup> anniversary book, *The Centennial Year*, all combined to make it a special evening indeed. Happy Birthday MTWFA!

For more on the centennial celebrations, see conference highlights on page 8 and pictures on pages 6-7 and 10-11.

## MTWFA Executive Board 2013

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### NEWSLETTER EDITOR

Karen Doherty, MTWFA Executive Director

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**REMEMBER  
TO ORDER YOUR SEEDLINGS  
FOR ARBOR DAY!  
DEADLINE IS APRIL 17**



## MTWFA MASSACHUSETTS TREE WARDENS' AND FORESTERS' ASSOCIATION



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# ASSOCIATION NEWS AND NOTES

## DON'T MISS A SINGLE ISSUE OF THE BARK—

To stay connected, be sure to send in your 2013 membership dues before June 1st.

## WELCOME NEW MEMBERS

Todd Beales—Montague  
Seth Bernatchez—Lunenburg  
Ben Brown—Worthington  
Gregory Dorr—Winchester  
John Feener—Ipswich  
Marc Fournier, MCA—Newton  
Michael Freeman—Danvers  
Robert Presutti—Pittsfield  
Paul Raskevitz—Greenfield  
Sara Sankowich—Hampton, NH  
Green Trees Arborcare—Norfolk  
Muni-Tech, Inc.—North Attleborough  
Safe Harbor Planting & Design—Chatham



### Remember...

This year only, each paid member (2013 calendar year) will receive one complimentary copy of the 2013 commemorative book, *The Centennial Year*. Books will be mailed to members beginning in April.



Scholarships were awarded to students on March 12, 2013 at the UMass Tree Conference in Amherst.

*Photo above:* MTWFA Scholarship winners (left to right) Ethan Dangelo, Todd Beales, Tyler Pease, President David Lefcourt, Casey Clapp, James Sacco

*Photo left:* Southeast Tree Wardens scholarship winners (left to right) Ryan Due, Shane McCallister, President Craig Hillman, Conor Laffey, Nicolette Eicholtz





## IDEAS from DCR

Arbor Day is April 26

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- Give away seedlings to elementary students in your community (*To download a seedling brochure, visit [www.masstreewardens.org](http://www.masstreewardens.org). Ordering deadline is April 17th*)
- Host an Arbor Day Festival
- Sponsor an Arbor Day cleanup to clean up street trees in the community
- Host an "Ask an Arborist" event in your town
- Hold a Tree Discovery Day at the library for youngsters
- Put on an assembly for students (Tree Benefits *Jeopardy!* is always a favorite!)
- Participate in the Massachusetts Arbor Day Poster Contest (*Information at [www.mass.gov/dcr/stewardship/forestry/urban/urbanBranch.htm](http://www.mass.gov/dcr/stewardship/forestry/urban/urbanBranch.htm). Deadline is April 19*)
- Plant trees and hold a ceremony
- Work with the Massachusetts Arborist Association to sponsor an Arbor Day of Service (*See facing page*)
- Dedicate a tree in your community

*Reprinted from the Citizen Forester, February 2013  
Mass. DCR Urban & Community Forestry Program*



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MASSACHUSETTS ARBORISTS ASSOCIATION  
**ARBOR DAY of SERVICE**

After a year of devastating hurricanes and record-setting snow storms, there has never been a better time to gain support for tree care in your community.

MAA's Arbor Day of Service is happening on Friday, April 26, 2013 (Massachusetts Arbor Day). Is there a tree care project in your town or neighborhood? It can be large or small... at the town common, on a school playground, in a park or anywhere! Member companies of the Massachusetts Arborists Association are looking to team up on service projects and help make a difference in their communities.

If you are a municipality or organization looking for support on an Arbor Day project, MAA invites you to post your project idea at the Arbor Day of Service section of the MAA website ([www.massarbor.org](http://www.massarbor.org)). There you can create an account and use *ArborDay2013* for the referral code.

**Arbor Day of Service 2013 Sponsors**

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**Forestry Equipment of VA**



Left: UMass student ensemble, Mike Caudill and friends, entertain during the social hour.

Below: Peter Church, Mass. DCR Director of Forest Stewardship, speaks on the enduring partnership with MTWFA.



