

# The New York Forest Owner

A PUBLICATION OF THE NEW YORK FOREST OWNERS ASSOCIATION

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

November/December 2016



*Member Profile: Sean R. Carter*

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# In This Issue . . .

**FROM THE PRESIDENT**  
CHARLES STACKHOUSE ..... 3

**TIMBER TIME**  
OSCAR WILLIMAS ..... 4

**NYFOA SILENT AUCTION**  
DEAN FAKLIS ..... 5

**ASK A PROFESSIONAL**  
PETER SMALLIDGE ..... 6

**WILD THINGS IN YOUR WOODLANDS**  
KRISIT SULLIVAN ..... 8

**RECONCILING WITH RED MAPLE**  
JEFF JOSEPH ..... 10

**WOODLAND HEALTH: OAK WILT IN NEW YORK**  
MARK WHITMORE ..... 12

**BOOK REVIEW**  
CHARLES STACKHOUSE ..... 14

**MEMBER PROFILE – SEAN CARTER**  
BRIANA BINKERD-DALE ..... 21

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Please address all membership fees and change of address requests to PO Box 541, Lima, NY 14485. 1-800-836-3566. Cost of family membership/subscription is \$45.

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

**COVER:** Sean Carter's friend and mentor George Nolan planting elderberry in a riparian zone. For member profile see page 21. All photos courtesy of Sean Carter.

# From The President

As autumn begins and deer hunting season is not far off, it is a good time for both hunting and non-hunting landowners to ponder whether there are too many, not enough or just the right number of deer living on your woodland property. The New York State Department of Environmental Conservation (DEC) uses a number of methods to monitor the deer herd across the state. They divide New York into 92 Wildlife Management Units (WMU) in order to manage for local conditions. These WMU's can include several whole townships and might not tell the story of what is happening on your property.



Extension in partnership with DEC and SUNY College of Environmental Science and Forestry has developed AVID – Assessing Vegetation Impacts from Deer. This is a field method of collecting data and submitting them to a central database to track tree, shrub, and wildflower response to deer browsing. In addition to documenting changes in forest plants on their land, participants learn to identify important spring wildflowers and tree species. It is not very difficult; I participated in setting out sample plots at Cornell's Arnot Forest and we will be setting out plots on our land this coming spring. Another method is to do a browse impact survey by walking along evenly spaced lines through your land and stopping at intervals to evaluate browse pressure on select deer forage plants. This can tell you if forage for deer is in short supply relative to deer density. The last method I will mention is to conduct a spring pellet count. The QDMA details the method on their website. They point out that that in addition to telling you how many deer have been living on your property, you get exercise, might find shed antlers, and can see what changes occurred to the habitat on your property during the winter. Perhaps you can convince your whole family that finding and counting deer droppings, or at least wildflowers, can be a fun thing.

This holiday season, consider giving gift memberships to NYFOA to friends, family or neighbors; they and their woods might greatly benefit. It is a gift that can be enjoyed throughout the year.

–Charles Stackhouse  
NYFOA President

There are a number of tools available to landowners to help them assess deer density. October is a good time to conduct a trail camera survey. The Quality Deer Management Association (QDMA) says “A trail camera survey is the most powerful herd monitoring tool you can use that doesn't require the assistance of a professional wildlife biologist.” It involves operation of one trail or game camera per 100 acres for a 14 day period. The QDMA has instructions about the methods on their website ([www.qdma.com](http://www.qdma.com)) and also publishes a book on the methods that I am currently reading. Of course deer cameras also capture pictures of all kinds of wildlife, much to our enjoyment.

Several survey methods must wait for spring. Cornell Cooperative

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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# Timber Time: *A kid's perspective of the Northeast Timber Growing Contest*

My name is Oscar Williams. I am 11 years old. I live in Waverly, Tioga County, New York. The way I got involved in the contest was by going to the Northeast Timber Growing Contest Workshop last March and learning the rules and about all that good stuff. I helped measure three timber plots on my family's property. During the contest I have learned a lot. I can now identify the types of trees much better than I used to be able to. I can also identify if the tree is any good for lumber or not. I have learned about how to estimate the volume of a tree with a cruising stick, and learned how to measure trees with a diameter tape. I also learned about board feet and basal area.

Since I'm so young, I have the chance to see the trees now and will have the chance to see the same trees in 30 years. Now that's cool because my kids will get to see those same trees and we will get to see the difference in growth.

I would like kids my age or all ages to go and take care of our earth and forests. Trees provide the air we breathe and we only have one earth.

*Oscar Williams is the grandson of NYFOA member David Williams.*



*Oscar with Peter Smallidge, who is explaining how to release crop trees by removing less valuable cull trees.*

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# NYFOA's Auction Team Announces Winners!

DEAN FAKLIS

NYFOA's membership committee has rekindled the tradition of having a silent auction coincident with our annual meeting in the springtime. The auction's beneficiaries for 2017 have been selected from several worthy organizations that are passionate about forestry and NY's young people. These beneficiaries include NY's 4-H forestry invitational team and NYFOA's woodlands mini grants!

The National 4-H Forestry Invitational is the national championship of 4-H forestry, which brings together youth teams from around the country. New York's team has performed well consistently and it touches every corner of our state. Their proposal was outstanding and it outlined several key areas where financial support from NYFOA would make certain critical improvements. For more information on the Invitational, please see: <http://www.4hforestryinvitational.org/>.

NYFOA woodlands mini grants offer up to \$100 each to successful educator-applicants that bring forestry into the classroom. The money helps offset the cost of forestry-related teaching materials like compasses, diameter tapes, seedlings and tree tubes. While \$100 each is not much, it can make all the difference in whether some children learn and care about NY's woodlands today and in the future. For more information on the mini grants, please see [NYFOA.org](http://NYFOA.org) and follow the auction's links. Please share the mini grant information with your child's teachers and encourage them to apply.

We're excited about these two efforts and we'd like to help fund them strongly. The NYFOA Auction is the perfect vehicle to help raise funds and to share some fun together! We're hoping to raise \$5,000 with your help and we'll keep you informed every step of the way. Will you help achieve this goal?

## How does the Auction work?

Kind and generous members donate items and services and kindred folks



buy them. All of the proceeds go to the auction's beneficiaries. There is no "auctioneer." The donations are made available for inspection both in person at the annual meeting and online for those not in attendance. Prospective buyers place bids either online or in person by writing on a piece of paper near the item. The highest bidder is the winner! Payments go directly to NYFOA.

## What can I do to help?

That's an easy one! You can make a donation and make a purchase. Some donors will choose to donate cash to help the beneficiaries. Donation forms are available at [NYFOA.org](http://NYFOA.org) and via email to [auction@nyfoa.org](mailto:auction@nyfoa.org).

