



THE CITIZEN FORESTER

Urban & Community Forestry Program

JULY 2021 | No. 252

Farewell

From Western Mass to Western Colorado

One hundred and fifteen issues after I started, this is my last issue of *The Citizen Forester*. After 12 years with DCR, including nine-and-a-half in Urban and Community Forestry, I am leaving to take a position with Colorado State University Extension on the Western Slope of Colorado. Working for DCR and helping communities in Massachusetts better their urban and community forests has been such an honor and incredibly rewarding. I have learned so much from everyone and it has been gratifying to work with so many people from all over the state. Thank you from the bottom of my heart. – Mollie Freilicher



New Factsheets!

We have revamped our factsheet series and are happy to announce that they are ready for download. We also have a new factsheet “What is a Tree Warden?” produced with assistance from the Massachusetts Tree Wardens’ and Foresters’ Association. Because we are so excited about this new one and the newly-designed factsheets in general, we are using this month’s article to highlight the information in What’s a Tree Warden?

What’s a Tree Warden?

A tree warden is the person in charge of shade trees in towns and cities. The word “warden” was a common title for natural resource officials in the late 1800s. Being a warden signified a unique legal responsibility: to guard public resources against

destructive forces that might include persons, insects, or diseases. In Massachusetts, in addition to tree wardens, you can still find forest wardens, herring wardens, and shellfish wardens, among others.

Since 1899, Massachusetts General Law has mandated that all cities and towns in the Commonwealth have a tree warden. The tree warden mandate is still in effect today under Massachusetts General Laws, Chapter 41, Section 1 and Section 106.

For a recent scholarly analysis on tree wardens, see Julie Steiner, J.D., [Guardians of Municipal Public Trees: Commonwealth of Massachusetts Tree Warden’s Authority and Accountability](#).

A tree warden may be either elected by the people or



Up Ahead:

Factsheets	1-3
Species Spotlight	4-5
From the Woods	6-9
Beetle Bites	10-11
Growing on Trees	12-16
Gleanings	16
News	17
On the Horizon	18

What do Tree Wardens Do?



(Continued from page 1)

appointed by the city or town. In either case, the responsibility is the same – to oversee the care, maintenance, or removal of public shade trees. As both manager and advocate, the tree warden must protect the trees and protect the public from the trees.

What Do Tree Wardens Do?

The scope of a tree warden's job is broad. In addition to having responsibility for trees along streets, a tree warden may have responsibility for all community trees – those in town commons, parks, schoolyards, and town forests. The position of tree warden requires qualified training in arboriculture, the science of tree care. A tree warden should also have good communication skills for dealing with the public, municipal departments and committees, and local politicians.

The job may be physically challenging as well. On a day-to-day basis, a tree warden must plan, organize, control, and be accountable for all authorized activities in the public community forest, including:

- Pruning trees
- Removing trees that are dead or dying (from storms, insects, disease, or old age)
- Identifying appropriate planting sites
- Planting new trees
- Creating, updating, or utilizing a tree inventory
- Assessing trees for risk

- Overseeing utility arboricultural operations
- Reviewing site plans
- Preparing budget presentations
- Supervising municipal tree workers
- Creating bid proposals for contract tree work
- Inspecting contracted tree work
- Planning, implementing, and overseeing tree protection related to construction activities
- Conducting public meetings and tree hearings
- Writing grant proposals
- Communicating and coordinating with the local tree committee or advocacy group

What is a Public Shade Tree?

The Public Shade Tree Law, Massachusetts General Law Ch. 87, defines public shade trees as “all trees within a public way or on the boundaries thereof,” including trees planted within 20 feet of the edge of the right of way, as defined in Section 7. The tree warden may also be responsible for trees in parks and other open spaces if designated under the provisions of Section 2 of Chapter 87. Tree wardens do not have jurisdiction over trees along state highways.

The Position of Tree Warden in a Community

The position of tree warden may be based in a public works, highway, parks, cemetery, or other department, or it may be completely separate. The position may be supported by salary or stipend. In some cases, tree warden duties may comprise only a portion of the duties of a position.

Qualifications for Tree Wardens

MGL Chapter 41, Section 106 requires that appointed tree wardens in towns and cities with populations greater than 10,000 “be qualified by training and experience in the field of arboriculture and licensed with the department of food and agriculture [...]” The term of the appointment was set at three years. The license which is referred to above is a pesticide license. This license does not certify whether or not a person is “qualified by training and experience in the field of arboriculture.”

To help establish a standard for qualification in Massachusetts, the Massachusetts Tree Wardens’

(Continued on page 3)

What do Tree Wardens Do?

Continued from page 7

and Foresters' Association created an educational training program for tree wardens in 2017. The [Massachusetts Qualified Tree Warden program](#) is designed to provide a base of knowledge for tree wardens in Massachusetts, especially for those in smaller communities that may not be able to hire a tree warden who is a certified arborist or has a degree in arboriculture. While not defined by law in Massachusetts, standard qualifications may include ISA Certified Arborist, Massachusetts Certified Arborist, or an associate or bachelor's degree in arboriculture, urban forestry, or a closely related field.

About MTWFA

Founded in 1913, the Massachusetts Tree Wardens' and Foresters' Association is a non-profit organization that serves tree wardens, municipal arborists, utility arborists, commercial arborists and companies, educational professionals, and citizen tree advocates in the care, management, and preservation of the urban and community forest. This text is adapted from 'What is a Tree Warden?' on the MTWFA website.

