

# The New York Forest Owner

A PUBLICATION OF THE NEW YORK FOREST OWNERS ASSOCIATION

*For people caring about New York's trees and forests*

May/June 2019



*Member Profile: Mike and Marilyn Arman*

*Volume 57 Number 3*



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**COVER:**

Front cover. One of the benefactors of the work in the woods is Mike's dog, who enjoys time among the trees and playing in the pond. For member profile see page 21. All photos courtesy of the Armans.

# From The President

Many NYFOA members recently participated in The New York State Department of Environmental Conservation (DEC) statewide stakeholder meetings that were held to gather comments and concerns with respect to potential regulatory changes to the Forest Tax Law Program (RPTL 480-a).



Landowners and private consulting foresters that participate in the forest tax law program were invited to these public meetings throughout the

state. A number of non-participating landowners also attended to learn more about the benefits and pitfalls of the program. NYFOA had a representative at each meeting and they presented our recommendations to improve the 480-a regulations. We believe that the NYFOA recommendations for regulatory reform would yield the following results:

- Increased 480-a participation
- Decreased landowner burdens
- Decreased NYS DEC administrative efforts
- Streamlined processes

Potential revisions include simplifying the application process and 480-a handbook, modifying required work schedules, computerizing documentation and allowing for forest regeneration, young forest initiatives, and wildlife habitat to be considered in the 480-a program.

I had the opportunity to attend the stakeholder meeting in Millbrook, NY. The meeting was well attended. The participants were well informed and engaged, and the NYS DEC staff were well prepared with a presentation of the history of 480-a, the current state of the program, and the process that should result in significant improvements to the program. The open discussion and question and answer period was fruitful and productive. I came away from the meeting believing NYFOA members and other stakeholders, working with NYS DEC, have a timely opportunity to make substantial progress in implementing 480-a regulatory reform. For more information visit our website ([www.nyfoa.org/news](http://www.nyfoa.org/news)).

On March 5, 2019 four NYFOA members (Dick Gibbs, Stacey Kazacos, Frank Winkler, and Mike Zagata) attended Forestry Awareness Day (FAD) 2019 at the Legislative Office Building in Albany, which was organized by The Empire State Forest Products Association. The ESFPA supports many of the same issues as NYFOA and the combined efforts proved successful. The participating groups met with legislators and staffers to educate them on current forestry related matters, and ensure our message and concerns are heard. I would like to acknowledge John Bartow, Executive Director of ESFPA, and his staff for their flawless coordination of the day's activities.

As a new initiative, NYFOA has supported the NYS Wood Products Development Council's (WPDC)

*continued on page 4*

The mission of the New York Forest Owners Association (NYFOA) is to promote sustainable forestry practices and improved stewardship on privately owned woodlands in New York State. NYFOA is a not-for-profit group of people who care about NYS's trees and forests and are interested in the thoughtful management of private forests for the benefit of current and future generations.

**Join!** NYFOA is a not-for-profit group promoting stewardship of private forests for the benefit of current and future generations. Through local chapters and statewide activities, NYFOA helps woodland owners to become responsible stewards and helps the interested public to appreciate the importance of New York's forests.

Join NYFOA today and begin to receive its many benefits including: six issues of *The New York Forest Owner*, woodwalks, chapter meetings, and statewide meetings.

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## From the President (continued)

program “Into the Woods: Forestry Training at Oswegatchie” (March 31, 2019 thru April 2, 2019). NYFOA’s representative on the WPDC, Bruce Revette, has been working with his local Future Farmers of America (FFA) chapter to develop a forestry program as part of the curriculum for students participating in FFA. As this partnership continues to develop, NYFOA took the opportunity to provide two scholarships, through its mini-grant program, for two students to attend the intensive three day training program. The program’s goal is to train students about the basics of forestry management and timber production. This educational opportunity for participating students will last a lifetime and hopefully ensure a bright future for them in forestry related jobs. Having a qualified work force in the forestry industry is good for the community and good for the health of our woodlands.



Hoping your spring and summer woodlot chores are a labor of love. And, just a reminder to check out your local woodwalks and educational programs that each of our NYFOA chapters offer statewide. You can find many of these programs listed on our website.

–Art Wagner  
NYFOA President

## Welcome New Members

We welcome the following new members (who joined since the publishing of the last issue) to NYFOA and thank them for their interest in, and support of, the organization:

Name	Chapter
Bill Burrichter	AFC
Paul Ebersbach	NAC
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NYFOA.

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NYFOA’s voice will become  
stronger!



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The New York Forest Owners Association thanks the people and organizations that supported our programs and publications in 2018. Your help is essential to our work.

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# Ask A Professional

PETER SMALLIDGE



Peter Smallidge

*Landowner questions are addressed by foresters and other natural resources professionals. Landowners should be careful when interpreting answers and applying this general advice to their property because landowner objectives and property conditions will influence specific management options. When in doubt, check with your regional DEC office or other service providers. Landowners are also encouraged to be active participants in Cornell Cooperative Extension and NYFOA programs to gain additional, often site-specific, answers to questions. To submit a question, email to Peter Smallidge at pjs23@cornell.edu with an explicit mention of "Ask a Professional." Additional reading on various topics is available at [www.forestconnect.info](http://www.forestconnect.info)*

## Assessing a maple woods for sap and syrup production

### Question:

I'm interested in using my woods to be productive and generate income, but the trees aren't big enough to think about a harvest. I saw advertising for maple weekend, and it made me think about sap and syrup. Is this an option for my woods? (Scott F., STC)

### Answer:

Many woodland owners enjoy working their land with the intent of generating income. While timber harvesting is common, harvesting is episodic and may not be suitable for any given property at any particular point in time. Maple production is compatible with goals that include timber and firewood harvesting, and in some cases offers additional economic and personal opportunities for the owner. Woodland owners thinking about maple production will need to consider the characteristics of their property, and the characteristics of the section of woods where sap is collected, called the sugarbush (Figure 1).

Maple production, the collection and processing of maple sap into syrup or value-added products, can take one of

three strategies. These strategies range from significant owner investment to no direct investment by the owner. With the greatest investment, the owner is the producer. As producer the owner installs a sap collection system (usually tubing, infrequently buckets for commercial production), a way to process the sap, and a plan to market the syrup and any related maple

products. This strategy has the greatest investment and the greatest return. An intermediate strategy is for the owner to collect the sap and sell it to a nearby producer. The owner thus needs only to invest in the collection system and a manner or strategy to transport the sap. The least investment is for the owner to lease trees to a maple producer who does the work and pays to the owner, usually, on a per tap basis. All these options may allow the owner to take advantage of a reduction in land taxes through the agricultural district laws.