## What kinds of items and services are welcome?

It's important to have a nice selection of donations across a range of prices. Some members might like to spend \$25 and some might like to spend \$1,000 to help the youth forestry programs. Here are some examples, but please don't let this be limiting:

1. Members offer handcrafted items from their studio or workshop. Wood, glass, metal, paintings, sculptures, etc. \$25-\$500 value.

2. Member donates portable sawmilling services. Perhaps another member will donate time to cut and gather logs from your woodlot for the sawyer. The range of possibilities for service offerings is endless. What are your specialties?

3. Member offers their timeshare, cottage or condominium to another member for a vacation stay. \$200-\$2,000.

4. Member offers to give a timberframing workshop. Participants learn history, materials, tools, techniques. ~20 people, \$50 each, \$1,000 value. What kind of fun workshop could you provide?

## When would you like to have the donations in hand?

Sooner rather than later, since we're a small team. The online portion of the auction will likely start in February and we'll want to have all the items before then so we can upload photos where applicable. We'll collect donations as soon as you can provide them. In fact, we already have a bunch, including cash donations.

## Is my donation tax deductible?

Yes. NYFOA is recognized by the IRS as a 501c3 non-profit organization. Limitations apply so please check with your accountant beforehand.

## I really like the idea and have more questions, who can help me?

Me! [dfaklis@frontiernet.net](mailto:dfaklis@frontiernet.net), or feel free to use the auction email address: [auction@nyfoa.org](mailto:auction@nyfoa.org).

## I have a few hours to spare over the winter, does the auction team need any help?

Silent auctions are FUN and they really bring the membership together to help advance the mission. The auction team needs a bit of help before and after the auction and at the auction to help the bidders. If you can help, please let us know. The "jobs" are easy and you'll likely meet some new friends.

Please join us by making a donation ASAP and by making a purchase. If you'd like to make a donation but are not sure what to give, send me a note including your price range. I have some ready-to-go ideas! Thanks. 🌲

# 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)*

## Maintaining a Healthy Sugarbush

**Question:** My son, grandson and I represent three generations of maple producers on our farm. What can we do in the woods to make sure we have healthy trees for the future? (Robert L., NAC)

**Answer:** Your attention to sugarbush management will yield favorable results in the short-term and long-term health, productivity and operations of your woods. Maple producers benefit from spending time, and maybe some money, ensuring they have a healthy and productive sugarbush.

A sugarbush is a special type of woodland. Woodlands include a complex mixture of natural processes and attributes such as soil type, elevation, tree species, types of wildlife, history of use, tree age and more. Foresters can help maple producers gain an in-depth understanding of these factors to achieve a healthy and productive sugarbush, but there are several steps a maple producer can take on their own.

Three principles should guide the way a maple producer looks at a sugarbush. These principles apply to all woodlands. First, managing the sugarbush to produce a specific product, in this case sap, is really about managing which plants receive sunlight. Sunlight feeds the leaves which make sugar, which of course is

needed for high quality sap. Second, trees are biological organisms, similar in some respects to a tomato plant, a cow, or a human being. Biological organisms are born, grow and eventually senesce. They also respond to stressors in their environment, and their vigor determines how well they respond. Third, as trees get larger they require more space. Because trees can't move as they get crowded, some trees will die as the sugarbush matures.

With these principles in mind, a reasonable goal for a sugarbush is to make sure that trees of good vigor and potential longevity have adequate sunlight, stress events are minimized, and the effects of crowding are controlled by the owner who selects which trees remain. Following are a few actions that maple producers can take to help keep their sugarbush healthy and productive.

1. **Monitor crown health.** The leafy part of the tree, the crown, is perhaps the most important part of the tree to monitor. Be alert to evidence of unhealthy crowns. Symptoms of poor crown health may include dead branches in the upper part of the crown, poor leaf color during the growing season, unusually small leaves, or a transparent crown (Figure 1). There will always be a couple trees in a sugarbush with poor crown health, but if several trees show these symptoms a problem exists. A symptom tells you a problem exists, but it doesn't usually identify the problem. Crown health may decline as a result of root problems, such as compaction from machinery. Repeated injury to the crown can also reduce health; for example when defoliation coincides with drought. Crown problems often result in less sugar production and lower yields the following



*Figure 1. The crown of this sugar maple showed high levels of crown dieback. The soils were a bit thin for good sugar maple growth. Dieback occurred after a heavy thinning that was followed by a late May frost and then defoliation by gypsy moth and forest tent caterpillar. Accumulated stresses are difficult for a tree to endure.*



Figure 2. The tree in the center of the picture is shorter than the tree to the left, and has a smaller crown. The tree on the left is winning in the contest for light, but the shorter tree is still having a negative impact.

sap season. In extreme cases, minimize or avoid tapping to allow trees to recover a healthy crown. Unfortunately, the causes of unhealthy crowns often can be difficult to change. Some of the following actions also help maintain good crown health.

2. *Assess competition for light among trees.* Trees need light to grow. Although sugar maple is tolerant of shade, it doesn't



Figure 3. Ferns and beech are native species, but can form dense thickets that complicate production for maple producers. The canopy may be vigorous and healthy maple, but the understory portends future problems.

thrive in shade. Maple producers need their trees to thrive, not just survive. The appropriate stocking, that is the number of trees of given size per acre, is a numeric index of competition for resources, specifically light. There are also visual indications of too much competition for light. First, if the upper canopy, collectively the crowns of the tall trees, is closed and doesn't allow sunlight through there may be too much competition for light. If the canopy is closed and some trees have rounded crowns yet other trees are flattened on two or more sides, there is likely too much competition (Figure 2). If the maple trees produce seeds, but there are no seedlings, there is either too much shade or too many deer. Before taking action, visual cues to competition should be assessed by a forester who will measure stocking. In many cases the state forestry agency can provide a public forester to do the assessment. These foresters are pre-paid... your tax dollars at work. If competition is high, thinning around the best trees will ensure they have enough light to continue to thrive. Look for resources on Crop Tree Management to guide the selection of trees to cut and those to leave. Woodlot and sugarbush thinning webinars are archived at [www.youtube.com/ForestConnect](http://www.youtube.com/ForestConnect)

3. *Look for interfering plants.* Interfering plants are either native or non-native (AKA "invasive"), and interfere with something the owner wants

to accomplish. Examples of interfering plants include multiflora rose, ferns, beech, striped maple, bush honeysuckle, and many more (Figure 3). For maple producers, interfering plants may complicate access for tubing or buckets. Interfering plants may also impede efforts to establish young desirable maple seedlings. In some areas, deer pressure is high and they browse desired plants. This browsing gives a growth advantage to the interfering plants that deer don't browse. Strategies and techniques to control interfering plants depends on the problem plant, its abundance, how thoroughly the maple producer wants to control the plant, and if the producer will use herbicides or organic strategies. The author's website ([www.forestconnect.org](http://www.forestconnect.org)) includes numerous resources to help control interfering plants.