Find out more at www.masstreewardens.org.

Mass. General Laws | <https://malegislature.gov/Laws/GeneralLaws>

Steiner, J.D. *Guardians of Municipal Public Trees* | <https://digitalcommons.law.wne.edu/facschol/321/>

Mass. Tree Wardens' and Foresters' Association | www.masstreewardens.org

Who is My Tree Warden? | <https://masstreewardens.org/who-is-my-tree-warden/>

Download this and other factsheets at www.mass.gov/lists/urban-and-community-forestry-fact-sheets

Growing on Trees—Webinars

Urban Forest Connections

July 14, 2021 | 1:00 - 2:15 p.m.

The Influence of Municipal Pruning Practices on Urban Forest Health and Storm Resilience

David Nowak, PhD., USDA Forest Service and
Justin Bower, Houston-Galveston Area Council

Find out more at the [Urban Forest Connections website](#).

TREE Fund Webinars

July 27, 2021 | 1:00 - 2:00 p.m. (ET)

A Three-Pronged Approach to understanding the defensive mechanisms in Green Ash resistant to Emerald Ash Borer

Jeanne Romero-Severson, PhD, University of Notre Dame

Find out more and register at treefund.org.

EPA Soak Up the Rain

July 28, 2021 | 1:00 -2:30 p.m. (ET)

Phytotechnology: A Nature-Based Approach to Containing Contamination

Find out more and register at epa.gov.

ISA Virtual Tree Climber Summit

July 13, 2021 | starts at 10:00 a.m.

\$49 until June 30

Find out more at isa-arbor.com.

Species Spotlight

Common Persimmon, *Diospyros virginiana*

By Mollie Freilicher

For this month's spotlight, I am revisiting one of my favorite trees, common persimmon (*Diospyros virginiana*). I last wrote about this tree in 2012 and wrote that it was not too common in the landscape. I can report eight years later that it still isn't common and would still make a distinctive addition to the urban forest. Massachusetts is just north of common persimmon's native range which reaches from southern Connecticut to Florida, but the tree can do well here, especially in areas that are in USDA hardiness zone 6 or higher, which makes much of Massachusetts suitable, temperature-wise. In 1913, it was noted that over 100 common persimmons were growing near Lighthouse Point in New Haven, CT and in 1917 a population of larger trees was found "in the rocky woods west of the trolley line." The next closest population was over 60 miles away on Long Island. Curious about this population in Connecticut, I looked into it, but couldn't find any current references. I reached out to DCR



Form, [Virginia Tech](#)

Service Forester (and avid botanist) Pete Grima, but he couldn't find any current references either. The last he found was from Les Mehrhoff's 1978 "Rare and Endangered Vascular Plant Species in Connecticut," which listed the population as "rapidly declining due to recreational interests." It is no longer listed on the state's rare flora. Among botanists in Connecticut, there

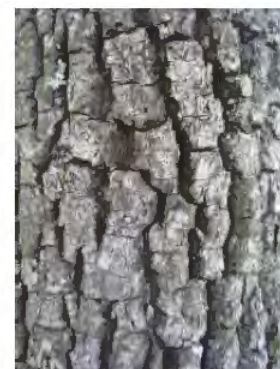
has been debate as to whether the population was "native," that is, not brought there by people. It seems likely that how persimmon got to Connecticut to form a disjunct population will remain a botanical mystery.



Leaf, Mollie Freilicher

Common persimmon is a small to medium sized tree, reaching heights of 60 feet and spreading up to 35 feet. The crown is often rounded, but branches are crooked, giving the tree a somewhat coarse texture in winter. It naturally occurs in alluvial soils, drier uplands and disturbed sites, as well as along roadsides, abandoned fields, and clearings.

The leaves of common persimmon are alternate, simple, ovate, and 2 ½ to 5 inches long. They are a lustrous green above and paler below, turning yellow in the fall. Buds are solitary, triangular, and burgundy to black, with two overlapping bud scales. Flowers are dioecious, fragrant, and bell-shaped, with a 4-lobed white corolla. The bark is dark gray or brown and deeply furrowed into small square blocks, making it pretty distinctive looking.



Bark, Mollie Freilicher

The fruit, a 5/8" to 1" berry, develops on the female trees and starts to ripen in September or October after the first frost. The fruit continues to ripen as the leaves fall off the tree, leaving a display of orange fruit. Once the fruit is very soft, it is ripe, usually by the end of October. Speaking from experience, trying to eat an unripe persimmon is probably a mistake you

(Continued on page 5)

Species Spotlight– Common Persimmon



Fruit, [Bruce Crossing](#)

(Continued from page 4)

will only make once. Where I grew up in Maryland, persimmons grew wild and at some point toward the end of a summer when I was probably around 10, I figured I'd try this beautiful fruit. My botanically-minded neighbor had told me they were edible, so I knew it was safe to try, but I may have missed my neighbor's advice on timing. It was not the soft, sweet fruit I'd imagined and I am not even sure if I have eaten persimmon since. The fruit is edible and provides food for wildlife such as raccoons, opossums, skunks, foxes, deer, and birds. The fresh fruit is quite astringent, even when ripe, and is more often cooked in a [quickbread](#), [puddings](#), and cakes. (It's possible that had my fruit been ripe, my reaction might have been the same.) Native Americans used persimmon fruit for breads and dried the fruit; in fact the word "persimmon" is from the Algonquin language. Colonists at Jamestown learned to eat the ripe fruit and found the fruit "very sweet and pleasant to the taste, and yields on distillation, after fermentation, a quality of spirits." A spirit from persimmon was [revived in the not-too-distant past](#). In 2014, the Virginia Historical Society and the Richmond-based Ardent Craft Ales teamed up to bring an 18th century recipe for persimmon beer to life. Colonists in

Jamestown also learned not to eat the unripe fruit, as Captain John Smith found, "If it not be ripe, it will draw a man's mouth awrie with much torment" (Goodell 1982). You can gather fruit by picking what you can reach by hand and knocking higher fruit off with a stick. (Watch your head!)