Before thinking about the specific attributes of the woods, an owner needs to consider several property-level conditions of their land and ownership objectives before venturing into maple production. The list is similar to the considerations that would be made before starting any new enterprise, and the full consideration is beyond the scope of this article. The owner should consider their proximity to a market, their ability to market products such as sap or syrup, whether they would accept tubing in their woods (which usually remains throughout the year, Figure 2), their



*Figure 1. Modern maple production is still just boiling sap into syrup, but involves an often involved process of highly engineered vacuum pumps, reverse osmosis, high efficiency evaporators and storage in controlled environments.*



Figure 2. Maple tubing is the standard approach for collecting sap for the commercial (and profitable) production of syrup. Tubing system designs allow for ease of access. Tubing usually remains in the woods throughout the year.

willingness to make a multiyear commitment especially if they lease their trees, their availability and capacity to participate in a busy spring season, and their ability to finance some initial investment for supplies and equipment. Owners considering a maple enterprise should spend time with other producers and join the NY Maple Syrup Producers Association.

They could also participate in the annual summer training called Cornell Maple Camp, announced at [www.CornellMaple.com](http://www.CornellMaple.com) and usually held at Cornell's Arnot Forest near Ithaca.

The economics of maple versus timber can be either simple or complex. On the simple side of this consideration is a woods with maple trees that are mostly 10 to 16 inches in diameter. If

the comparison is maple versus timber, these smaller trees can begin producing an annual return immediately, but might be a few decades from a timber revenue event. The net present value and collective revenue through time is in the favor of maple sap/syrup production. If the trees are 18 to 22 inches and high quality stems, the economics would likely favor timber. This isn't all or nothing, because the trees used for maple sap and eventually can be sold as "tap hole" maple logs to buyers with markets for specialty lumber (Figure 3). The complexity arrives because some owners with high-value timber trees are reluctant to harvest trees, they want to maintain a high canopy, or want an activity that is annual and binding across generations of the family. The analysis is further complicated because there will be high and lesser value trees, and by adding the potential for increased revenue from maple value-added products such as maple cream, granulated maple sugar, maple candy, or maple cotton candy.

Having considered the broad questions of whether to begin a maple enterprise, there are several characteristics of your woods that will help you identify the best place to begin, or which section of your property to avoid. The assessment

*continued on page 18*



Figure 3. Lumber made from previously tapped trees is called "tap hole maple" and used in specialty wood products such as tables, cabinets, wainscoting, and picture frames.



Figure 4. Maple producers attending Cornell Maple Camp learned how to use an angle gauge to estimate the number of tapable trees. The abundance of tap trees per acre influences efficiency.

# Wild Things in Your Woodlands

KRISTI SULLIVAN

## BLACK-BILLED CUCKOO (*Coccyzus erythrophthalmus*)



*The black-billed cuckoo is a slender, long-tailed bird about 12 inches in length. It has a black, down-curved bill, and brown head, nape, back and upper tail. Its underside is white except for the tail, which is gray below with very narrow white tips on the tail feathers. Another distinguishing feature of this species is its reddish eye ring. Both sexes are similar.*

As spring arrives in New York state and the trees begin to leaf out, the black-billed cuckoo makes its annual northward trek from its wintering grounds in South America. This cuckoo breeds in southern Canada and the northern half of the United States, east of the Rocky Mountains. Its habitat includes deciduous and evergreen forests, open woodlands, forest edges, and moist thickets.

The black-billed cuckoo is usually secretive, and often its presence is known only by the distinctive call — a rhythmic cu-cu-cu, cu-cu-cu-cu, cu-cu-cu — heard somewhere in the distance. However, this otherwise shy bird may become very vocal, flying at intruders and clapping its bill loudly, when its nest is nearby.


A typical black-billed cuckoo nest is built either on a horizontal limb or in a cluster of shrubby vegetation, about six feet off the ground and resting against a tree trunk. Some nests may be built on or very near the ground. The male and female cuckoos work together to construct a nest of twigs and line it with ferns, grasses, mosses, feathers, and



rootlets. The female lays from two to five eggs (typically two or three), which are incubated by both parents. The black-billed cuckoo sometimes parasitizes the nests of other black-billed cuckoos, and occasionally parasitizes nests of other species. Brood parasites lay their eggs in the nests of other birds. The black-billed cuckoo may parasitize another bird's nest if it has no nest of its own or an unusually large clutch size.

This species is known to produce a greater number of young in years with large outbreaks of caterpillars. In addition to caterpillars, the cuckoo feeds on large insects such as katydids, cicadas, crickets, grasshoppers, and butterflies. It occasionally eats other birds' eggs, and has been known to feed on small mollusks, fish, and aquatic insect larvae. The cuckoo is famous for its appetite for hairy caterpillars like the forest tent caterpillar and the gypsy moth caterpillar, particularly during periodic outbreaks of these pests. Each cuckoo can consume thousands of caterpillars in a season, and over 100 large caterpillars in a day. Unlike many other birds, the cuckoo has a special adaptation that allows it to eat these hairy caterpillars. Caterpillar hairs pierce the inner lining of the stomach and remain there, but when the hairs become numerous, the entire stomach lining is sloughed off and regurgitated as a pellet.

The black-billed cuckoo is listed as a Species of Greatest Conservation Need in New York state due to a decrease in the number of birds detected through the Breeding Bird Survey from 1966 to the present. Habitat fragmentation caused by suburban development, degradation of riparian habitats, and a reduction in the number of caterpillars due to insecticide use are some of the potential factors contributing to its decline. The best way to provide ideal habitat for the black-billed cuckoo is to manage for an open forest canopy (< 30% closure) with a well-developed understory of seedlings, saplings, and shrubs 2-10 feet in height. Any small openings made in the tree canopy that allow light to penetrate to the forest floor and encourage understory growth might benefit this bird. Encouraging young tree and shrub growth at the edge of wooded areas can also provide good habitat.

To learn more about this bird and get to know the characteristic sounds made by the black billed cuckoo, visit the Cornell Lab of Ornithology web site at [http://www.allaboutbirds.org/guide/Black-billed\\_Cuckoo/sounds](http://www.allaboutbirds.org/guide/Black-billed_Cuckoo/sounds) 

*Kristi Sullivan directs the New York Master Naturalist Volunteer Program. More information about wildlife and their habitats can be found at <http://blogs.cornell.edu/nymasternaturalist/>. Image by Wolfgang Wander. Licensed under CC-BY-SA-2.5*



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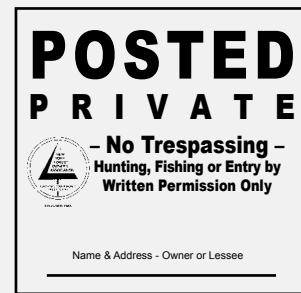


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# News from New York Tree Farm Program

MARY JEANNE PACKER



Cerulean warbler (*Setophaga cerulea*)  
(Wilson, A, 1810) USDA Forest Service Southern Research Station, USDA Forest Service, SRS, Bugwood.org

## 2019 NYS Tree Farm Field Day: June 8

The NYS Tree Farm Program will be holding its Annual Tree Farm Field Day in the Upper Delaware Watershed this year and all NYFOA members are invited to attend. The event will take place on Saturday June 8 from 8 a.m. to 4 p.m. at the John A. Lennox Memorial Forest and Cornell Cooperative Extension of Delaware County's 4-H Camp Shankitunk located in Delhi, NY. You can download the registration information from the NYS Tree Farm website, [www.nytreefarm.org](http://www.nytreefarm.org), or call the NY Tree Farm office, 518-854-7386. Camping and rustic cabins are available on-site, for an additional fee, for the nights of June 7th and 8th.