4. *Monitor tree diameter growth.* Tree diameter growth is critical to maple syrup producers. Diameter growth is an index of crown health. Diameter growth also helps heal tap holes, add new wood for future tapping, and as a reservoir for sap. A tree may produce the same amount of wood each year, but the thickness, known as the diameter increment, will decrease because the wood is spread around a

*continued on page 16*



Figure 4. Repeated accurate diameter measurement of this white pine is simplified by an aluminum nail at approximately 12 inches above ground and a 3.5 ft stick.

# Wild Things in Your Woodlands

KRISTI SULLIVAN

## PREDATORS IN NEW YORK STATE

From black bears to bobcats, fishers to forest raptors, predators play important roles in our woodlands. Typically large and charismatic, people enjoy the opportunity to observe these animals. However, because of their size and prey requirements predators often require large home ranges and have low population densities. With few individuals spread across large areas, chances to view these creatures are often limited and catching a glimpse of these animals may be a rare, but exciting occurrence. Landowners can take a number of steps to enhance habitat for large predators, which in turn play a valuable role in our forest ecosystems.

Because of their home range and prey requirements, predatory carnivores (and omnivores) can be good indicators of ecosystem health. Conserving and managing forest lands in consideration of their needs – adequate space and habitat – can result in the conservation of a whole range of species and the ecosystems they inhabit. In some situations, predators help enhance the diversity of plants growing in the ecosystem by limiting overgrazing by herbivorous prey. They can also serve as indicators of toxins in the environment. Smaller prey animals accumulate low levels of chemicals in their bodies. When long-lived predators feed on their prey, the toxins from the prey accumulate to higher levels in the tissues of the predator. In the past, certain species of raptors in particular have been detrimentally affected by chemicals in the environment and have served as “canaries in the coal mine.”

Recently, the role of top predators in controlling “mesopredators” (middle

level predators) has received a great deal of attention. Scientists are finding that when top predators are removed from an environment, mesopredators (e.g. feral cats, raccoons, foxes), which tend to be more generalist and opportunistic species with a high reproductive rate relative to larger predators, can quickly increase in abundance and have a strong, negative effect on prey species, such as songbirds. Top predators may reduce mesopredator populations directly by killing them, or indirectly by instilling fear which causes them to reduce or change their times of activity, and can reduce their ability to find adequate food. Fewer feeding opportunities in turn lead to lower rates of reproduction and survival and can suppress population levels.

Some of our most intriguing predators in New York State include the black bear, coyote, bobcat, fisher, northern goshawk, great-horned owl, long-eared owl, river otter, and even the snapping turtle. Predators typically share a number of characteristics which make them particularly vulnerable to human influences, including the need for large areas of suitable habitat, low population densities, low reproductive rates, and vulnerability to pollution. Not surprisingly, several predator species in NY state are either currently considered “species of greatest conservation need,” or their populations were substantially reduced or even eliminated from the state at one time. The river otter, though stable now, disappeared from western NY in the early 1900s as a result of unregulated harvest, habitat destruction, and water pollution.

Snapping turtles, which feed heavily on aquatic organisms and are known to accumulate chemicals in their bodies, are considered species of greatest conservation need today. The northern goshawk is a species of special concern and a species of greatest conservation need because it is an uncommon year-round resident dependent on forest habitat, and its numbers have been declining over the last several decades. The long-eared owl is another raptor listed as a species of greatest conservation need and considered vulnerable. This rare and secretive owl is difficult to locate and monitor and, as a result, there is a lot of uncertainty about its population size and trends in the state. Fishers experienced a severe decline in NY during the late 1800s and early 1900s due to over-exploitation and loss of forested habitat. However, today their populations have rebounded and they can be found in forests across much of the state.

The role of predators is an interesting and complex one. Just as interesting and complex, however, are their unique characteristics, their popular allure, and their often extensive habitat requirements. Many of the top predators in NY state may benefit from habitat conservation, management, and enhancement on private forestlands (see Table 1 on the following page). In return, landowners can increase their opportunities for viewing these charismatic species. 🐾

*Kristi Sullivan is Co-Director of the Conservation Education and Research Program and Director of the New York State Master Naturalist Program at Cornell. More information on managing habitat for wildlife can be found at [arnotconservation.info](http://arnotconservation.info)*



**Table 1. New York predators, their preferred habitat and home range size.**

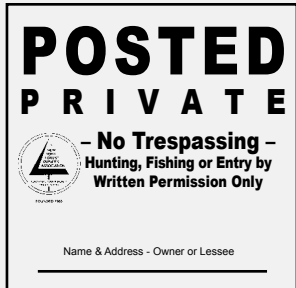
Species	Habitat	Home Range Size	Habitat Maintenance and Management
Black bear	Contiguous forests, often mixed with bogs, swamps, agricultural areas	24 -120 square miles	Encourage or plant mast-producing trees and shrubs; retain trees with large cavities; leave tree tops following a timber harvest.
Bobcat	Extensive forests, wooded swamps, rocky outcrops, and occasionally agricultural areas	12-136 square miles	Create young or early-successional habitat areas by cutting; build brush piles; leave tree tops following a timber harvest; leave large logs on forest floor to attract prey, and provide den sites.
Coyote	Overgrown fields, brushy thickets, and woodlands	8-20 square miles	Leave large logs on forest floor for feeding and den sites; build brush piles to attract potential prey.
Fisher	Mature evergreen or mixed evergreen and deciduous forest	6-12 square miles	Maintain or encourage evergreen trees as a component of the forest; retain or create large trees with cavities; leave large logs on forest floor or fell several large trees to create denning sites and thermal cover.
Great-horned Owl	Open and second-growth woodlands, often mixed with other land uses	3-4 square miles	Maintain large live trees with cavities or standing dead trees; favor conifers and oaks for roost sites.
Long-eared owl	Dense evergreen or mixed forest adjacent to openings	0.25 – 8 square miles	Plant or maintain evergreen stands.
Northern Goshawk	Large tracts of mature forest	3-24 square miles	Maintain stands of mature forest with closed canopy within a wider forest mosaic; retain large deciduous trees for nesting; retain large amounts of woody material on the forest floor.
River Otter	In and along streams, rivers, beaver dams and associated riparian habitat	3-10 miles	Maintain undisturbed aquatic systems and adjacent riparian habitats.
Snapping Turtle	Ponds, wetlands, and adjacent upland habitat	0.5 mile or more	Reduce pollutants; maintain aquatic habitats and nearby upland openings for nesting sites.