The hard and close-grained wood of persimmon has been used for golf clubs, weaving shuttles, and veneer. Common persimmon is in the same genus as tropical ebony and also has dark heartwood, however, it does not dry well, making common persimmon not suitable for lumber.

Common persimmon can be an interesting addition to a park, campus, golf course, or other open space with its fall color and striking fruit. It shines much of the year, but especially in the fall, when trees have fruit and the coarse (and somewhat spooky) form of the tree becomes visible when the leaves fall away. There are many cultivars available that have excellent fruit or other characteristics. Common persimmon is often used in permaculture and edible landscaping (see <http://youtu.be/Q431DMyKOfI> and <http://youtu.be/ONLI-a9RFc>).

Additional resources:

Arnoldia in the kitchen. Persimmon pudding: <http://arnoldia.arboretum.harvard.edu/pdf/articles/1972-32-2-arnoldia-in-the-kitchen.pdf>

Goodell, E. 1982. Two Promising Fruit Plants for Northern Landscapes. *Arnoldia*. 42(4): 103-134. <http://arnoldia.arboretum.harvard.edu/pdf/articles/1138.pdf>

Harger, E.B., C. B. Graves, E. H. Eames, C. H. Bissell, L. Andrews and C. A. Weatherby. 1917. Additions to the Flora of Connecticut. *Rhodora*, Vol. 19, No. 227 (November, 1917), pp. 245-253.

Nichols, G.E. 1913. The Vegetation of Connecticut: I. Phytogeographical Aspects. *Torreya*. Vol. 13, No. 5 (May 1913), pp. 89-112.

UConn Plant Database: <http://www.hort.uconn.edu/plants/d/diovir/diovir1.html>

Thanks to [Russ Cohen](#) for contributing the pudding recipe, video links, and other information to this month's species spotlight.

From the Woods

Among the Bears

By **Peter Grima**

It is a difficult confession for a forester to make, especially for one who works in the rugged and remote forests of the northwestern corner of the state, but I must admit that, as a child, I was terrified of bears. It was a paralyzing phobia induced by such canny horror flicks as *Night of the Grizzly*. I remember wondering, after our first family trip to the White Mountains, how anybody could live up there and not lose sleep with the constant worry of black bears laying siege to their families. And I felt quite relieved to return to my hometown of Seekonk where the specter of a roving wild bear seemed about as likely as seeing a rhinoceros. There were no bears in Seekonk then. In fact, there weren't even coyotes, or turkeys, or deer – and this was not much more than 20 years ago!

But things have changed mightily, and I hear that even the forests of Bristol County may harbor a "fuzzy wuzzy" now and then. Thankfully, I have changed too, and having lived in western Mass. for almost two decades now, I've come to know our bears rather well and have enjoyed learning how they spend their days. Since I too am spending my days in the woods along with them, it's become something of an occupational necessity to understand how I can share that space peaceably with them too. Working in the woods of Berkshire County, where bears were never altogether extirpated from the Commonwealth and are quite, *quite* abundant, I have gained a healthy degree of respect and admiration for these "forest people," which I gather is an uncommon sentiment in humanity. Most, like myself once, are probably terrified of bears, which I now see as unfortunate. Yet, black bears are actually quite relatable, and I hope to convey some of the hints of kinship here for anybody wishing to reconcile their fear of bears with their love for forests.

Be Not Afraid!

An important fact to note is that the loudest animals you are likely to encounter in the woods



This beech tree in Savoy has been repeatedly climbed by black bears, mostly to get at the beech nuts as they ripen in the fall.

are humans, followed closely by gray squirrels. Thoreau remarked in his *Maine Woods* that "a howling wilderness does not howl: it is the imagination of the traveler that does the howling," which is to say that a squirrel scurrying through the leaves will become a bear to the mind of a hiker afraid of bears, every time! All of the bears that have run away from me – and they have all run away from me, thus far – make more of a muffled shuffling as they amble off that belies their true size. Even deer, though their feet are much smaller, make a great deal more racket than a 400 lb. black bear as they run through the woods. Although the sight of a big black bear running off through the underbrush is indeed rather thrilling, you are far

(Continued on page 7)

From the Woods—Among the Bears

(Continued from page 6)

more likely to suffer cardiac arrest from a ruffed grouse exploding into flight from under your feet!

The only bears that haven't run away from me are the ones that have just stayed put, unbeknownst to me. These I cannot count because I can't know how many bears I never saw, but I am fairly certain that I am within earshot (or smelling distance) of a bear just about every time I'm in the woods. You see, they've pretty much figured out that most humans are oblivious and self-absorbed in their own pursuits, so they've learned to just sit tight for a minute to let us pass on by, after which they can carry on with their endless foraging. The forest understory is a complex mosaic of shadow and dappled light, and it doesn't take a screen of many trees to break up the pattern of their charcoal-black fur. One consequence of this "sit tight" behavior is that, should you double back on your path, as foresters are wont to do sometimes, you are more likely to short-circuit the bear's avoidance tactic and bump into them as they recommence their ambling. Most of the closer bear encounters I've had in the woods have happened when I've doubled back, or abruptly changed my direction, which caused the bears to reevaluate their "sit tight vs. flight" response. I should say "sit tight vs. flight vs. height" to include the all-important tree-climbing abilities that all black bears possess, and which some seem to prefer. I've treed a few bears in recent years, which was both thrilling and actually quite reassuring since it demonstrated that they were clearly not interested in getting closer to me. Watching a 300+ lb. animal scoot effortlessly up a tree out of sheer anxiety is much more of a portrait of timidity than intimidation.