The morning program will highlight the new Harvests for Habitat program and opportunities for family forest

owners to get involved. Harvests for Habitat is a partnership that began in 2018 in the Upper Delaware Watershed between Audubon NY, the Watershed Ag Council, and NY Tree Farm Program, with funding from National Fish and Wildlife Foundation and American Forest Foundation. It enables habitat improvements through active forest management and financial incentives. Also on the agenda is an update on the potential threat to NYS's forests from the invasive spotted lanternfly presented by Sara Wurzbacher from Penn State University.

Resource tables and informational displays staffed by representatives of various forestry and natural resources conservation agencies and organizations will be set up all day at the camp. NYS DEC Pesticide Applicator recertification and SAF credits are pending approval.

After lunch, which is included with registration, the program moves outdoors for an educational forest management tour through some of the 18 blocks of the Lennox Model Forest's silvicultural treatments. Included will be several units that demonstrate how the application of certain sustainable forestry practices can improve forest habitat conditions for at-risk bird species such as wood thrush, cerulean warbler, and many others. Similar forest management practices can be undertaken by forest owners in the Upper Delaware watershed utilizing incentives available through the Harvests for Habitat project.

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*Continued on next page*

Tree Farm Inspector Rod Jones from Northeast Timber Services in Walton is Lennox Forest's forester, and will be leading the afternoon woodswalk. Jones says, "this field visit will be an excellent opportunity for forest owners to see firsthand what the outcomes of management activities look like after the harvest is completed."

According to Audubon New York, "young forest habitat is an important component of a diverse and healthy forested landscape. Research from the past decade has confirmed that many birds that nest in mature forests preferentially use young forest as post-fledging habitat for their young, which appears to increase survival of fledglings. To have an intact forest breeding bird community, forested landscapes must include patches of young forest habitat. Young forest habitat can be created by appropriate application of even-age silvicultural techniques, such as clearcuts, clearcuts with reserves, and seed tree harvests."

In the Lennox Forest compartment description, Jones writes about two stands totaling about 12 acres that will be part of the afternoon field visit that have been managed with an even-age prescription. "[These sections] of the Model Forest were originally reduced to 40-60 square feet of basal area back in our first entry in order to develop regeneration of high quality northern hardwoods. The larger trees that were left in the stand are excellent quality and the stand is developing a good amount of regeneration. The larger trees were removed in 2009. The advanced regeneration that is established has enough numbers of trees per acre to establish the next forest."

Learn about the NY Tree Farm Program at [www.nytreefarm.org](http://www.nytreefarm.org) or contact the office on 518-854-7386 or email [nytreefarm@gmail.com](mailto:nytreefarm@gmail.com) 

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# Trees of Power

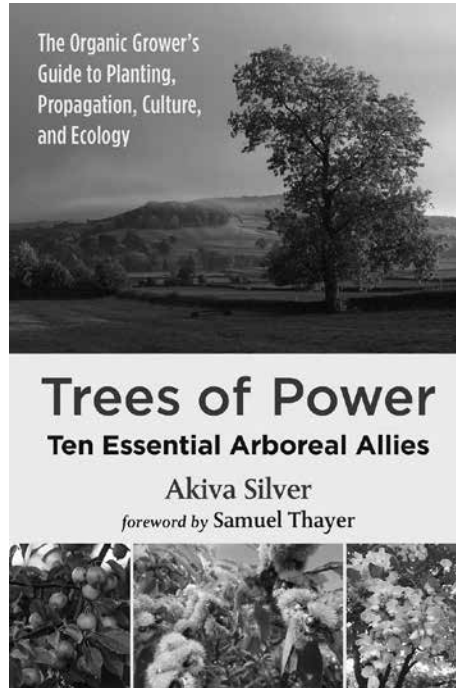
Whether you are a woodlot owner, orchardist, tree planter, ecologist, or just someone who appreciates the wealth of benefits that New York's sylvia provides, *Trees of Power* offers an abundance of concrete information and inspiration for working with trees to benefit ourselves, the natural communities around us, and the broader ecology of the planet as a whole. Highly recommended.

—Jeff Joseph

The following excerpt is from *Trees of Power: Ten Essential Arboreal Allies, The Organic Grower's Guide to Planting, Propagation, Culture, and Ecology* by Akiva Silver (Chelsea Green Publishing, 2019).

## Uneven Ground

Here in upstate New York there are hills everywhere, but the ground upon them is flat. The fields of our hillsides are easily mowed and grazed. They were smoothed out a long time



ago when they were first cleared and plowed. It did not always look like neat rolling hills here.



A typical pit and mound in the woods created by an uprooted tree. The consequences of this event are a raised bed, a vernal pool, and increased biodiversity.

Ancient hardwood forests created a ground so uneven, textured, and three-dimensional, it resembled mogul ski runs. These types of forest floors still exist today on the steepest hillsides that have been forested for centuries. Walking in an old forest around here is more like climbing up and down pits and mounds of soil than strolling down a trail. The topography is so intricate that one hillside is actually made up of thousands of micro hills and valleys.

This micro topography is created when large trees topple over. A giant root mass is lifted into the air, and as it breaks down, it turns into a mound. The place where the root ball used to be is a pit. Pits and mounds, pillows and cradles, don't sound like much, but they are. These pits and mounds have far-reaching, powerful consequences.

Before I explain exactly why I love the pits and mounds of old forests, let's take a look at a smoothed-out hillside (treed or not). The ground is easy to walk on and drive on, and it's easy to get machinery in and out, but other than this convenient access, I cannot see any other benefits. Runoff of rainwater and nutrients is constant, and can be especially severe when the ground is frozen and there is no snow cover. Streams downhill fill up faster than they can handle and flood their banks.

The soil on my farm is classified as Volusia. It is a dense clay. In the spring, winter, and fall, the soil is saturated. Muddy is probably the best word to describe the soil on our hill for most of the year. During a dry summer, it can be as hard as concrete. Under these anaerobic conditions, trees languish. They grow very

slowly, if at all, and they usually have much shorter life spans compared with trees grown in well-drained soils.

How did a soil like this once support the massive trees that became the beams of our old house and the collapsed barn nearby? How do Volusian soils support the healthy forests all around my fields?