Left: Keynote speaker Patrick Ellis, MTWFA Past President

Below: Past Presidents Ed Casey and Wes Osborne

Below: Norma Ryan's gift of a centennial diamond (accompanied by 10 chocolate carats/carrots wrapped in foil)





Left: Trainer Paul Sellers instructs Ted Bubbins in senior calisthenics while measuring balloon ribbons prior to the evening dinner gala. Board members in background operate the helium tank, tie ribbons and supervise.

Below: Kelly Woods and Melissa LeVangie show off the Centennial Book as Marc Welch and Karen Doherty discuss what to do next.

**PSSST....**

**More pictures on our Facebook page!**



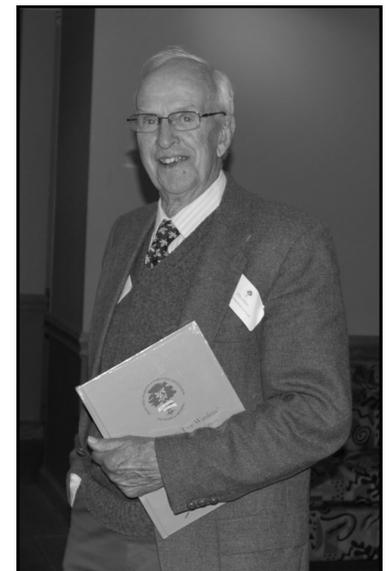
*Below right:* Ellis Allen holds tightly to his copy.

*Below left:* The Marriott dinner buffet at the Campus Center

**Massachusetts Tree Wardens' and Foresters' Association  
100th Anniversary Dinner Gala  
March 12, 2013**



**5:00 pm Social Hour**  
**6:30 pm Dinner**  
Marriott Hotel—11th Floor  
UMass Campus Center  
Amherst, Massachusetts



## MTWFA CELEBRATES 100 YEARS

The article below was written by Rick W. Harper, Extension Assistant Professor of Urban & Community Forestry, UMass-Amherst. It was originally published in the DCR *Citizen Forester*, February 2013.

On Tuesday January 15th and Wednesday January 16th, a record 300 attendees and exhibitors gathered at the Host Hotel and Conference Center in Sturbridge to attend the 100th Annual Conference of the Massachusetts Tree Wardens and Foresters Association (MTWFA). Up from the usual 225 attendees, the two-day centennial event featured a list of renowned speakers and a trade show floor filled with exhibitors displaying equipment, technology and literature for sale (and even free handouts!). In addition to informative lectures and an annual business meeting, the Centennial Conference wasn't all work and no play; door prizes, networking, a lunchtime awards ceremony and a social anniversary dinner made the two day event action-packed and fun-filled.

Kicking off day one, state specialists from the Massachusetts Department of Conservation & Recreation (Eric Seaborn, Julie Coop and Ken Gooch) provided an annual update on a number of topics ranging from community reforestation initiatives to urban forest health activities, including the latest on Asian Longhorned Beetle and Emerald Ash Borer – two invasive insects known to devastate trees.

Over the two-day period, attendees also heard from U. S. Forest Service specialists. Dr. Nathan Siegert provided a forest pest update and John Parry discussed the Urban Forest Strike Team – an initiative designed to assist communities where areas of urban forests have been damaged or even destroyed from a storm event.

Faculty from the University of Massachusetts were well represented on the roster of speakers. Bob Childs, Extension Entomologist and recent recipient of the Massachusetts Arborists Association's prestigious VISTA award, discussed a host of insect challenges over the last century that have threatened (and in some cases continue to impact) the well-being of our community trees. Bob also recounted entomological occurrences and achievements of the past that were the direct result of the strong tie between UMass Amherst and the MTWFA, including the formation of the Shade Tree Lab in Waltham, MA in 1949.

Dr. Nick Brazee, Extension Pathologist and Plant Diagnostic Director, outlined a number of woody plant diseases of importance that were present during the growing season of 2012. He especially highlighted the importance of Dutch elm disease past and present, and how this pathogen shaped policy and tree care practice in Massachusetts, further underscoring the relationship between UMass Amherst and the MTWFA.