Eat to Live, Live to Eat

Everybody seems to know that bears are particularly fond of blueberries. They also eat blackberries, raspberries, huckleberries, serviceberries, cherries, Viburnum berries, grasses, sedges, skunk cabbage, poplar catkins,

acorns, beech nuts, bark, leaves, apples, corn, ants, grubs, carrion, deer scat, fawns, compost, bird seed, garbage and just about anything else that they stumble across or their nose alerts them to. For those of us who are serial gleaners, accustomed to opening cupboards and refrigerator doors at odd hours, ever in search of the next bite or nibble, the diverse palate and incessant foraging of a black bear must earn our sympathy. And with the trendiness of human foraging ever on the rise, bears should perhaps be recognized as the most natural teachers. They sample everything, eat with the seasons, and gorge themselves when something is available in abundance. The best way to find out what a bear is eating is by examining what a



It turned out that I wasn't the only one sampling the huckleberries in this high-elevation heath bald in Williamstown.

(Continued on page 8)

From the Woods—Among the Bears



Bears have bitten and scratched this telephone pole to the extreme near the entrance to October Mtn. State Forest in Becket. Bites at different heights probably correspond to standing on all fours vs. standing up straight on their hind legs.

(Continued from page 7)

bear is...leaving. Bear scats are full of, let's call it "information," that can give you some insight into how they've spent some of their time in the most recent 24 hours. By examining scats, I've learned that bears LOVE black cherries above all other summer fruits. I've also inferred that people still leave bird feeders out in spring, even in "bear country" where they are supposed to know better. And once, a giant scat full of feed corn gave me a hint of how far that bear had traveled overnight from the nearest corn field (nearly 5 miles!).

Fruits and nuts are the obvious bear foods that humans can relate to, but it should really be emphasized just how much "green stuff" bears eat. Starting with skunk cabbage and false hellebore in early spring, bears frequent herbaceous swamps throughout the growing season, grazing here and there almost absentmindedly as they go, not mowing things down in succession like a deer would. These are like the lettuce beds of a bear's garden, always well-watered and diversely planted, which they manage with a "cut and come again" approach. Forested swamp habitats with what I consider "bear garden" vegetation are quite extensive in the higher elevations of the Berkshire Plateau, and I don't think it is entirely coincidental that some of our most robust bear populations -- and our biggest bears -- occur there, in spite of the longer, colder winters and the dearth of acorns.

Leaving Notes

Where there are many bears, there arises a need for them to communicate, which I call "leaving notes" for each other. I've come to have an eye for favored marking posts where bears scratch, bite and rub up against some prominent tree, telephone pole, fence post, or trail signage to leave the universal baseline message along the lines of "fuzzy wuzzy wuz here." Novel conifers, which have the added benefit of being fragrant when scratched or bitten, seem to attract special attention, because bears, like humans, have a decided penchant for both objects of novelty and aromatic conifers. Where trees are sparse, as in some shrub swamps or young forest habitats, they improvise and take to breaking off twigs with their mouths, where the objective is to break twigs as high up as one can reach in order to communicate some measure of size, as a proxy for dominance. One special case of



This northern white-cedar was one of many that bears had bitten and pulled off strips of bark. Northern white-cedar is very fragrant and apparently favored by bears throughout the range of this tree.

(Continued on page 9)

From the Woods—Among the Bears

(Continued from page 8)

marking I've seen involved bark-stripping in a grove of the rare northern white-cedar, where every tree showed evidence of a bear biting into the trunk and peeling off strips of bark, sometimes to the detriment of the trees. This was apparently a long-standing practice based on the callous tissue healing around some of the older wounds of varying ages.

All of this foraging, sign-posting, climbing trees, and running away from humans is hard work! Bears deserve their rest, and, again like humans, they sure seem to know a good nap spot when they find one. Every now and then I come upon a nap spot, typically at the base of a big conifer, where the litter has been scratched aside and compressed by many hours of luxurious inactivity. Corroborating it as a bear bed are usually several dozen piles of scat encircling the site. It would appear that bears wake up, walk between one and ten feet, and then relieve themselves before getting too much farther along. This probably has a territory-marking effect too, letting other bears, and perhaps a would-be Goldilocks, know just whose bed they have stumbled into. I recently found a bear bed at the base of a big pine tree in a swamp, and there were dozens of scats of different sizes all around it – a mother and cubs, I presume.

The Bear in Us All

With each passing year, I find that I have more and more in common with the black bears that live in the woods with me. Bears are hungry, sleepy, and shy. They keep to themselves, mostly, but their appetites can sometimes get them into trouble. Although secretive and solitary, they advertise their presence and disposition in various ways – the forest equivalent of a social media post. They love shady swamps and airy oak stands, aren't afraid to climb a mountainside, and they relish in the abundance of all kinds of berries. I've heard people say that "bears can sometimes be very human-like," but I think this sentiment comes



A bear bed at the base of a solitary white pine tree in an otherwise hardwood-dominated forest in New Ashford.

from recognizing the bear in us all, the lover of woods and berries and long summer afternoons napping in the shade. Now that I see my bear-like nature and recognize that I too have a place in the woods, I feel much more at ease being among the bears, knowing that we're just two big mammals going about our business among the trees.