It is true that most of the topsoil was lost when the first European settlers here tried to plow the hillsides and grow annual grains like buckwheat and barley. When I first began planting trees here, I assumed that by adding compost, topsoil, or mulch I could improve the soil and bring patches of it back to its former greatness.

I would dig a hole, add copious amounts of compost, and apply lots of mulch on top. After a single year this spot's soil would be exactly the same as all the soil surrounding it: wet and muddy. More compost and mulch yielded the same results.

What was I missing? The answer is air. As springs bubble from deep within our hillside, the water runs through the soil and completely fills all available pores and capillaries. There is not enough oxygen in a saturated soil for roots to breathe, or for certain microbial life to flourish. In some places the soil is so wet that it smells anaerobic and has a gray-blue color. Compost might work if I added huge amounts, but sooner or

later the anaerobic conditions would triumph over my soil amendments.

I realized the best way to get air into the soil during a walk in the woods. It is hard to describe the beauty of New York's southern tier. Steep hillsides covered in trees and pastures make up this idyllic landscape. It resembles hobbit country. This is the northern edge of the Appalachians. During my walk, I entered a mixed hemlock forest. The pits and mounds were so plentiful that there was almost no place that was not a pit or mound. Many of the mounds were taller than me, and some of the pits equally deep.

I have spent a lot of time looking at the ground in these types of forests. Trees are almost always growing out of the mounds. The pits fill with water and snow for large parts of the year and dry up in the summer. This system is truly remarkable: a network of raised beds and vernal pools.

The raised beds allow drainage to occur. This keeps the crown of tree roots safe from saturation by raising them above the water table. The soil in these mounds is always crumbly, wonderful stuff. And the pits are more than just water storage vessels. They slow water down, give it nowhere to go except to gently infiltrate the soil. They are not deep enough to hold water year-round. This seasonality is a big part of what makes them so exceptional.

A pond that holds water 12 months a year will inevitably become colonized with fish. Birds' legs will carry eggs

from one body of water to another. A pond or pool that dries up every summer will not support fish, which can be a great thing from an ecological perspective. I love fish, raise them in my ponds, and have gone fishing my whole life. The thing about fish, however, is that they love to eat. Fish will decimate populations of amphibians and invertebrates in a small pool. The biological diversity of a vernal (seasonal) pool is very high in the absence of fish. These are the places where creatures like salamanders, toads, frogs, and myriad insects will lay their eggs and complete life cycles. The forest I was walking through contained thousands of vernal pools in just a few acres.

It also contained thousands of huge mounds that were growing big trees. Trees like red oak that could never grow in the wet field adjacent to this forest. The adjacent field is the same soil series as the forest: Volusia, or muddy. The difference is the uneven ground.

From *Trees of Power* by Akiva Silver, © 2019 by Akiva Silver. Reprinted by arrangement with Chelsea Green Publishing, White River Junction, VT. [www.chelseagreen.com](http://www.chelseagreen.com)

*Akiva Silver owns and operates Twisted Tree Farm, a homestead, nut orchard, and nursery located in Spencer, New York.*

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You will receive an email every two months that includes a PDF file of the publication. While being convenient for you – read *The Forest Owner* anytime, any place; this will also help to save the Association money as the cost of printing and postage continues to rise with each edition.

# Eye Candy and Cough Syrup

PAUL HETZLER

I haven't checked with an optometrist, but I may have a winter-related vision problem. When five or six months of winter-white finally give way to a mostly brown world each early spring, my eyeballs hurt—they ache for something bright in the landscape. That's probably why I plant a few additional crocus bulbs in the yard every fall, and why I search out early-blooming native wildflowers like bloodroot and Carolina spring beauty.

But what thrills me most is how clumps of yellow coltsfoot flowers emerge, long before their leaves come out, from muddy roadside ditches, rail embankments and other sites with a history of soil disturbance. Coltsfoot flowers look a bit like small dandelions, but without any leaves in sight. Maybe it's the contrast between their bright color and the sepia environs, or perhaps it's their audacity at blooming so early, but these tiny sunbursts do much to dispel my winter fatigue.

Although coltsfoot is native to Europe and Asia, it has naturalized throughout North America. Many non-native plants came here accidentally, but this one was likely planted by early settlers because of its history as a medicinal plant. We don't know if coltsfoot cheered up European settlers as snow receded, but we do know they used it to treat coughs and colds in wintertime.

Coltsfoot's botanical genius name is *Tussilago*, derived from the Latin word for cough. The fact that its leaves, which emerge as the flowers die back, have a shape similar to a horse's hoof has given rise to its common name.

Pliny the Elder (think Socrates, but Roman instead of Greek and slightly less ancient) treated his asthma by inhaling the smoke of dried coltsfoot leaves and flowers. In an ironic and tragic twist,



*Coltsfoot (Tussilago farfara).* Jan Samanek, *Phytosanitary Administration, Bugwood.org*

Pliny died of smoke inhalation during the eruption of Mount Vesuvius.

There was a period of time in Europe when the coltsfoot blossom was the symbol for an apothecary, the flower virtually synonymous with healing. And following a tradition that dates back thousands of years, some Chinese still use commercial cough syrup made with coltsfoot.

It's common to assume that plant-based remedies are one step removed from placebos, or at least universally benign. The truth is that herbal medicine is nothing to sneeze at. Think about digoxin, nicotine, caffeine and THC, to name but a few naturally-occurring but potent chemicals. Because herbal medicine can possibly interfere with prescription drugs or exacerbate health conditions, no herbal remedy should be used without first consulting a licensed medical professional.

In fact there is concern about the safety of coltsfoot in some quarters. In a 1999 University of Iowa study, researchers documented an increase in liver cancer among rats ingesting large doses of coltsfoot. However, because the Iowa study concluded coltsfoot's health risk was due to just one particular compound that it (the plant, not the study) contained, some German researchers are working to develop a strain that's free of the offending substance.

Making cough syrup from plants requires supervision, but using coltsfoot as a tonic for the spirit need not involve doctors. I encourage everyone to check out these splashy early-blooming flowers. Not only is this eye candy approved by the American Dental Association, it's free and safe. 🌿

*Paul Hetzler is the Horticulture and Natural Resources Educator at Cornell Cooperative Extension of St. Lawrence County*

# Providing for Our Present and Future Needs

ED NEUHAUSER

As forest landowners, we understand that growing and managing our forests has both short- and long-term requirements. To accomplish our long-term goal of producing a harvest of high quality logs, we take many short-term steps like periodically conducting timber stand improvement cuts to remove poor quality trees to achieve our long-term goals.

We also have short- and long-term economic needs that should be addressed. One of our short-term financial needs is to insure that NYFOA stays a strong vibrant organization that continues to promote optimum forest management in private woodlands in New York State. The

future optimum management of NYS forests requires that young professionals be provided the economic resources to complete their education.