In addition to speaking about industry practices then and now (including an update on the A300/Z-133 safety standard changes) the ever-popular Dr. Dennis Ryan, arborist and UMass Amherst Professor of Arboriculture, was the surprise recipient of the 2013 MTWFA George E. Stone Award.

Named after the UMass professor who founded the MTWFA at UMass on March 27, 1913, the Stone Award is the highest honor bestowed by this organization and only presented on an occasional basis. It is reserved for a member who has continuously demonstrated outstanding dedication, with many hours of volunteer service to the organization. A historical display at the conference featured a picture of Dr. Ryan's predecessor, Professor Gordon King, receiving the Stone Award in 1989. Congratulations, Dr. Ryan!

And congratulations to the MTWFA on the successful celebration of their Centennial – 100 years and still growing!

## ERIC SEABORN HONORED WITH MTWFA PRESIDENT'S AWARD

Yet another highlight of the 100th Annual Conference in January was the presentation of the President's Award to Eric Seaborn, Urban and Community Forestry Coordinator, Massachusetts Department of Conservation and Recreation. Christopher Hayward, President 2011-2012, presented Eric with the award, a handsome wooden watch, with appreciation for his service to the organization and to the Commonwealth. Throughout his time at DCR, Eric has worked closely with the MTWFA to foster urban forestry efforts in the Commonwealth.



## STATE OFFICIALS ANNOUNCE EAB QUARANTINE

Officials from the Massachusetts Department of Conservation and Recreation (DCR) announced on February 21, 2013 that a quarantine will be established in Berkshire County, in order to stop the spread of the invasive insect species emerald ash borer (EAB). The decision came after extensive survey in the affected area and public hearings. The quarantine took effect March 1, 2013.

"The emerald ash borer brings a very serious threat to our ash trees, and we are not taking its presence lightly," said DCR Commissioner Ed Lambert. "We believe a county-wide quarantine will allow the best chance at slowing the spread of emerald ash borer."

EAB was first detected in Massachusetts in Dalton in August of 2012. Massachusetts is the eighteenth state discovered to have EAB within its borders.

Immediately following the EAB detection, DCR began work with the Massachusetts Department of Agricultural Resources (MDAR), the United States Forest Service (USFS), and the United State Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) to formulate a plan for dealing with the invasive insect. DCR set up more than 700 EAB traps across the Commonwealth.

With funding from the USFS, DCR also girdled 26 trees, a process known as delimiting that stresses the individual trees in an attempt to attract and sequester any EAB in the area. After the delimiting survey was completed around the Dalton/Pittsfield area, five trees were found to have EAB larvae present. These trees are located within a 1.5 mile radius of the trap where the first EAB beetle was detected in August 2012.

DCR engaged in a public outreach campaign, including public meetings that allowed the public to express their opinions and concerns on the topic of quarantine. Though most public comments posted in the aftermath

of these meetings called for quarantine as small as scientifically possible, the studies conducted indicated that a county-wide quarantine would work best.

The quarantine order means that certain products will be regulated from moving outside the regulated area, including all hardwood firewood (any piece of wood smaller than 48"), all ash nursery stock, and any ash lumber that has not been treated. Proper wood treatments include the removal of bark and half an inch of wood, dry kiln sterilization, fumigation, and heat treatments.

The state of New York recently added 22 new counties to their EAB quarantine, including counties that abut the Berkshire County border. This will allow wood to move from quarantined county to quarantined county, including moving regulated wood from Massachusetts to the mills that are just over the border in New York, relieving some of the financial pressure on the wood industry in Berkshire County.

Plans for future surveys are currently being discussed. EAB traps will be utilized again this summer in Massachusetts, and approximately 100 ash trees will be girdled to continue to help narrow the infestation.

*The Massachusetts Department of Conservation and Recreation (DCR) is an agency of the Executive Office of Energy and Environmental Affairs. Visit the DCR website at [www.mass.gov/dcr](http://www.mass.gov/dcr).*



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*Left:* Dennis Ryan accepts the George E. Stone Award from James MacArthur.

*Right:* Alan Snow, Town of Amherst, received the 2013 Tree Warden of the Year Award.