## WANTED

Have you applied for EQIP cost-sharing programs through the Natural Resources Conservation Service (NRCS) in the last three years? We would be interested in hearing about your experience with EQIP, especially if your application included practices to support forest regeneration, including herbicidal control of invasive vegetation and/or deer exclosure fencing. Please call or Email Jerry Michael, (607) 648-2941, GoTreeGo@stny.rr.com

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# Reconciling with Red Maple

JEFF JOSEPH

Each year, I devote a week to thinning my woodlot—cutting mostly firewood, along with some shiitake bolts and the occasional sawlog. Real poor quality stuff just stays where it falls to feed the soil and provide habitat. While I very much enjoy the ‘work’ (felling trees is fun in my book), my favorite part of the process comes at the end, when I get the chance to walk around without a chainsaw, and unencumbered by safety gear, just looking around to assess the results of that year’s efforts.

Thirteen years ago when I started working on this piece of property, the stocking was so dense that I could barely catch a glimpse of the dominant crowns, as they were almost always obscured by the suppressed understory trees, which in my case were mostly diseased beech. After years of dogged thinning, what once seemed to be a beech forest punctuated by an occasional maple has now begun to feel like a maple-dominant forest with some patchy beech problems.

As I cut more each year, I also learned more about the timber market, and so was initially dismayed to discover that while sugar maple is scattered throughout my woodlot, it is by far outnumbered by its less well-regarded cousin, red maple, which is very well represented here, from seedlings all the way through large mature stems. Over the years I have also had the opportunity to meet many fellow woodlot owners, a number of whom have seemed almost embarrassed to admit that red was the predominant maple in their woodlots as well: “Yeah, well, you know, I’ve only got red maples....” seemed to be a common refrain expressed by many of my peers, while they all but hung their heads in shame.

I felt much the same way until I accepted the fact that it is likely the best thing I will have to work with in many of my stands, and that after beech (which I am working to eradicate) it will be one of the species most likely to regenerate successfully.



So having reconciled myself to the fact that my woodlot really seems to want to grow red maple, and having noticed that it seems to be very competitive in all types of environments, I became curious about why this might be so and decided to do some research about the history and status of *Acer rubrum* in New York state. The following is a synopsis of what I’ve learned, and how, despite its often maligned character, I’ve gained a new appreciation and respect for red maple.

First, some population statistics:

- Among trees 5” dbh and larger, red maple is the most numerous tree species in New York state;
- Among trees 15” dbh and larger, it is our second most numerous (trailing only white pine);
- It is our second most numerous sapling (1-4.9” dbh) after beech, and is the 4<sup>th</sup> most numerous seedling;
- Its dominance is near statewide, as it ranks first in six of the eight inventory units (is 2<sup>nd</sup> in Capitol district, and 5<sup>th</sup> in the Eastern Adirondack unit);
- Extending beyond New York, red maple is the most abundant and widespread tree of eastern North America, inhabiting nearly the entire landmass east of the Mississippi, and occurring in 54 distinct forest-cover types.

And a few key aspects of red maple ecology:

## The Good:

- high shade tolerance, though less than sugar maple/beech/hemlock; generally gives way to the more tolerant hardwoods after about 80 years;
- vigorous seeder: large seed crop almost every year; seed matures and drops April-July; can form near pure stands on old fields; seed is lightest in weight of all maples, and is dispersed by wind, so can travel far from parent trees; trees reach sexual maturity at young age (4-10 years);
- very fast growing, especially when young;
- responds well to thinning;
- lateral or taprooted—tolerant of dry/upland sites **and** wet/swampy/flooded soils;
- very vigorous stump sprouter; 2<sup>nd</sup> growth stands are often of sprout origin; responds quickly after disturbance;
- Is one of our only hardwoods immune to predation/defoliation from forest tent caterpillar;

## The Not So Good:

- minimal resistance to decay, often subject to butt rot and various cankers;
- sensitive to wounding, slow to callus/heal wounds;
- often of poor/defective growth form, especially on poor quality sites, or in multi-stemmed trees of sprout origin;
- thin bark offers little to no resistance to fire damage;
- buds and foliage are a preferred deer browse;
- softer/lighter/weaker wood than sugar maple;

While the above list is a mixed bag of good and bad, based upon the population numbers red maple is clearly a tree with a successful strategy for outcompeting most of its neighbors in our neck of the woods (so to speak). Perhaps surprisingly, this was not in any way a foregone development, as early survey records show that red maple was only a minor component of most of the precolonial forestland of New York and the northeast.

So why is it so successful now? The answers that I found can be divided into two basic categories: 1) attributes of the tree itself; and 2) the nature of how we have managed (or not managed) the forests around those trees.

With regards to the tree itself, the key to its success seems to be its amazing adaptability—red maple has been called a

“supergeneralist,” and has demonstrated the ability to grow on a wider range of soils (type/texture/moisture levels/pH) and elevation than perhaps any other tree species in North America. Whereas sugar maple will thrive and outcompete red on the best quality sites, and has higher tolerance so will outlive red in ‘climax’ type/uneven-aged stands, red maple is content to take advantage on the margins everywhere else, as it is found thriving on sites far too wet/dry/acid/infertile for sugar maple. Its nutrient demands are lower, it grows faster, matures sooner, has higher genetic diversity, and has roots that are adapted to the extremes of both dry upland and swampy (even periodically flooded) sites. Metaphorically speaking, red maple is blue collar, unassuming, and frugal in how it goes about its business while sugar maple is more akin to a demanding prima donna.

Another unique characteristic of red maple is its seed ‘phenology,’ or timing: it is our only upland hardwood that matures and drops its seed in the spring and early summer, which germinates immediately thereafter, a strategy usually only employed by riparian species. As most tree seeds drop later in the season and remain dormant until the following spring, this gives red maple seeds and seedlings a head start.

As far as what has happened around red maple that has led to its population explosion, the following have all played a role:

1) fire suppression—this is likely the biggest factor, as the bark of red maple has nearly no fire resistance, so the trees would have been killed off regularly and repeatedly by wildfires, which were a common natural occurrence as well as a deliberate management technique utilized by native peoples of the region prior to colonization; oaks would have thrived in this circumstance;

2) widespread disturbance in general—we’ve caused a crazy amount of forest disturbance in the past 250 years; left to themselves, more tolerant sugar maple and beech (and hemlock) will eventually succeed red maple in undisturbed forest stands;

3) high grading of more desirable trees—this is more of a personal observation, but it seems to me that in my woodlot, and in the hills around it, that there are lots of BIG red maple around that were passed by during earlier timber harvests—both due to

the low financial value of these trees at the time, and lower Btu value for its firewood compared to other readily available species; these ignored trees thereafter functioned as the dominant seed trees for the next generation of forest;

4) man-made exponential increase in the deer population—deer like to eat red maple seedlings, but not the seeds, and not near as much as they like to eat acorns, which has given red maple a distinct advantage on drier upland sites that would once have been oak-dominant; red maple is also a far more reliable and prolific seeder than are oaks;

5) importation of gypsy moth caterpillar—due to human ignorance; the gypsy moth caterpillar will eat red maple foliage, but it is a less preferred food than are oak leaves, again favoring red maple on upland sites;

In sum, short of some new insect or disease (you never know these days), it seems that the ecological stage has been set for red maple to remain a dominant species in many of our woodlands for some time to come.