One way to help NYFOA meet its short-term goals is to sign up for Amazon Smile. Ordering useful and important things like tools on Amazon Smile is identical to shopping on Amazon, except that 0.5% of your purchase price is donated to the non-profit organization of your choice. NYFOA is registered as an Amazon Smile charity.

To sign up for Amazon Smile, simply go to [Smile.Amazon.com](https://Smile.Amazon.com). You will then be asked to select your charity and you can type in the New York Forest Owners Association. Then each time


in the future you want to order anything on Amazon, simply start by typing in Amazon Smile. Then select items as you normally would.

While 0.5% of your purchase price might not seem like very much, if a number of NYFOA members signed up for Amazon Smile, it could provide some extra resources to NYFOA. Since I have a tendency to buy woodworking tools, I have contributed a total of \$30.35 to NYFOA. This should not be looked upon as my generosity, but rather as my wife's tolerance toward my spending of her money. Since the start of the Amazon Smile program, a total of \$287.55 has been donated to NYFOA.

NYFOA was started in 1963 by Prof. Heiberg from the New York State College of Forestry. As part of NYFOA's commitment to educating future foresters, NYFOA has established a scholarship fund with the SUNY College of Environmental Science and Forestry. The fund is known as the NYFOA Scholarship Fund and earnings from the fund provide scholarships to deserving students in the Forest Resources Management Program.

To determine the amount of money available for scholarships each year, the fund looks at the average value of the endowment over the last 20 quarters and uses 5% of that value for scholarships. Currently the fund has a balance of ~\$29,000 and for the 2017-2018 academic year has provided scholarships of \$750 to 2 students in the Forest Resources Management program.

To make an electronic donation to the fund, go to the secure online giving form <https://basin.esf.edu/donate> and from the list of available funds choose "New York Forest Owners Association Scholarship Fund" from the alphabetical drop down list of funds. To make your donation by check, make the check payable to "ESF College Foundation NYFOA Scholarship" and mail to the ESF College Foundation, 1 Forestry Dr. 214 Bray Hall, Syracuse, NY 13210. If you have any questions you call the Foundation office at 315-470-6683.

So to assist NYFOA in its mission of promoting effective forest management on New York's private forest lands, consider signing up for Amazon Smile. To honor someone special to you and help educate our future foresters, consider donating to the NYFOA Scholarship fund at ESF. This is a gift that will keep educating foresters for years to come. 

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# Woodland Health

*A column focusing on topics that might limit the health, vigor and productivity of our private or public woodlands*

COORDINATED BY MARK WHITMORE

## UPDATE ON EMERALD ASH BORER IN NEW YORK

By MARK WHITMORE

At this point in time, I was about to just let the emerald ash borer (*Agrilus planipennis*, EAB) infestation plow ahead for another year before writing an update. After all, there seems to be no lack of materials about it being generated and just about as many experts coming out of the woodwork. Then I ran across some sketchy information and had a few folks contact me with questions I've answered before. I've realized it's time for yet another update in the evolution of the EAB saga. Hopefully this will help you ask the right questions and make more informed decisions now that EAB has

undoubtedly become a more immediate issue to many more residents and forest owners. Just in case you harbor doubts, there is no question in my mind that EAB will be killing the vast majority of ash in New York over the next couple decades or less.

First of all, some basics. EAB is a beetle in the family Buprestidae (flat-headed wood borers) that only feeds on ash trees in New York. Adults are a beautiful metallic green and begin flying usually when the black-locust are in bloom, usually early June. They mate, and the females will then feed on ash foliage for a week or two to

mature their ovaries. This feeding damage to leaves is insignificant and hardly noticeable. Eggs are laid on the bark of ash in cracks, they hatch, and the larvae immediately bore into the inner bark, or phloem. The larvae consume the phloem through the summer in a very typical serpentine, or snake-like tunnel. But keep in mind that when there are tons of larvae in the same place their tunnels look more like tangled spaghetti. It's this feeding in the phloem that girdles and kills the tree. As the number of attacks accumulates there is less food getting to the developing buds and the leaves will come out much smaller in spring, a crown thinning symptom. By the time crown symptoms appear the vascular tissue is compromised, often beyond the point of recovery. The larvae will feed until late fall when they bore about half an inch into the wood where they will pupate. This is why you can remove all the bark and still have EAB in the wood, ready to emerge in spring. I've listed a few online resources at the end of the article in case you want more information.

One of the more common questions I receive is: "How long will it take EAB to kill a tree?" Basically, if there are only a few beetles attacking it will take years to kill a tree. On the other hand, if there are tons of beetles attacking they die rapidly. A single EAB attack will kill the bark in an area about the size of your hand, but trees are built to sustain wounds of this size so they won't kill the tree right away. When EAB is just getting started in an area, say from someone bringing in a load of infested firewood, it can take years for EAB populations to build, and the number of attacks on a stem to accumulate to the point where the tree dies. For example, I've dissected a tree that showed no symptoms in the canopy, yet when we looked carefully at some of the attacks on the stem we found that the first attacks were seven years old! The other scenario is when there are trees near an EAB population that has been building and moving rapidly across the landscape in areas heavily stocked to ash, like on the

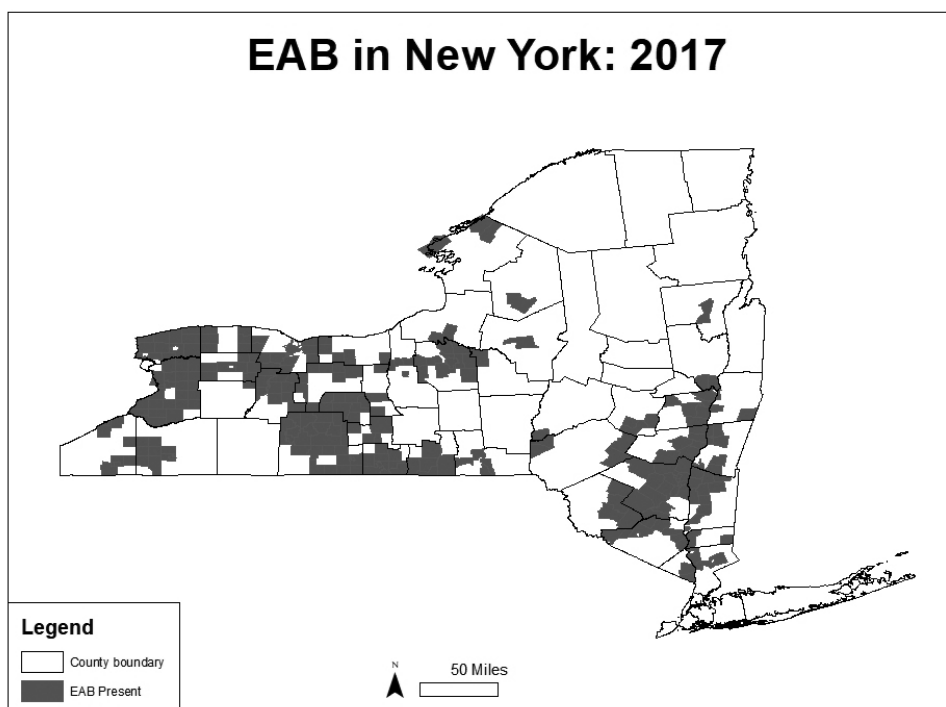


Figure 1. Map of EAB detection through 2017 in New York. NYSDEC.