*Below:* Bob Childs presented his annual pest update—spiced up this year with a number of historical notes on insect infestations of the past.



*Above left:* Display boards with historical notes and photographs greeted attendees in the entrance hall.

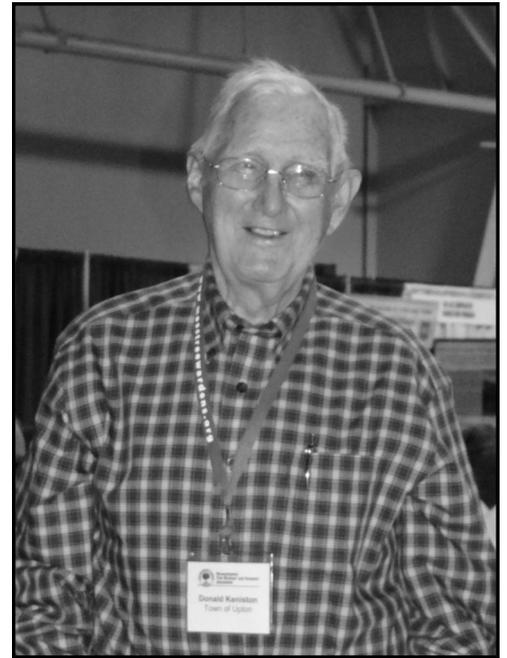
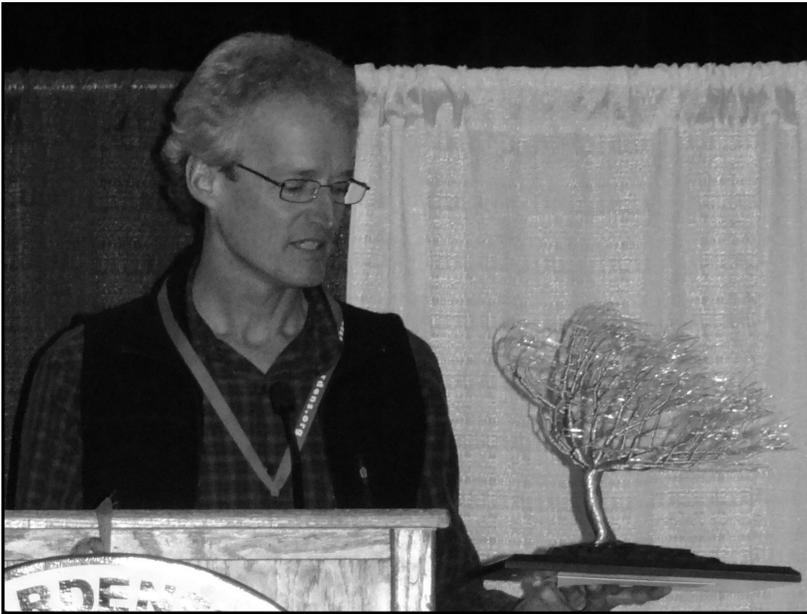
*Below left:* The amazing centennial cake at the conference evening dinner

*Below:* Christie Smith with Wes Osborne



*Left:* Keynote speaker Tom Wessels, author of *Reading the Forest-ed Landscape*





**2013  
Annual Conference  
Sturbridge, MA**

More pictures on  
our Facebook page!



Above: Carl Cathcart (on left) and John Moran

Above: Donald Keniston, recognized for his 50 years of service as tree warden for the Town of Upton.

Below: Karen Doherty, still smiling...



Below right: Kelly Woods and Paul Sellers show a sample ash-wood Biltmore stick made from Midwestern trees killed by the emerald ash borer.

Below: The evening dinner at the Host Hotel





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Department of Landscape Architecture  
and Regional Planning

Dear UMass/Stockbridge School PLANET Student Career Days Team Supporter,

The 14 members of the Stockbridge School / UMass PLANET SCD's Team traveled to Auburn University in Alabama from March 6<sup>th</sup> through March 10<sup>th</sup> and returned with some impressive results. Ethan Dangelo and Luke Longstreeth placed #1 in Arboriculture Techniques, Joe Argillo placed #1 in Compact Excavator, and Sean Regnier placed #1 in Computer Aided Design. Joe Agrillo placed #5 in Maintenance Cost Estimating, and he also placed #8 in Small Engine Repair, taking home a chain saw for placing in the top 10. Nick Brown placed #8 in 3D Exterior Design and #7 in Leadership Skills.