So if you’re like me, and have lots of red maple around, don’t despair. While it may not be the best (or even all that good) in any one given category, it ranks pretty high in most all of them, which seems to be the secret to its success. It’s an ok firewood, and currently has an ok value on the timber market, true to its generally ok nature. **It** is reproducing like mad though, and will grow nearly anywhere, so next time you’re out wandering around your woodlot, take some time to get to know your red maples, as like it or not, they seem to be sticking around for the long haul, bearing many offspring, and humbly going about their business like the unpretentious, working class trees they are. 🌳

*Jeff Joseph is a woodworker who has happily worked with much red maple harvested from his woodlot.*

**Resources**

New York Forests 2012, U.S. Forest Service Resource Bulletin NRS-98, 2015. “The Red Maple Paradox,” Marc D. Abrams, *Bioscience*, May 1998, pp. 355-364.

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*Silvics of Forest Trees of the United States*, U.S. Forest Service Agricultural Handbook No.271, 1965.

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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

## OAK WILT IN NEW YORK

BY MARK WHITMORE

It was inevitable, but I was hoping that I would not need to be writing about new detections of oak wilt, *Ceratocystis fagacearum*, for at least a little while longer. Oak wilt is one of the most damaging fungal pathogens of oaks in North America. It was first described causing oak mortality in the midwest in 1944, and most researchers considered it to be a native pathogen. Those familiar with forest pathology know that there are many species of *Ceratocystis* causing a wide range of symptoms in many forest tree species but there had never been such an aggressive form detected in oaks. Now recent research indicates

that this might actually be an invasive species introduced in the early 1900's, but as yet nobody knows where it might have come from. Oak wilt has spread throughout the midwest from Minnesota to Texas and east through Pennsylvania yet was undetected in New York until 2008. Now, just recently there have been two new detections, one on Long Island in Islip and the other in Canandaigua. It is spreading in New York and we need to act fast to keep the threat to our valuable oak forests to a minimum. As with all invasives, early detection and rapid response are key to management success.



Figure 1. Bark crack through which insects gain access to the oak wilt fungal mat. Joseph O'Brien, USFS. Bugwood.org

Oak wilt infects all oak subgenera but the red and live oaks are the most heavily impacted because of the porosity of their wood. Although white oaks can become infected the fungus travels very slowly because tyloses (i.e., little plugs) in the xylem vessels reduce porosity. That is why white oak is the preferred wood in barrels used for aging wine and bourbon. White oaks can be infected for years with only smaller branches occasionally dying. Trees in the red oak subgenus (red, black, and pin oaks) on the other hand are highly susceptible and death is rapid. Initial infection of trees in northern areas is in spring and red oaks will begin showing symptoms by early to mid-June and be dead just a few weeks later in early July, hence one of its nicknames: the Fourth of July disease.

The first symptom is a change in leaf color with the green fading starting at the leaf edge, progressing to the base. The color will fade first to light green then brown, falling off the tree soon thereafter. The fungus continues to grow in the tree and the following spring will form a fruiting body on the sapwood surface of that will push the bark away from the wood, causing it to crack (Figure 1). If you peel away the bark you can see the dark mass of hyphae that bears spores, the spore mat, and thickened growth called pressure pads. The pressure pads are what causes the bark to crack, which is essential to the dispersal of the disease. The fungal mat produces a strong odor of ripening or fermenting fruit which attracts insects which will crawl through the bark crack, feed and mate on the delicious smelling fungus getting the fungal spores on their body and carry them to another tree. The most important are a few species of beetles in the family Nitidulidae, known as sap beetles that will feed on the oak wilt spore pad then visit a fresh wound on an oak, infecting it with the spores. Fresh wounds can be created during construction, pruning, and during wind storms. Pruning in areas




Figure 2. Oak wilt spore mat with pressure pads. Joseph O'Brien, USFS. Bugwood.org

near infected trees should therefore be limited to late summer and winter, when the beetles are not flying. More importantly, it is absolutely necessary that any infected tree be removed prior to the development of spore pads in spring. Infected wood can be properly treated by chipping, debarking, splitting then burning to kill the fungus before it can spread. The heat from careful composting will also destroy

the fungus. Infected wood should never be transported to uninfected areas.

There is one problem with tree removal and that is the fact that it will stimulate transmission to nearby susceptible trees through root grafts unless the roots are severed prior to tree removal. Red oaks root graft more readily than do white oaks and grafts between the two groups

are very rare. Soil types and host tree density will affect the rate of spread by root grafts. Oak wilt is more easily spread through root grafts than by beetles but is more localized as opposed to the relatively long distance dispersal by beetles which can fly surprisingly far. Proper treatment of an infection zone therefore requires three steps: 1) proper delimitation of the infected area; 2) trenching at least 54 inches deep around that area with heavy equipment to cut root grafts; and 3) destruction of the infected material.

So what is going on in New York? The first oak wilt infection was found in a small group of trees in an urban area near Schenectady. NYS DEC Forest Health was quick to act, trenching to break root grafts then removing and destroying the infected trees. Their suspicion was that the disease was brought in on firewood from out of state. It was a difficult process because the trees were large and valuable spread amongst a number of landowners in the urban landscape. Reassessment of the area for the next 6 years turned up no new infections then they found a new tree, a beautiful tree that they were going to remove but the landowner convinced them otherwise. Now the clock on the successful treatment of that infection has been reset. The latest news is of two new infections in fall 2016. At this time the infected areas have yet to be accurately delimited and the response formulated but these are highest priority for the NYS DEC Forest Health crews. Early detection is key because if the infection zone is small they will be much easier to treat. One difference with the Islip infection is the influence of Long Island's sandy soils. Pin oak growing in sandy soils send out roots much further than red oak in upstate soils so the treatment area will be much larger and more complicated in an urban environment. Don't be shy to report this devastating pathogen! Call the NYS DEC hotline at 866-640-0652. 

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

# BOOK REVIEW

***Backyard Woodland: How to Maintain and Sustain Your Trees, Water, and Wildlife*** by Josh VanBrakle, New York, The Countryman Press, 2016, 239 pages, \$21.95, ISBN 978-1-58157-509-5h

The sale is closed and you are a new forest landowner. Now what? Not all forest landowners have the same goals for their land, but nearly all want to do right by their land. In the opening chapter the author asks “But what does it mean to ‘do right by your land?’ Does that mean leaving it alone, letting nature take its course? Are there ways you can use your land without harming it? And, most exciting, are there opportunities for you to make your land even better? The purpose of this book is to answer these questions.”

The author does answer these questions in a clear and non-technical manner. Small or large woodland owner, new owner or long time owner, this book can motivate you to do more with your land and get more from your land.