Figure 2. Woodpecker foraging on ash bark. Note the places where the woodpecker reached into the bark to remove an EAB larvae. Photo by Mark Whitmore.

Lake Ontario Plain. There are so many beetles in these areas that stems will be girdled in only a few years.

The most important thing landowners need to know to formulate management decisions is where the beetles are, and how intense the infestation is. The most current map available for NY is with 2017 data (Figure 1), but NYSDEC is working on a map for their website that will be updated in real time. Stay tuned for this valuable tool. One of the most frustrating comments I get is “EAB is everywhere.” Although there are areas where EAB is truly having its way and moving rapidly, most of the state is still uninfested or in the early stages with low population pressure. So what is the best way to tell where EAB is? The answer is to look at the map and visit an actively infested area then pay attention to the woodpeckers. Woodpecker foraging in ash bark is in my mind the easiest and most certain method of locating an EAB infested tree. Crown thinning symptoms are common with white ash decline, but if they don’t have woodpecks it’s not EAB. Once you learn to identify woodpecks on ash you can find EAB

infested trees as you drive roads near your property, especially when ash bark is wet. When woodpeckers forage for EAB larvae they flake off the outer layers of the outer bark, exposing the reddish-brown inner layers. You can also see the small dark spots where they have drilled down deeper to actually pull out a larva (Figure 2). When EAB populations are low, or building in an area, these foraging spots will appear in a checker board-like pattern. When populations are high they will flake off large contiguous areas of bark, what people are referring to as “blonding.” The nuanced aspect of looking for woodpecks is that you can tell where the trees are dead, and EAB is long gone by the fact that woodpecks have turned gray. The woodpecks at the leading edge of an infestation as it moves across the landscape are a rich, reddish brown.

Armed with the knowledge of where EAB is, you can begin to formulate some management decisions. If you’re planning a timber harvest you might have some time to carefully plan ahead and get more volume with a couple more years of growth. On the other hand you will need to line up a good logger for the job, and that may take time. In addition, you don’t want to be harvesting dead trees because the kiln drying schedule is different and mills may not purchase the logs. Of course, my best advice is to hire a forester to help with the details. One decision a forester can help you with is if it is even wise to remove the ash in your forest if the harvest itself will damage residual hard maple or oak that in the end may be more valuable.

Knowing where EAB is also is important when thinking about treating ash with systemic insecticides to keep them alive. We are fortunate to have a very effective treatment with the active ingredient emamectin benzoate (trade names TreeAzin and Arbormectin) that research has demonstrated remains effective for three years. If you have concerns about the use of systemic insecticides for EAB, I recommend looking at the excellent publication from Purdue University referenced at

the end of this article. In NY these are restricted use insecticides, and require a licensed professional for application. The key to successful insecticide treatment is to treat trees that have no symptoms so the treatment can be adequately spread throughout the tree by intact vascular tissue. The vascular tissue is gradually compromised as the number of EAB attacks accumulate. Indeed, by the time you notice crown decline symptoms it may already be too late to treat your trees.

So what will I do with the four trees (2 female and 2 male) that I’ve decided to treat so that I will have seed for the future? Because populations are in the building phase near me, I plan to treat when I see woodpecks on ash about a mile from my land. But if populations in the surrounding area are large and trees are dying rapidly I’ll treat when I see woodpecks 3 or more miles away.

Perhaps the most important thing for all of us to do to assure the future for ash in our forests is to pay attention to those ash trees that survive the onslaught of EAB. These may harbor the resistance genes that we can use to establish ash once again across the landscape. 🌱

#### Resources:

<http://www.emeraldashborer.info>  
A national website sponsored by the USDA and has tons of great information as well as links to other resources.

<https://www.dec.ny.gov/animals/7253.html> NYS DEC website with the most up to date maps of EAB distribution in New York.

<https://extension.entm.purdue.edu/EAB/PDF/PotentialSideEffectsofEABInsecticidesFAQ.pdf> Excellent article on the potential side effects of insecticide use to control EAB.

[http://www.emeraldashborer.info/documents/Multistate\\_EAB\\_Insecticide\\_Fact\\_Sheet.pdf](http://www.emeraldashborer.info/documents/Multistate_EAB_Insecticide_Fact_Sheet.pdf) This is THE reference for insecticide treatment of EAB and was just revised with all the latest data.

*Mark Whitmore is a forest entomologist in the Cornell University Department of Natural Resources and the chair of the NY Forest Health Advisory Council.*

## Ask a Professional (continued)



*Figure 5. Good roads are an asset. Bad roads are a headache. Work with professionals to install roads that allow for ease of access in as many seasons as possible. Roads are an investment that pay long-term dividends.*

is done in one stand, or section of your woods that is distinct from other sections of your woods; the stand is analogous to a farmer's field. Sugarbush stand criteria presented here are based on a fact sheet called "Assessing the commercial potential of a site for maple sap collection." This is available in the "downloadable publications" section on [www.CornellMaple.com](http://www.CornellMaple.com). While intended to inform potentially commercial producers, the nine assessment criteria will help producers of any scale.

The number of taps per acre will influence efficiency, and thus cost of collecting sap. The easiest way to estimate the number of taps per acre is to use a point sample with an angle gauge (Figure 4). Using the angle gauge, as described in the assessment guide, provides the owner with a rigorous method to know how many 10 inch diameter (the minimum tapping size) and larger maple trees exist. The owner can keep track of red and sugar maple, both of which can produce delicious syrup. In areas with few maples, it may be possible to thin the

woods and accelerate the growth of the smaller maples so that more will reach the minimum diameter.

Soils are important as they influence the growth of trees, the types of trees, and the ability of the trees to respond to stressors. Sugar maple grows best on soils that are fertile, moist and well-drained. Red maple has a broader range of acceptable soils. Owners can use the USDA NRCS web soil survey to learn about their soils. A fact sheet about woodland soils is available at [www.ForestConnect.info](http://www.ForestConnect.info) via the link to popular publications. Unfortunately, if the soils aren't good for maples, there are few options for remediation. Don't try to force a maple to grow on a soil where it doesn't belong.