The team also had 6 members who placed in the top 20 in their events, 8 members in the top 30, and 3 members placed in the top 35 in their events. With over 70 colleges and universities attending and almost 900 students competing, these are impressive results. The team represented UMass and Stockbridge School of Agriculture with pride and professionalism.

The 2013 UMass / Stockbridge School  
PLANET Student Career Days Team:

Joe Agrillo	Nick Henderson
Nic Brown	Chris Johnston
Michael Carbone	Luke Longstreeth
Alex Cembalisty	Collin McGrady
Robert Coffman	Henry Puza
Ethan Dangelo	Sean Regnier
Nicole Forsyth	John Waters



Ethan Dangelo (on left), Stockbridge '12, UMass '14 with fellow PLANET team member Luke Longstreeth, Stockbridge '13.

Many industry professionals as well as the College of Natural Sciences and the College of Social and Behavioral Sciences at UMass Amherst supported the Team.

Several industry associations played a major part including:

- Massachusetts Association of Landscape Professionals (MLP) (Platinum Sponsor)
- Massachusetts Arborists Association (MAA)
- New England ISA
- Massachusetts Tree Wardens' and Foresters' Association (MTWFA)

Without the strong support the team receives, this opportunity would be out of reach for most of the members. We would like to extend a heartfelt thank you to everyone who helped make this year's trip a memorable and rewarding experience. 🙏



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## WHEN TREES DIE, PEOPLE DIE

By Lindsay Abrams  
January 22., 2013

Captured from <http://www.theatlantic.com/health/archive/2013/01/when-trees-die-people-die/267322/>.

Link submitted by Tom Brady

The blight was first detected in June 2002, when the trees in Canton, Michigan, got sick. The culprit, the emerald ash borer, had arrived from overseas, and it rapidly spread -- a literal bug -- across state and national lines to Ohio, Minnesota, Ontario. It popped up in more distant, seemingly random locations as infested trees were unwittingly shipped beyond the Midwest.

Within four years of first becoming infested, the ash trees die -- over 100 million since the plague began. In some cases, their death has an immediate impact, as they fall on cars, houses, and people. In the long term, their disappearance means parks and neighborhoods, once tree-lined, are now bare.

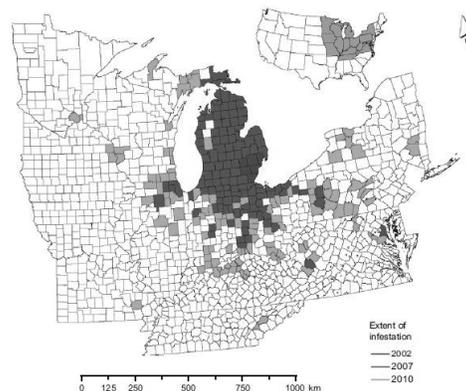


Figure 1. Counties where the emerald ash borer had been detected in 2002, 2007, and 2010

©American Journal of Preventive Medicine

Something else, less readily apparent, may have happened as well. When the U.S. Forest Service looked at mortality rates in counties affected by the emerald ash borer, they found increased mortality rates. Specifically, more people were dying of cardiovascular and lower respiratory tract illness -- the first and third most common causes of death in the U.S. As the infestation took over in each of these places, the connection to poor health strengthened.

The "relationship between trees and human health," as they put it, is convincingly strong. They controlled for as many other demographic factors as possi-

*Continued on page 19*



## TREE PHYSICS LIMITS HEIGHT AND LEAF SIZE

2013-01-11 Contact: Pat Bailey, UC Davis News Service  
Email: [pjbailey@ucdavis.edu](mailto:pjbailey@ucdavis.edu)  
Article submitted by Tom Chamberland

DAVIS — Why are the leaves on the tallest trees all about the same size, and why aren't those tall trees even taller? It all has to do with basic scientific principles at work in nature, according to researchers at Harvard University and the University of California, Davis.