In the opening chapter, we learn how important private forest ownership is in the United States. More than half of the forests in our country are privately owned and 10 million family owners control 260 million acres of forests. Ninety two percent of U.S. lumber comes from trees on private land, 88% of rain and snow in the U.S. falls on private land and 85% of U.S. wildlife finds habitat on private land. No wonder the

title of the book’s first chapter is “Private Landowners Rule!”

The second chapter is entitled “Where Do I Start” and I encourage every new forest landowner to read it. We learn why doing nothing to your land and letting nature run its course is not a good idea. Contemporary forests often face threats not only from invasive plant and insect pests and too many deer, but also from man made threats like development pressure, property taxes and disinterest from heirs. A hands off approach to our woods can insure their destruction.

This chapter also details 6 simple rules that should guide us in how we use and relate to our lands, no matter if we use our land for timber income, forest farming, or recreation. These rules are 1) protect the soil, 2) protect the water, 3) provide diversity, 4) leave something for the future, 5) keep the land intact, and 6) meet your ownership goals.

This book is full of practical and detailed advice. We learn how to enhance natural beauty and wildlife habitat on our lands at the same time as we derive recreational and economic benefits from owning the land. Simple fun activities are included that get children involved in the land. Tips are given on avoiding poisonous plants, widowmakers, wildlife attacks and tick-borne diseases. Covered topics include programs to lessen property taxes, dealing with taxes on forest income, timber trespass, wildfire and what to do if your land does burn, invasive insect pests, how to insure that your woods are regenerating themselves, and assessing the

impact deer are having on your woods. Non-timber income sources are discussed such as maple syrup, forest farming for ginseng, running livestock in the woods (be careful!), hunting leases, selling carbon credits, and ecotourism.

Logging. Unfortunately, to many people this brings mental pictures of destruction and desolation. The truth is that logging can benefit both the landowner and the land, as long as it is done properly. The chapter “Timber” carefully lists the steps to take before, during and after a timber sale. Since timber sales are usually rare events for the non-industrial forest landowner, anyone contemplating a timber sale, even long-term woodland owners, would be wise to review this chapter before proceeding.

The author is a forester employed by the New York City Watershed Agricultural Council and it is not surprising that the chapter on protecting water quality is particularly good. Detailed instructions are included on best management practices (BMPs) to prevent soil erosion and enhance water quality during trail building and logging.

The final two chapters on conservation easements and legacy planning deal with the largest threat to family woodlands in the U.S. – the risk of being broken up and sold for development. Conservation easements are discussed in detail as a tool to ensure your land will remain undeveloped into the future. Without legacy planning, woodlands are often broken up and sold for development to cover urgent needs for cash. The process of legacy planning is explained, including 1) getting your family involved, 2) learning about various options, and 3) getting professional help.

At the end of the book are sections called “Beyond the Book” and “State Resources” where additional information can be obtained from websites, state agencies, forestry societies and state landowners groups such as NYFOA.

I enjoyed reading this book and got a number of good ideas from it. This book should be on the shelves of public libraries and it would make a great gift for neighbors and families. It struck me that there is strong similarity to what NYFOA exists for and what the author hoped to achieve — “I hope this book motivates you to seek out more information, connect with other landowners, and find professionals who can help you. Most important, though, I hope it inspires you to get outside and interact more with your land.”

—Charles Stackhouse

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## Ask a Professional (continued)

bigger tree. Tapping guidelines assume tree growth is sufficient to add new wood and prevent future tapping into columns of stain from prior tapping. "Pattern tapping" helps prevent tapping into a stain column, and so does adequate diameter growth. Producers should expect annual diameter increments of 1/8<sup>th</sup> to 1/10<sup>th</sup> of an inch for trees less than 16 inches, 1/10<sup>th</sup> to 1/12<sup>th</sup> of an inch per year for trees 16 to 20 inches, and 1/12<sup>th</sup> to 1/16<sup>th</sup> of an inch for larger trees. The actual growth necessary to provide a sufficient thickness of new wood depends on depth of tapping and the offset of the tapping pattern between years. "Band tapping" high versus low bands of the tree will reduce the expectation for diameter growth (but why would you strive for slower growing trees?). Annual measurements at the same position on the stem with a tape measure will reveal tree growth. Producers can place an aluminum nail in the tree at 12" high, and use a 3.5 ft stick to locate consistent height to annually measure diameter at breast height (dbh)(Figure 4). Measure a minimum of 30 to 40 trees, but at least one per acre. Just as producers should measure sugar concentration, so they need to measure tree diameter growth.



Figure 5. Plastic fence hung on a single strand of high tensile wire on a bumper block, for small patch cuts, will help reduce the impact of deer on small seedlings.



Figure 6. Small ruminants and poultry may be better suited to sugarbush silvopasture than cows and cattle. Each species has unique attributes that need consideration.

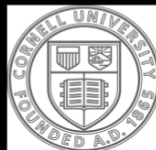
5. *Consider tree age and longevity.* Sugar maple can be a long-lived tree, with some trees reaching 300 to 400 years of age under ideal conditions. Under normal conditions, maple will likely have reduced production between 150 and 250 years of age. Maple producers could assess if there are patches of old or otherwise unproductive maples and regenerate a couple small patches every few years. Cutting within patches needs to be sufficiently intense to allow sunlight to the forest floor. Patch could be 0.25 to 0.75 acres, but vigorous trees within the patch could be retained. Young seedlings should

be protected from deer by fencing (Figure 5) or dense continuous piles of brush around the perimeter. A forester can help assign vigor-ratings to trees, and producers can monitor sap production for individual trees. The location and timing of patch cuts should synchronize with planned changes of tubing and mainline.

6. *Livestock.* Historically many farm woodlots and sugarbushes allowed cattle and other livestock to free range. In these cases, grazing involved a perimeter fence and then free choice by the livestock. This continuous or set-stock grazing proved

*continued on page 18*

**Got Trees? Got Questions?**  
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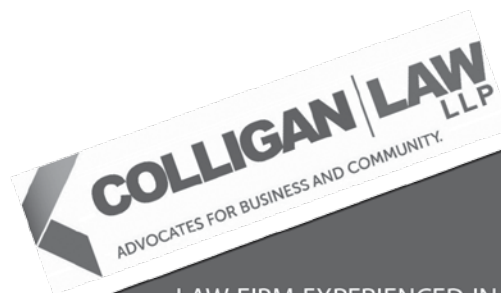
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## Welcome New Members

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	Name	Chapter
Scott Bonno	NAC	Dwight Orndorf	WFL
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Ben Byas	CDC	Ron Read	NFC
Cathy Catranis	WFL	Ann Remchuk	WFL
Douglas Fairbanks	AFC	James Scharfenberger	LHC
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Dominick Ferraro	CDC	Joan Schmidt	WFL
Patrick Ford	AFC	William Stopinski	WFL
Alison Harding	WFL	Charles Sundloff	WFL
Darren Holupko	WFL	Martha Thompson	SFL
Jim Houck	AFC	William Van Gorp	SAC
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## Ask a Professional (continued)