The health and quality of trees is likely a combination of soils and past activities in your woods. Tree crowns should be evaluated to ensure there are fine branches and that the upper branches are thriving. Stems should be free of significant defect that would compromise their structural integrity and lead to premature stem breakage. Damage to the root flare or root zone could indicate root decay, greater sensitivity to drought, and lowered resilience to defoliation. A forester can advise an owner on management practices that will enhance the vigor of trees in their woods.

The location of the production woods relative to the collection site impacts the efficiency of moving sap. Eventually the sap must be transported or moved from the sugarbush to a collection point. The ideal condition is the sugarbush located immediately uphill from the collection tank, and next to the sugarhouse where the sap is processed. If the sugarbush is remote from the collection site, the sap must be moved through tubing or in a tank on wheels. Poor access can be improved by building a new road to the sugarbush or installing an effective tubing system to move large quantities of sap.



*Figure 6. Maple trees need sunlight to make sugar, and for sufficient growth to remain vigorous. Closed canopies, as shown, result in competition among trees for light and reduced growth for all trees.*



Figure 7. Maple products can bring high values. The value-added products can sell for 3 to 8 times the equivalent value of syrup. Participants at Cornell's Maple Camp learn how to make maple candy.

The presence of roads and topographic features influences the ease of tubing installation, work during sap season, and work during the off season (Figure 5). The owner/producer will spend considerable time in the sugarbush during the season, and in the off-season. Road access improves efficiency, simplifies the transport of tools and supplies, and increases the likelihood that the owner will monitor the condition of the sugarbush and the operation of the tubing system. Poor trails and roads can be resolved, perhaps, with a forest harvest that plans for a road and trail network that considers future maple sap collection.

The presence of electricity will determine the whether you can easily run a vacuum pump, need to add an electricity source or will use buckets. The value of electricity is the potential to use an artificial vacuum system. Vacuum systems increase sap yield by about 5% for each inch of vacuum (measured as inches of Hg). Thus, a well-designed and maintained system with vacuum operating at 20 inches of Hg can expect to double the yield of sap compared to a conventional system,

and with no health consequence to the tree. Without electricity, the owner could use and maintain a generator. In a remote sugarbush without electricity the owner can use tubing with a gravity flow, or buckets.

The topography of the area, particularly the steepness and the direction of slope, impacts the ease of tubing installation, if sap runs to or away from collection, and the potential for natural vacuum. Sap runs downhill, but steep hills are only fun in one direction. Tubing systems operate best when the tubing is tight, straight and downhill. Gentle slopes of 3 to 15% slopes are comfortable to work on with tubing, but more challenging with buckets. Recent technology has emphasized the use of smaller 3/16th inch diameter tubing (traditional tubing is 5/16th inch diameter). However, research at Cornell's Arnot Forest and in Vermont is finding some problems related to plugging of the smaller diameter. When the 3/16th inch tubing works, it can create a natural vacuum and save the expense of electricity and an artificial vacuum pump.

Canopy closure and competition

among trees for light will influence tree growth rates, taphole closure, future sugar production, and tree vigor (Figure 6). At the core of maple production is realizing that the tree is the factory. The tree uses and requires sunlight to photosynthesize and create sugar that is in the sap. When trees compete for sunlight they are less efficient at making sugar. A forester can assess the amount of competition among trees for sunlight, and write a prescription for thinning to increase the growth, and thus vigor, of the maple trees.

Interfering plants, native and non-native, can become sufficiently dense so as to complicate your work in the woods and the collection of sap. A variety of native and non-native plants can become sufficiently abundant as to make access into the woods difficult or restrict the regeneration of desired tree species. The solution to managing interfering plants depends on the problem plant and the objectives of the owner. Several webinars on this subject are archived at [www.youtube.com/ForestConnect](http://www.youtube.com/ForestConnect)

Maple production requires a commitment of space, and perhaps time if you're the producer, but the payoff can be rewarding (Figure 7). The process connects you to the land and can bind with that connection across generations. Enter the process with understanding, realism, and the spirit of America's oldest agricultural venture. 🌲

*The column is coordinated by Peter Smalldige, NYS Extension Forester and Director, Arnot Teaching and Research Forest, Department of Natural Resources, Cornell University Cooperative Extension, Ithaca, NY 14853. Contact Peter at [pjs23@cornell.edu](mailto:pjs23@cornell.edu), or (607) 592 - 3640. Visit his website [www.ForestConnect.info](http://www.ForestConnect.info), and webinar archives at [www.youtube.com/ForestConnect](http://www.youtube.com/ForestConnect) Support for ForestConnect is provided by the Cornell University College of Agriculture and Life Sciences and USDA NIFA.*

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# Member Profile:

## *Mike and Marilyn Arman*

DORIAN HYLAND

In 1990, Mike and Marilyn Arman and two friends bought 48 acres in Prattsburgh because they were attracted to the immense views from the top of the hill, the beauty of the land, the lure of the forests offering great hunting opportunities with their abundant wildlife, and the perfect spot for a seasonal cabin. They built the seasonal cabin and enjoyed their piece of paradise, but after 19 years only Mike and Marilyn were still interested in part-time living there and they bought out the other owners.

These days they spend more than half the year, from March to November, in the house they both built on the highest point on the property. It sits on about a one acre site, and opens to a 180 degree view looking east towards

Penn Yan and Hammondsport. By day they ride around on their UTV and at night they sit on their deck enjoying the unbelievably beautiful night sky. Surrounding their property are 40 forested acres of former farmland, and some orchards. The land consists of 30 acres of red oak, red maple, sugar maple, white ash, beech, and scattered white pines. Beech brush is becoming established as the understory and ten acres consist of mostly white pine, red maple, aspen, and white ash. Invasive species, such as multiflora rose, honeysuckle, and autumn olive grow along the periphery. Wild apple, grey dogwood, white ash, and aspen make up the remaining seven acres. Throughout the land they maintain trails for recreational use and for



*Marilyn Arman awaits a favorable change in the weather so she and husband Mike can settle into their summer home atop their woodland hill in Prattsburgh.*

forestry pursuits, with a generally flat to gentle topography allowing good drainage.

The Arman's met at Alfred State where they both attended college. Later, Mike went to the Rochester Institute of Technology then began working for Xerox in sales, while Marilyn worked for Kodak. They both were born in upstate NY; she in Elmira, spending most of her childhood on the family farm in Potter, and he was born in Horseheads. Mike retired from Xerox three years ago after a 38 year career in sales. He and Marilyn restored an old farmhouse 50 miles north of their woods on ten acres in Mendon, NY, with Marilyn taking responsibility for much of the care and repair as Mike was often on the road for work. At home in Mendon, Mike volunteers for the Fire District and for the non-profit Equi Center, a 200 acre horse ranch nearby that provides therapeutic horseback riding for people with disabilities, veterans, and at risk youth. Add to that the care and enrichment of 48 acres in Prattsburgh in Steuben County and he is one busy retiree.