To learn more about black bears, I recommend:

Kim Cabrera's Bear-Tracker website:

<https://www.bear-tracker.com/bear.html>

The North American Bear Center website: <https://bear.org/bear-facts/black-bears/basic-bear-facts/>

MassWildlife's website and fact sheets: <https://www.mass.gov/service-details/learn-about-black-bears>

Pete Grima is a DCR Service Forester covering the northern half of Berkshire County.

Find out more about the [DCR Service Forestry Program](#).

Beetle Bites

Exquisite Figures in Native Hardwood

By Jon Cooper

As an avid woodworker, there is nothing more beautiful to me than our native New England hardwoods like black walnut, cherry, and maple. Sugar maple is one of the favorite species of many woodworkers due to the wide range of figuration (or “figures”) that occurs naturally in the wood grain. Birdseye, curly, fiddleback, tiger, flame, quilted, spalting, and burl are just a few of the common patterns you can find.

“How does wood become figured?” is a common question I get asked. Well, in truth, it is a complicated process and there are many factors at play. The figure of wood used in furniture is a combination of the cut (which affects the look of the grain), and the species (some species are more prone to certain types of figure). Sugar maple is one of the species which commonly has figure. This does not mean that all sugar maples will have figure, but there is a higher prevalence of figure in comparison to other species.

Certain types of wood figure, like spalting, come from known causes, while with others like birdseye, we can only theorize as to the reason. Spalting looks like an abstract ink drawing of thin black lines and may include areas of wood where the color has either lightened or darkened. It can be truly spectacular especially when book-matched on a piece of furniture. Spalting is technically the beginning stages of rot and decay, when a fungus spreads through the tissues of the wood, feeding on sugars and lignin. When spalted wood is dried, it kills the fungus and maintains the structural integrity of the wood.

One of my particular favorite figures of wood to work with is burl. It lends itself well to woodturning and use in fine woodworking. Burl grain is a jumbled mess that results in a chaotically beautiful figure. Burls are a growth on a tree that are believed to be caused by either disease, damage, or some other form of abnormal overgrowth. The result is a swirling ballet of colors, growth lines, and often



Spalted river birch, Ed Street, northernspalting.com.

epicormic sprouting. They can be found on a variety of species of hard and softwoods. One of the more common species to produce burls is our native black cherry as the black knot disease generally creates dozens of burls on a single tree.

Unfortunately, many of the other desired types of figure are still a mystery as to their cause. Curl or ‘curly’ is another pattern that is commonly seen in maple, although it is frequent in most hardwoods as well. It occurs when the grain is wavy through the length of the board giving it a chatoyant effect under different lighting conditions. Due to the waviness in the grain, when light hits the board, it will refract differently in areas depending on where it was cut through the peaks and troughs of the log. These waves on the board will change in color and intensity when you move or the light changes, making peaks appear as valleys when the light comes from one direction, and making valleys appear as peaks when the light comes from another. This striking effect makes curly, tiger, and fiddleback patterns highly sought after by woodworkers.

(Continued on page 11)

Exquisite Figures in Native Hardwood

(Continued from page 10)

It is known that if a tree grows tall and straight, it will most likely result in straight and consistent grain. Some trees grow in conditions or places that cause the grain not to be straight. The waving growth of the tree creates the curly figure and that is not contested. However, why that figure is seen in the growth of one tree and not another is where there is no clear answer. The curly figure is common in maples (slightly more frequent in soft maples) but can also develop in other species like birch and walnut (less prevalent).

One of the current theories on how curl develops relates to the concept of tension wood. Tension wood is a type of reaction wood that grows of the upper side of a stem. Tension wood in the roots can reliably produce curl but that is not a hard and fast rule that holds true for the rest of the tree. Factors like climate, soil, growth rate, and

age may modify figures in the grain, or make it more likely to occur.

The same factors and theories around curly figure are used to try and explain other grain figures like quilting or blistering. The one truly unknown figure

is birdseye. Birdseye so aptly named for the tiny spots of curly grain that look like bird eyes is one of the rarest figures you can find in sugar maple, occurring in only 1% of all sugar maples, and there is no known cause. “Eyes” develop in young trees and continue to get larger and develop as the tree grows. Unlike spalting and curl, it has not been successfully cultured or intentionally reproduced. It only occurs naturally, and therefore is very rare and special, lending to its long history of use in fine woodworking. Like snowflakes, no two trees with birdseye figure are exactly alike. The figure is unique and typically consistent throughout the tree. Finding a sugar maple with birdseye is like finding a pearl in an oyster.

Whether it is spalting, curly, birdseye, burl, or just grown plain straight and true... there is truly exquisite beauty to be found in our native hardwoods.

Jon Cooper is a Forester with the DCR/APHIS ALB Eradication Program in Worcester and an active woodworker



Birdseye maple, [The Wood Database](#)



Closeup of fungal decay on a sugar maple board.

2021 DCR Arbor Day Poster Contest Winners

The DCR is pleased to announce the winners of the 2021 Annual Arbor Day Poster Contest. This year's theme was **The Trees Out Our Window** and we received entries from across the state.