In both cases — leaf size and tree height — the explanations are rooted in the physics of the tree's plumbing, or the branching vascular system that nourishes the tree from leaf to trunk, the researchers write in this week's issue of the journal *Physical Review Letters*. "It all comes down to the leaf size and tree height that provide for the optimal flow of sap and energy throughout the tree," said Maciej Zwieniecki, a biologist in the UC Davis Department of Plant Sciences, who collaborated on the study with biophysicist Kaare Jensen of Harvard University. Their findings offer a new explanation for the lack of tall trees in environments with limited water and the prevalence of the tallest trees in the world's most forgiving environments, such as tropical rain forests or foggy river ravines.

In this study, the researchers focused on angiosperms, the group of flowering plants that includes trees like oak and sycamore, rather than on the gymnosperm group, which includes trees like pine and spruce. In analyzing data on 1,925 angiosperm tree species, they found that, overall, tree leaves range in size all the way from less than one inch to more than four feet long. The tallest of these trees, however, have leaves that fall in the relatively narrow range of approximately 4 inches to 8 inches long. Jensen and Zwieniecki suggest that this surprising decline in leaf size diversity that accompanies increasing tree height is a product of fluid dynamics within the tree.

Like most other plants, trees fuel their growth and development through photosynthesis — the natural process that uses water, carbon dioxide, minerals and sunlight energy to produce carbohydrates. The sugar-rich fluid produced through photosynthesis in the leaves travels to other parts of the tree via a system of channels called phloem. The researchers modeled the tree phloem system as if it were composed of permeable, cylindrical tubes. The leaf phloem collected the sugar-rich fluid and generated energy to transport it through a much longer tube running down the trunk.

As the fluid passed through the leaf phloem toward the stem, it gathered speed as more and more water was pulled in from the leaf through osmosis. Consequently,

the longer the leaf, the faster the fluid flowed, much like streams rushing toward a river. When the fluid reached the tree trunk, however, no more sugar was collected in the phloem, and only water was drawn from the surrounding tissue. The trunk phloem was longer and, consequently, presented more resistance to the fluid's flow as it traveled down the trunk and to the roots.

This model illustrated two functions at work, one involving leaf size and the other related to tree height. First, there was an advantage for a tree to have larger leaves because it could produce more nutrient-rich fluid that would flow more quickly toward the trunk and roots. If the tree's leaves were too small, the fluid would move too slowly to be beneficial. Secondly, although increased height might provide some trees with better access to sunlight, it also would increase the length and thus flow resistance of the trunk phloem, slowing the movement of nutrients toward the roots.

"So there comes a point where the optimal limits on leaf size and tree height intersect, indicating the point at which it is no longer advantageous for the tree to become taller or produce larger leaves," Zwieniecki said. He noted that this point is approximately 100 meters, or slightly more than 300 feet — about the size of the tallest angiosperms. *Funding for the study was provided by the National Science Foundation and the U.S. Air Force Office of Scientific Research* 🇺🇸

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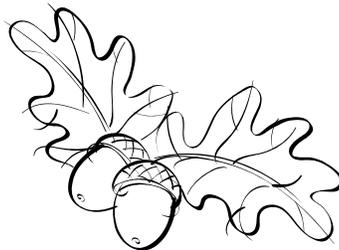
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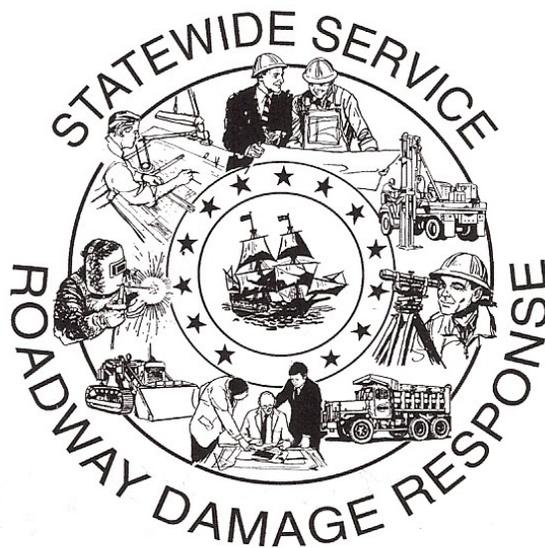
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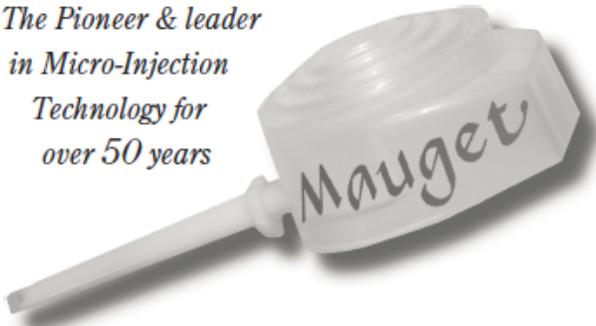
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ble. And yet, they are unable to satisfactorily explain why this might be so.