*The house helps integrate all the activities and needs for owners and property. A place to stay while working, relaxing, and enjoying the fruits of labors, and space to strategize for the projects yet to be accomplished.*

*continued on page 22*



*The views from the top of the Prattsburgh land may be 180 degrees wide but go on forever. The diversity of the woods is reflected in the variety of fall colors.*

His favorite place is of course the woods. Mike is an avid outdoorsman who spends as much time as possible in the woods. He enjoys bird hunting with his fifth Brittany spaniel, and fishing for smallmouth bass. Knowing how prolific white-tailed deer are, he not

only hunts himself but allows neighbors to post stands and hunt deer. Mike and Marilyn also generously allowed a few friends to harvest deer.

Their multi-level goal in management is to provide multiple benefits including improving wildlife, timber, recreation,



*Winning a chain saw: what could be better? Using it (of course with PPE - personal protective equipment)!*

and aesthetics. Last year they decided to add a pond which they hope will serve as a magnet for wildlife by offering a consistent source of water, as well as providing a quiet place to swim and fish.

Since the original purchase in 1990, the land was logged once, about fifteen years ago. Although they were happy with the job, after their recent training, they contracted with a forester to manage future logging. In 2018, during a timber stand improvement project managed by Corey Figueiredo of Future Forest Consulting, they worked on the reduction of white ash. The proceeds from that project were spent to create the one-half acre spring fed pond with the primary purpose of attracting wildlife. Their latest on-going project is cutting up the slash for firewood, and creating brush piles for wildlife. This includes installing nest boxes, particularly around the pond, cutting down aspen to improve conditions for grouse, and reducing the beech infected with beech bark disease and treating the stumps with herbicide.

Another large project underway is releasing the apple trees that are part of the old farm land that had been an orchard. Although labor intensive, pruning dead and diseased wood can restore some life and productivity to the trees, and potentially provide early succession habitat for wildlife.

The biggest change in the woods, since they bought the land, is the result of the emerald ash borer (EAB). “The EAB didn’t show up in my forest until the summer of 2016 and in just a few years it has devastated the ash. I would estimate that around 10% of the hardwoods on the property are ash,” Mike said.

The biggest change in managing the property came after Mike retired. The challenge “used to be time, but fortunately that changed to some extent when I retired. Probably the other challenge was simply lack of knowledge, but that also changed with



*The lovely new 1/2 acre pond provides a water source for wildlife and a swimming hole for Mike's Brittany spaniel. The pond also offers a source of water to the local wildlife.*

my introduction to NYFOA, and the access to resources that I now have. I have always appreciated my property, but now I believe I am a better steward for the property and feel confident that I will leave it better than it was when I purchased it.”

What changed their focus in the care of their land, and deepened their understanding of their woods was meeting Charlie and Sarah Stackhouse who introduced them to NYFOA. This introduction prompted their transition from forest owners to forest



*The cabin the friends built on the hilltop offers views morning, noon and night. It's great to be close to your woods.*

managers. Before that, as Mike says, like so many others before him, “I didn't know what I didn't know.” He feels NYFOA has been an eye opener because it connected him with other landowners, and introduced access to fantastic resources. The Stackhouses recommended he talk to Greg Muller, the NYSDEC forester for Steuben County. After walking the property and listening to Mike's objectives for the land, Mr. Muller provided the Armans with a forest stewardship plan in September 2016. All of Mike's actions over the past three years are the result of that plan. An extra blessing for these plans is great neighbors, especially an Amish community who have helped clean up the slash and remove additional ash trees. To get around and complete all these plans he uses a Polaris Ranger UTV. He is also a grateful owner of a Makita chainsaw which he won at the 2017 annual NYFOA meeting in Syracuse.

He suggests that woodland owners determine what they would like to do with their property and then engage with experts. Whether they are NYSDEC foresters, Master Forest Owner volunteers, and/or other landowners. “There is a wealth of people and resources available through membership in NYFOA. The organization has connected me with the resources to become a better steward of my property, and has definitely connected me with the right people who have helped accelerate my plans. It is great to be around people who care as much about their property as I do,” stated Mike.

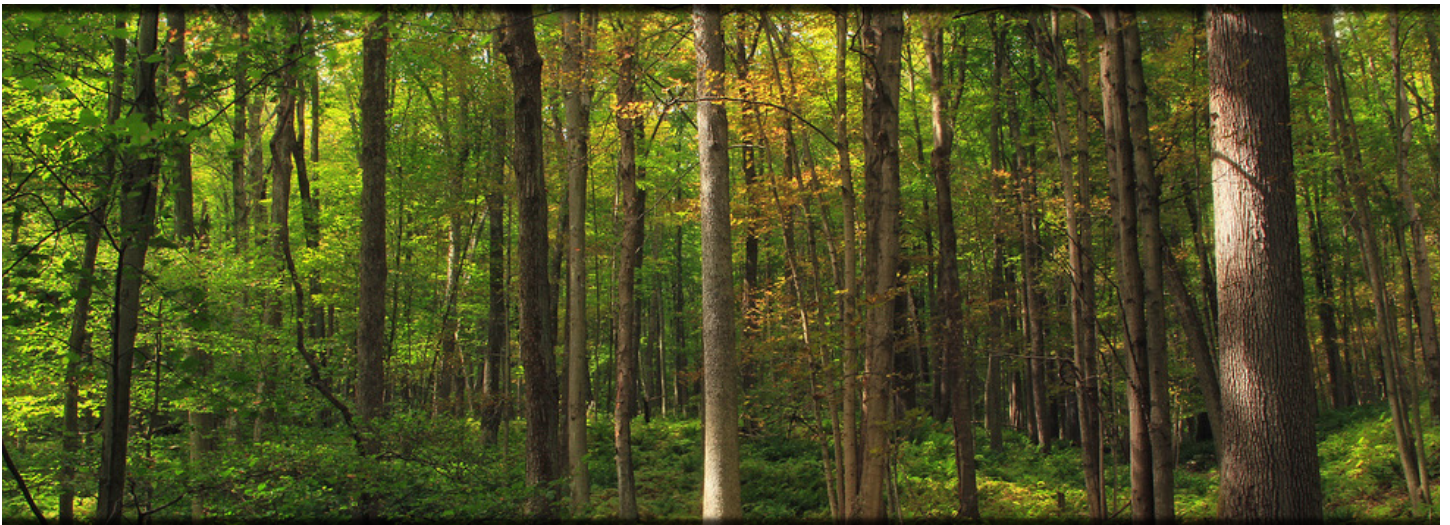
In closing, Mike sounds as contented as anyone could hope to be when he describes what he enjoys most about being a forest owner: “The satisfaction of being a short-term owner and steward of such a fantastic resource, and knowing that I will be leaving it in better shape for the future. Your forest is the gift that keeps on giving.” 🍂

*Dorian Hyland, is a writer for The New York Forest Owner landowner profile.*



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