Figure 7. Ruts more than a couple inches deep will shear root, limit water and nutrient uptake, and expose the tree roots to infection. Some roads are necessary, but limit the extent of roads. In wet areas, invest some low value stems to make corduroy that will float equipment.

detrimental to the animals, the trees and the land where the stocking rate (same concept as for trees, see #2) was too high. Sustainable grazing is possible, but requires considerable work. Silvopasture is a deliberate process of integrating livestock into woodlands while also managing for nutritious forage plants. Management-intensive rotational grazing in small paddocks, with herd/flock movement daily



Figure 8. Disease and damage can cause weak stems that are prone to failure. Trees like the one pictured should be removed to avoid complications during the season and free growing space for nearby maple trees.

ensures ample rest periods for the land and intensive, and restorative grazing of the forages (Figure 6). With careful planning, silvopasture practices can solve some interfering plant problems. Any plans for deliberate grazing should assure that root damage is avoided; pigs in particular can cause root damage through their tendency to “root.” The author’s website has several references and resources for silvopasture.

**7. Avoid soil ruts and compaction.** While tree crowns are perhaps the most important part of the tree for producers, tree roots tie for first place or a very close second place. The roots anchor the tree to the ground, pull water from the ground into the stem for sap, and feed the foliage. Damage to roots by tractors, skidders, or livestock can cause irreparable damage (Figure 7). It is easier to prevent a problem than fix a problem. Producers with buckets need to access the sugarbush, but they should limit the number of trails. In chronically damp or soggy areas, install corduroy roads with a continuous mat of small logs and poles to float the tractor. Use as small a machine as possible that is safe and effective, and add high floatation tires if practical. Other types of woods work should allow equipment only during seasons when the ground is firm, usually summer, dry falls, and during cold winters. Repairing ruts with fill or corduroy may help avoid the need for a

new trail and new damage in a new area, but this will not repair the damage to the roots.

**8. Mixtures of species.** Your sugarbush will generally be healthier and more resistant to stresses such as insect defoliation if there is a mixture of species. When thinning a sugarbush to provide more light to desired trees, avoid the temptation or outcome of a monoculture. Providing adequate sunlight to keep a thrifty maple healthy may be best accomplished by cutting...another maple... there, I said it, it is okay to cut a maple. Seriously though, most producers can look at a maple with a small crown, weak fork, or old scars from maple borers or tractors and know that tree is not productive or is otherwise risky (Figure 8). Bucket producers have the advantage of truly knowing a tree’s productive capacity. Paint or mark a tree of low productivity during the season, and cut that tree later in the year when time permits. When cutting firewood or thinning, set a target for the main canopy to be about 75% sugar maple or red maple and 25% other species. These aren’t hard numbers, but use them as a guideline.

Time is of course the biggest obstacle to maple producers working in their sugarbush. Start with the easy tasks, and keep a list of priorities. Use this list to guide a discussion with a forester from your state forestry agency or your consulting forester. Let them know your goal is a productive and healthy sugarbush. A forester can help you develop a plan and a schedule to optimize the use of your time. Finally, be safe in the woods; there are too many stories of maple producers hit by trees and crushed by tractors. Install a ROPS, rollover protection system, if you have an older tractor with no rollover bar.

**Acknowledgements** – Joe Orefice and Steve Childs provided helpful reviews of this article. This article was adapted from an article by the author that was published in the *Maple Syrup Digest* October 2016. 📄

*Dr. Peter Smallidge, Department of Natural Resources, Cornell University Cooperative Extension. Director, Arnot Teaching and Research Forest, Ithaca, NY, 14853. Support for ForestConnect is provided by USDA NIFA and the Cornell University College of Agriculture and Life Sciences.*

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# Member Profile:

*Sean R. Carter*

BRIANA BINKERD-DALE

Sean R. Carter was born in Niagara Falls, NY. He joined a startup environmental consulting firm (Matrix Environmental Technologies Inc., Orchard Park, NY) and founded a remediation technology company (Matrix Oxygen Injection Systems, LLC, Henderson, NV) after obtaining two degrees in agricultural and biological engineering (Cornell B.S. '88 and M.S. '91). Sean has a daughter, son-in-law and 3 grandsons from Seneca Territory in Western NY. His favorite activities include deer hunting, fishing, maple sugaring, lacrosse and gardening. His partner, Maria Paone, is also from Niagara Falls and has a background in the food and beverage industry in Salt Lake City, UT and Las Vegas, NV. She earned an A.S. in Drafting and Design, graduated from the Finger Lakes Permaculture Institute (FLPCI) and has attended numerous other permaculture courses and workshops. Her favorite activities include photography, mushroom cultivation, maple sugaring, gardening and hiking. They reside with Ted, their 3-year old rat terrier, who enjoys sleeping, eating, running, spinning in circles and watching wildlife – coincidentally, Sean, Maria and Ted are all from Niagara Falls and took different paths to Ithaca.

Sean and Maria own 103 acres in

Tompkins County, with 37 acres in Dryden and 66 acres in Newfield. We will be focusing on the Dryden land in this article, as the Newfield land was just purchased last year. "I was searching for hunting land in Tompkins County and found the perfect parcel that was never logged since reverting back to forest, adjacent to state reforestation land and the Finger Lakes Land Trust (FLLT)," Sean said of the Dryden parcel. They purchased 33 acres in 2006 and an adjacent 4-acre parcel in 2015.

Located in the headwaters of Six Mile Creek, Sean and Maria's Dryden property is at an elevation of about 1,600 feet, with a southwest slope, Channery silt loam soils with a shallow fragipan, groundwater seeps, vernal pools, and one intermittent and one ephemeral stream. A riparian corridor runs through the center of their land. The property line is part of the Onondaga Indian trail that connects Central NY to the Susquehanna River, and later became a boundary line of two military tracts after the Revolutionary War. "It is 99% forested," Sean said. They are on the northern edge of the Allegheny Plateau with both central hardwoods (oak-hickory) and northern forest (maple-beech-birch) represented. Dominant canopy trees include red oak, red maple, white ash,

white pine and eastern hemlock. Other canopy trees include white oak, sugar maple, shagbark hickory, black birch, yellow birch, red pine, big tooth aspen and quaking aspen. Unique trees include American elm, some American chestnut, one tamarack and a very old "wolfy" hickory that grew to maturity in



*Maria boiling sap from their maple trees.*

full sun but is now surrounded by forest, including a number of progeny. One piece of bark from this old hickory can measure one foot by four feet!