Congratulations to all the contest winners and to all the artists who submitted posters to the state contest. Artwork submitted to the state contest is included in a 2022 calendar featuring all the entries.

The Arbor Day Poster Contest is open to fifth-graders across the Commonwealth. The 2022 contest theme and instructions will be released later this summer or early fall.



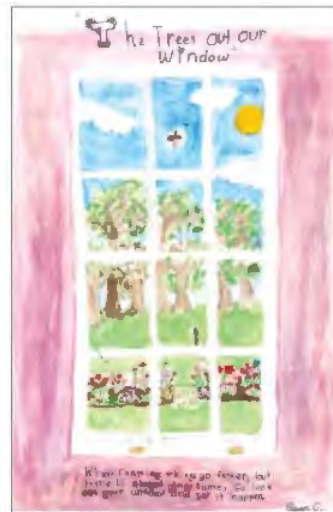
First place winner, Olanna J., Neighborhood School, Jamaica Plain



Second place winner, Sampriti A.H., Colonel Moses Parker School, Chelmsford



Third place winner, Isabella P., Cambridge Friends School, Cambridge



Honorable Mention, Isabella P., Cambridge Friends School, Cambridge



Honorable Mention, Sarah B., Buckland-Shelburne Elementary School, Shelburne Falls



Honorable Mention, Nora S., Stearns Elementary School, Pittsfield

Growing on Trees

New England ISA

August 2-4, 2021 | Burlington, VT

Tree Risk Assessment Qualification Course

Register by July 2.

August 27, 2021 | 8:00 a.m.-1:00 p.m.

Portsmouth, NH

Aerial Lift Specialist and Compact Lift Specialist Workshop

Classroom instruction and a demonstration, including pre-trip, setup, and rescue operations.

August 28, 2021 | 8:00 a.m.-4:00 p.m.

Canterbury, NH

Day of Safety

Morning seminars including Chainsaw Safety, Gear Inspection, Proper Tree Planting, Setting up a Work Zone, Stop the Bleed, and an afternoon of fun competition, including an obstacle course, throw line, knot board, and other events.

Find out more at www.newenglandisa.org

Prepare for the Mass. Arborist Exam

Two on-demand webinars to help you prepare for the Massachusetts Arborist exam.

Part 1: Science and Part 2: Techniques

Each webinar: \$24 Mass. Arborist Assoc. members/\$44 non-members

Next MCA Exam Date: October 7, 2021

Find out more at massarbor.org.

Native Plant Trust Classes

Online: [Roots of Black Botany](#) – July 20

Hybrid [Plant Ecology](#) – June 9-30

In-Person

[Harvard Designs: Arboretum and Science Complex](#) – July 9

[New England Plant Communities](#) – August

[Native Woody Plant Materials](#) – Aug. 27, Sept. 3

[Plant-insect Interactions](#) – Sept. 2

Find out more at nativeplanttrust.org

2021 Mass. Qualified Tree Warden Course

From the Massachusetts Tree Wardens' and Foresters' Association
Fall 2021



Sharpen your skills and expand your knowledge. Learn what you need to know to fulfill the duties of tree warden and earn MTWFA's professional qualification. The six-session course runs from September 1 through November 10, 2021.

Find out more and register at masstreewardens.org.

ISA Certified Arborist Exam Prep Course

September 6-29, 2021 | 6:00-9:00 p.m.

Online class with a live instructor. The course consists of 8 three-hour classes held on Mondays and Wednesdays in September 2021.

Find out more at newenglandisa.org.

Conservation Arboriculture

September 15, 2021 | Online

This is a 2-part workshop instructed by Philip van Wassenauer. Part I will cover Practical Approaches to Managing Aging Trees and Part II will cover Reducing the Crown and Retaining the Tree.

Find out more at PacificNorthwestISA.



Growing on Trees

What Can I do about Emerald Ash Borer?

Emerald ash borer (EAB) has been detected in much of Massachusetts and the small jewel-green beetles have certainly made themselves comfortable, wreaking havoc on ash trees across the state. What can you do?

Inform yourself – if you do not know about EAB, find out more! If you don't know how to identify ash trees, or whether you have any on your property or in your community, learn how and take a look! A good place to start is massnrc.org. If you manage trees and do not know how much ash you have or what the condition it is in, conduct a tree inventory.

Keep firewood local – EAB spends a lot of its life just under the bark of ash trees. By moving firewood, say, more than 50 miles from where it was cut, you are potentially moving, not just EAB, but other insects that may be inside or on the wood. Insects like EAB can complete their lifecycle in firewood and emerge in their new location. Many surrounding states have prohibitions about bringing in untreated firewood of any kind. If you're traveling, the best practice is to keep your firewood at home and purchase wood at your destination.

Know your Options – If you do have ash trees on your property or in your community and they are not heavily infested with EAB and are still in good condition, you have **insecticide options** to help protect your tree (or trees) from EAB. Trees that are lightly infested with EAB are okay, but trees that show signs of heavy insect infestation or disease, that have significant mechanical damage or other defects, or that have been weakened by drought or other conditions are not good candidates for treatment. There are effective organic and non-organic insecticides approved for use in Massachusetts. **Without treatment, most ash trees will become infested and die, though some may survive.** The booklet [**Insecticide Options for Protecting Ash Trees from Emerald Ash Borer**](#) is a great resource to help property owners and tree managers decide how to manage their ash trees for EAB. If you

want to treat trees with an insecticide, **we recommend hiring a certified arborist with a pesticide license.** Most insecticide options in the booklet require a licensed pesticide applicator.