In a literal sense, of course, the absence of trees would mean the near absence of oxygen -- on the most basic level, we cannot survive without them. We know, too, that trees act as a natural filter, cleaning the air from pollutants, with measurable effects in urban areas. The Forest Service put a 3.8 billion dollar value on the air pollution annually removed by urban trees. In Washington D.C., trees remove nitrogen dioxide to an extent equivalent to taking 274,000 cars off the traffic-packed beltway, saving an estimated \$51 million in annual pollution-related health care costs.

But a line of modern thought suggests that trees and other elements of natural environments might affect our health in more nuanced ways as well. Roger Ulrich demonstrated the power of having a connection with nature, however tenuous, in his classic 1984 study with patients recovering from gall bladder removal surgery in a suburban Pennsylvania hospital. He manipulated the view from the convalescents' windows so that half were able to gaze at nature while the others saw only a brick wall. Those with trees outside their window recovered faster, and requested fewer pain medications, than those with a "built" view. They even had slightly fewer surgical complications.

Environmental psychologists Rachel and Stephen Kaplan attributed nature's apparent restorative ability to something they termed "soft fascination": Natural scenes, they theorized, are almost effortlessly able to capture people's attention and lull them into a sort of hypnotic state where negative thoughts and emotions are overtaken by a positive sense of well-being. Indeed, an analysis of numerous studies in *BMC Public Health* found evidence for natural environments having "direct and positive impacts on well-being," in the form of reduced anger and sadness.

The effect, it has been suggested, can have subtler effects than a mere elevation of mood. A 2010 study looked at the presence of parks and forests in the vicinity of people's homes and their ability to act as a "buffer" against stress. They ended up finding that the presence of "green space" was more closely related to physical -- in terms of minor complaints and perceived general health -- than mental well-being. While nature wasn't enough to make the participants forget about stressful life events, it appeared to quell their psychosomatic complaints.

The increases in mortality identified by the Forest Service study, meanwhile, were more pronounced in counties where the median household income was above average. The disparity highlights what we intuitively know about the presence of trees: In wealthier communities, they increase the market value of homes, while parks in poor neighborhoods attract crime and are thus undesirable. The researchers hypothesize that the rich communities that thrived before the blight arrived thus experienced its destructive effects more potently.

Which is all to say that there is something fascinatingly mysterious about the entanglement of our health with that of nature. The suspicion that this may be so, of course, is seen well outside of the scientific literature on the topic. Maurice Sendak knew it, as he spoke of his appreciation for the trees seen from his window in the final months of his life. And Henry David Thoreau, writing in *The Atlantic* in June 1862, said, "I think that I cannot preserve my health and spirits, unless I spend four hours a day at least -- and it is commonly more than that -- sauntering through the woods and over the hills and fields, absolutely free from all worldly engagements." 🌳



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Saturday, May 4  
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*www.necisasrt.eventbrite.com*  
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- April 26**      **Arbor Day (Massachusetts)**
- April 26**      **Arbor Day of Service (ADoS)  
Massachusetts Arborists Association**  
*www.massarbor.org*  
*(See article on page 5 of this issue)*

- May 1**      **State Regulations Pertaining to  
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- May 14**      **The Invasive Plant Issue and  
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- May 18**      **New England ISA  
Tree Climbing Competition**  
Goddard Memorial Park, Warwick, RI  
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- June 11**      **Developing an Invasive Plant  
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