Understory trees on the property include American beech, American hornbeam, hophornbeam, Norway spruce (seeding from adjacent state land), hawthorn, grey dogwood, witch-hazel and serviceberry. Shrub layer plants include maple leaf viburnum, high and lowbush blueberry, black raspberry, various ferns, wintergreen and many other plants that would require a botanist to name. Planted species include spicebush, wild ginger, cranberry bush viburnum, silky dogwood, green cedar, black and red elderberry, bladder nut and various apples on local rootstock. Maria and Sean purchased the native plants from White Oak Nursery (Canandaigua), Twisted Tree Nursery (Spencer) and The Plantsmen (Ithaca).

Maria and Sean make the management decisions and participate in the work with help from friends and family. Site work has been completed by Newleaf Environmental, LLC (Newfield, NY) with portable sawmill services by Saw It Coming (Newfield, NY). They have a Forest Stewardship Plan written by a NYSDEC Region 7 Forester, with a Forest and Wildlife Ecosystem Management Plan written by Newleaf. They also apply permaculture principles for food production and to improve the resiliency of the land. Sean and Maria attend seminars and webinars by NYFOA, NYSDEC and Cornell, and read literature



*Barn raising in 2015 with red oak and other timber harvested on site.*

*continued on page 22*

in addition to attending NYFOA woods walks, permaculture site visits and other events.

Their management of the Dryden land started with a site walk in 2006 with DEC Forester John Graham and writing of their Forest Stewardship Plan. The previous owners had a plan written by DEC Forester John Clancy in 1995. In 2008 and 2009, they were able to obtain EQIP funding for forest thinning and crop tree release. They performed that work with help from hunting friends, along with building an Adirondack lean-to with red pine logs from the thinning. In 2012, a cabin was installed on the property by Woodtex (Himrod, NY) and they hired Lance Ebel of Newleaf as a consulting forester, preparing the first draft of a Forest and Wildlife Ecosystem Management Plan. In 2013 and 2014, they performed mechanical cutting of beech root suckers and diseased trees in mid-summer under a closed canopy; hand pulling and cutting of invasive plants including privet, honeysuckle, multiflora rose, buckthorn, barberry and *Daphne mezereum*; planted and fenced a small orchard; and planted native plants in select areas.

In 2014, Sean and Maria thinned out more of the red pine stand, milling the lumber on site. Red oak, ash and hickory from dying or poor quality trees was milled as well. They also tapped seven maple trees and made a small batch of syrup; started gardening on a bank using *hugelkultur* (a composting process employing raised beds constructed from decaying wood debris and other compostable biomass plant materials) with aspen and red maple logs, soil and compost; and planted perennial herbs, tomatoes and pumpkins. 2015 was another

busy year—they installed three ponds/vernal pools in a wetland created by waterbars from a skid trail; completed a wetlands delineation and permitting with USACE and NYSDEC; harvested red oak with stump rot or other defects and milled lumber on site; and built a three bay English barn using red oak posts and beams and red pine framing lumber. They harvested over 400 red oak “bolts” for shiitake mushroom inoculation and many cords of firewood (which Sean will often split and leave on a pallet in the woods until he needs it); inoculated aspen logs with oyster mushroom spawn using the totem method; and tapped 33 maple trees, making a few gallons of syrup.

This year so far they have tapped 67 maple trees and made seven gallons of syrup and are continuing ongoing forest stand improvement practices and invasive plant control. They are now producing up to 25lbs/week of shiitake mushrooms from May-September. Maria sells them to a local restaurant and farm stand, as well as to customers in NV, FL, KS, VA, SC, PA, and at the Freeville farmers market. Lately she has been producing almost a pound per log.

One of Sean and Maria’s biggest challenges has been hiring trained people to implement management practices such as removal of invasives and beech control when they don’t have time to do it themselves. It can be difficult to find qualified people, and then finding the funds to pay them—EQIP doesn’t cover all of the costs of management, and unless there is a timber sale to defray costs, it can be tricky to budget for. They have resisted using glyphosate in the course of their management efforts, finding several years



Sean with a buck harvested on their property.

of manual removal done on 3-4 acres at a time to be just as effective. Sean hangs invasive plants that he uproots upside down in trees to prevent re-rooting (after finding they re-root if left on the ground).

Some of the things Sean and Maria have done to manage their land more efficiently include seeking advice and expertise; working with a plan, schedule and budget; subcontracting work; acquiring personal protective equipment, a professional brush saw, an ATV, a log arch and many hand tools; and taking training courses including forestry and wildlife seminars, webinars and woods walks. They regularly collaborate with friends and neighbors, with many friends contributing labor, neighbors cutting firewood, and everyone pitching in to deer hunt. Hunting, wild crafting (mushrooms, fruits and medicinals), hiking, snowshoeing, campfires and observing the natural world are all regularly enjoyed on the land. Their property is a destination for family and friends ranging in age from children to their 90-year old uncle, and they have gatherings regularly throughout deer season and during maple sugar season. Their property has been a forum not only for a good relationship with neighbors (property access, hunting, firewood), but quality engagement with State foresters, the town, and the Finger Lakes Land Trust on adjacent and nearby properties.

One steward of the land who deserves particular mention is Sean’s good friend, mentor and business partner George Nolan (shown on the cover planting elderberry



Maria’s shiitake yard, with bolts from culled trees.

*continued on page 23*



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in a riparian zone on their land). George founded Matrix and they grew the company together over 25 years and were very close. George was a Vietnam War veteran, lifelong archer from Pennsylvania who loved the outdoors, and was exclusively a bow hunter who came up every year to hunt with Sean. "We were exactly 20 years apart in age, but more like brothers," Sean said. "Every single project on the land that he wasn't a part of, he couldn't wait to come up and see." George was also an expert skier, who died in March of this year on his last run of the night in Telluride, CO, at the age of 69. Sean and Maria miss him dearly, but feel his presence and enjoy the legacy he left behind on their land.

Sean's life-long interest in forest management came from summers spent fishing and camping with family in the Adirondacks and Allegany Mountains, the writings of Aldo Leopold, John Muir and Theodore Roosevelt, and Haudenosaunee oral history describing the abundance and functionality of the land. He feels that their NYFOA membership has benefitted them greatly via the excellent network of landowners with experience and access to a knowledge base. What he most enjoys about being a forest owner is "Being immersed in a living, growing forest— every day is a new experience and new discoveries seem endless."

Maria and Sean's advice to other forest owners is twofold: first, to hire a consulting forester that talks more about habitat, ecosystem and water quality, and less about cutting and selling timber—and second, to focus on improving and restoring habitat for the entire plant/animal/bird/insect/amphibian/fungi/bacterial community, rather than just big bucks and gobblers. "People spend too much time looking up and not enough time looking down – looking for the big trees, rather than the health of the soils, biotic community and water; if those parts of the community aren't healthy, you are never going to have a healthy forest." 🌲

*Briana Binkerd-Dale is a student in Environmental Biology and Applied Ecology at Cornell University. If you are interested in being featured in a member profile, please email Jeff Joseph at [jeffjosephwoodworker@gmail.com](mailto:jeffjosephwoodworker@gmail.com)*

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