Arborists in Massachusetts may be certified by the International Society of Arboriculture (ISA) or by the Massachusetts Arborist Association. (Arborists certified by the Mass. Arborist Association are known as "MCAs.")

Certification means that these individuals have a certain level of knowledge or experience. Each organization also has a code of ethics that certified arborists are to abide by. Reputable tree companies in Massachusetts have certified arborists on staff. You can look up these companies and/or individuals by geographic area here to find one that serves your area:

MCA: <https://massarbor.org/directory.php>

ISA: www.treesaregood.org/findanarborist

It is good to ask for references. The New England Chapter of the International Society of Arboriculture has some good tips on hiring an arborist: <https://newenglandisa.org/find-an-arborist/choosing-a-qualified-arborist>

It is important to note that **ash trees become brittle as they decline and die**, with trees eventually falling within 5 years—and dropping branches throughout that time. If you have ash trees on your property or in your community that are not treated with an insecticide for EAB, it is likely that those trees will become infested with EAB and die as a result. Even without EAB, many ash trees in Massachusetts, and elsewhere, are struggling because of a variety of factors – from disease to moisture problems, to other issues. If there are ash trees around structures, walkways, driveways, or other places you congregate, it is important to **be aware of and mitigate risk from these trees.** We recommend working with a certified arborist to help manage ash and other trees on your property.

Find out More: DCR Forest Health: [Emerald Ash Borer Website](#) | [Emerald Ash Borer Information Network](#) Massachusetts Introduced Pests Outreach Project: [Emerald Ash Borer](#) | [Report EAB in MA](#) | [DCR UCF](#)

Growing on Trees

2021 DCR Tree Steward Training

Plans are still in the works, but we will be offering a **hybrid Tree Steward Training** this year, with a series of webinars culminating in an in-person field day. More details to follow.

Webinars will be held Thursdays in September and October, at 10:00-11:15 a.m. on Microsoft Teams.

- September 23, 2021 – DCR Urban and Community Forestry and Other Programs
- September 30, 2021 – Tree Wardens and Tree Committees Working in the Community
- October 7, 2021 – Tree Identification and Pruning
- October 14, 2021 – Field Day – (In Person, Outside) Dunn Pond, Gardner: Tree ID, Pruning, Insects & Disease, Tree Planting and Site Assessment

Weather and Climate

According to the [U.S. Drought Monitor](#), as of June 22, 2021, dry conditions in Massachusetts may be found on the Cape and Islands and in portions of four western counties, where some areas are abnormally dry or in moderate drought. Local conditions across the Commonwealth may vary.

On June 10, 2021 the state Executive Office of Energy and Environmental Affairs announced that the Southeast Region will be elevated to Level 1- Mild Drought, the Western and Cape Cod Regions will remain at a Level 1- Mild Drought. Read the full release at [mass.gov](https://www.mass.gov).



Find out More: Massachusetts Drought Status: [mass.gov](https://www.mass.gov) | The Northeast Regional Climate Center: www.nrcc.cornell.edu/regional/drought/drought.html | The U.S. Drought Portal | www.drought.gov/drought/states/massachusetts | National Climate Report | <https://www.ncdc.noaa.gov/sotc/>

From the UMass Landscape Message

Nick Brazee, Plant Pathologist, UMass Extension Plant Diagnostic Lab, UMass Amherst.

June 4, 2021 – There have been several reports of intensifying beech leaf disease (BLD) outbreaks in Middlesex, Plymouth and Bristol Counties on both American (*Fagus grandifolia*) and European beech (*F. sylvatica*). Locations in Connecticut, Rhode Island and Massachusetts with isolated cases of the disease have seen a surge of new BLD cases in 2021. Symptoms of the disease include dark interveinal banding and puckering/cupping that appear convex on the upper leaf surface. Marginal distortion and curling may also occur. Research and field observations have shown that infected leaves emerge from the buds with symptoms of the disease, indicating they are injured prior to bud break. The nematode responsible for BLD (*Litylenchus crenatae* ssp. *mccannii*) is infecting the buds and symptomatic leaves appear at bud break. Trials are underway testing the utility of emamectin benzoate injections. While this chemical is toxic to nematodes, it's not clear if the chemical is properly translocating to the canopy after injection. Additional trials are testing phosphites as soil drench and injection. For American beech, there is the added stress of [beech bark disease](#), a chronic cankering disease that is also capable of killing trees.



Leaf infected with beech leaf disease, NY-DEC.

For more information on beech leaf disease, see this recent [USDA Forest Service Pest Alert](#). For more information on other common disease and insect issues of beech that could be mistaken for BLD, see [here](#). View the Landscape Message at [UMass Extension](https://umassextension.org).

THE CITIZEN FORESTER

Growing on Trees

Green Communities Leadership Institute

A new leadership development program for natural resources professionals is being launched this year. The Green Communities Leadership Institute (GCLI) is announcing their next-level leadership program with two info sessions to learn more -- in addition to launching their application period to select the first cohort of leaders this summer. Learn more on [the GCLI website](#), or sign up for their info sessions (pre-registration is required) [Wednesday, June 23rd 4-5 p.m. EST](#) or [Thursday, August 12th 12:30-1:30 p.m. EST](#)



Municipal Forestry Institute

Do You Have What It Takes To Move Yourself or Your Urban Forestry Effort To The Next Level?

The Municipal Forestry Institute (or MFI) may be able to take you there! MFI is an exciting, high-level training opportunity educating people in the leadership and managerial aspects of urban forestry. This week-long intensive educational pro-gram delivers a challenging opportunity to grow a more successful community tree program.

Come learn and master leadership and management tools of program administration, coalition building, strategic thinking, program planning, and public relations by investing a week in your personal growth and development.

What Does MFI Cover? The Institute curriculum was developed by a team of urban forestry professionals and educators with dozens of years experience in leading urban forestry efforts at the local, state/provincial, federal, and non-profit levels. There are four major components of the MFI curriculum:

- Developing A Leadership Approach To Your Position
- Thinking and Planning Strategically to Advance Urban Forestry Efforts
- Working Effectively with Boards, Coalitions, and Non-Profit Organizations
- Managing the Relationship Between People and Trees

The curriculum is presented in a variety of formats including lectures, multi-media presentations, panel discussions, group exercises, and real-life scenarios.

Sign up now for MFI 2021, being held September 26–October 1, 2021 in Bowling Green, OH.

Find out more at the [Society of Municipal Arborists](#). Register by July 15, 2021.

Gleanings

History of Early American Landscape Design – Boston Common

Take a deep dive into the history of the Boston Common, from its utilitarian origins to its current use with this webpage from the [National Gallery of Art](#).

There you can also read about [Mount Auburn Cemetery](#), the [Bunker Hill Monument](#), and other sites.



Right: William Burgis, Plan of Boston in New England [detail], 1728.

A Few Fond Memories from my Time at DCR

- Mollie Freilicher



Headlines in Brief

Massachusetts

[Concord Guide Speaks for The Trees](#)

[He Helps Put the Emerald in The Emerald Necklace](#)

[Newly Planted Trees Along the VFW Parkway
Were Sawed In Half Over the Weekend](#)

[The Surprising Root of the Massachusetts
Fight Against Natural Gas](#)

Regional

[Maine Residents Fend Off Poisonous Caterpillars](#)

[East Providence and EP Urban Forest to Inventory
Street Trees](#)

[Our Leafy Neighbors: Quintessential Dartmouth College
Trees and Their Stories](#)

[Just Peachy! You Can Grow Your Own Peach Tree and
Enjoy Local, Tree-Ripened Fruit](#)

[Beech Leaf Disease Detected in Maine](#)

National & International

[Drought-Stricken Nevada Enacts Ban On
'Non-Functional' Grass](#)

[University of Idaho Researcher Studies Trees to
Trace the Climate History of Yellowstone](#)

[How Cities Can Avoid 'Green Gentrification' and
Make Urban Forests Accessible](#)

[The Mystery Behind a Photo of a Logged Old-Growth
Tree](#)

['Crazy Worms' Threaten America's Trees — And
\(Gasp!\) Our Maple Syrup \(and check out Chris
Clarke's story in *The Citizen Forester* \[May 2021\]\(#\)\)](#)

[Tree Water and ... Goose Droppings? Cheers to New,
Creative Uses of Waste Streams](#)

[A Better Way to Look at Trees](#)

THE CITIZEN FORESTER

On the Horizon

- Jun 24** Webinar: [Climate and Heat: Trends, Health Impacts, and Risks](#), 1pm
- Jun 24** [Connecting Main Street to Mountaintops](#), 2pm
- Jun 25** Tree City USA and Tree Campus Higher Ed. Award pickup, Amherst Field Office, Contact [Julie Coop](#)
- Jun 30** [Summer Tree Summit](#), 12pm, UMass Extension
- Jul 1** Tree City USA and Tree Campus Higher Ed. Award materials pickup, Beaver Brook Reservation, Belmont, 10-12pm, Contact [Julie Coop](#)
- Jul 13** [ISA 2021 Virtual Tree Climber Summit](#), International Society of Arboriculture
- Jul 21** Webinar: [Urban Tree Pest Update: Part 2](#), Penn State Extension, 12pm
- Jul 27** Webinar: A Three-Pronged Approach to understanding the defensive mechanisms in Green Ash resistant to EAB, TREE Fund, 1pm
- Aug 2-4** [Tree Risk Assessment Qualification Course](#), New England Chapter, ISA, Brattleboro, VT, Register by July 2.
- Aug 5** [Tree Risk Assessment Qualification Renewal](#), New England ISA, Brattleboro, VT
- Aug 18** Webinar: [Are Your Trees Storm Ready?](#), Penn State Extension, 12pm
- Aug 27** [TCIA Aerial Lift Specialist and Compact Lift Specialist Workshop](#), Portsmouth, NH, New England ISA
- Aug 28** [New England ISA Day of Safety](#), Canterbury, NH
- Aug 31- Sept 2** Trees and Utilities Conference, Minneapolis
- Sept 1** Mass. Qualified Tree Warden Course begins, Sturbridge, www.masstreewardens.org
- Sept 6- Sept 29** Online Course: [ISA Certified Arborist Exam Prep Course](#), New England ISA
- Sept 6- Sept 29** Online Course: [ISA Board Certified Master Arborist Prep Course](#), New England ISA
- Sept 14** Webinar: [Long term effects of electrical right-of-way vegetation management on floral and faunal communities](#), Tree Fund, 1pm
- Sept 15** Webinar: [The Role of Climate Change on Forest Trees, Including Fall Coloration, in the Eastern U.S.](#), Penn State Extension, 12pm
- Sept 26- Oct 1** [Municipal Forestry Institute](#), Society of Municipal Arborists, Bowling Green, OH

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Bureau of Forestry

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