The New York Forest Owner

A Publication of The New York Forest Owners Association

For people caring about New York's trees and forests

July/August 2017



Member Profile: Charles and Karen Starks



THE NEW YORK FOREST OWNERS ASSOCIATION

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www.nyfoa.org

Charles and Karen Starks in front of their home, with their dog, Loch, the great Pyrenees. For member profile see page 21. All photos courtesy of Charles and Karen Starks.

From President

During the spring and summer months, mornings often start with a cup of coffee on the porch swing, watching the birds. My wife Sarah and I have seen over 50 species of birds from our porch and derive great enjoyment from these colorful and interesting creatures. Their palette of colors is amazing; the orange of the oriole, blue of the bluebird, red of



the cardinal, and gold of the goldfinch are striking examples. One never tires of watching the aerobatics of the tiny hummingbird

trying to monopolize the feeder or the boldness of the closely approaching chickadee.

As forest landowners, our actions and our inactions can have a major impact on birds and other wildlife. Wild birds require a great variety of different habitats. Both at a backyard level and at a forested landscape level, the key element is diversity, i.e., a variety of plants at the ground level, shrubs, small trees and tall trees. Forest landowners have a variety of tools to achieve this habitat diversity, such as planting of shrubs and trees, management of competing invasive plants, and perhaps most importantly, the chain saw.

Across much of the forested landscape of New York, a critical missing habitat component is young forest. Since forests are so dynamic, young forests don't remain so for long. We need to be creating more young

forests or many species of wildlife will suffer decline. This usually means the removal of mature trees for lumber or firewood. Sound forestry brings economic benefit but also great wildlife benefit. Forest landowners can now get information and assistance from foresters working for the Audubon Society, National Wild Turkey Federation, NYS DEC, Quality Deer Management Association, and the Ruffed Grouse Society.

Please share this magazine with a neighbor and urge them to join NYFOA. By gaining more members, NYFOA's voice will become stronger!

Much of the public is unaware of the need for young forests and the wildlife benefits of forest management. To the uninformed or misinformed, the whine of a chainsaw in the woods or the untrailering of a feller-buncher is not a good thing. NYFOA chapters and members have a powerful tool to correct this misinformation — a woodswalk held several years after a properly-done timber harvest. Eyes will be opened. Hence, I encourage NYFOA chapters to hold at least one woodswalk a year in a woodlot that has had a timber harvest — and to invite their friends and neighbors to see the benefits a timber harvest, when properly done, can have.

> -Charles Stackhouse NYFOA President

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.

NYFOA is a not-forprofit 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, woodswalks, chapter meetings, and statewide meetings. () I/We own acres of wood-() I/We do not own woodland but support the Association's objectives. Address: City: _____ State/ Zip: Telephone: Email: _____ County of Residence: County of Woodlot: Referred by: **Regular Annual Dues:** () Student (Please provide copy of student ID) () Individual/Family \$45 **Multi-Year Dues:** \$80 () 2-yr () 3-yr \$120 **Additional Contribution:** \$1-\$49 () Supporter () Contributor \$50-\$99 \$100-\$249 () Sponsor () Benefactor \$250-\$499 \$500 or more () Steward () Subscription to Northern Woodlands \$15 (4 issues) NYFOA is recognized by the IRS as a 501(c)(3) taxexempt organization and as such your contribution may be tax deductible to the extent allowed by law. Credit Card No. Expiration Date V-Code Signature: Make check payable to NYFOA. Send the completed form to: NYFOA P.O. Box 541, Lima, New York 14485 1-800-836-3566

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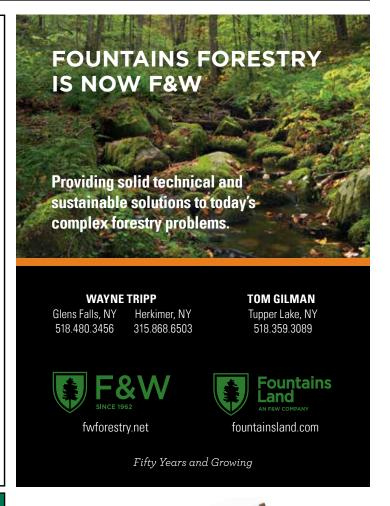
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New York Woodland Owners: ASH???

Has your woodlot been affected by the emerald ash borer (EAB)? Do you have stands of ash that may soon be threatened by it? Have you already lost your ash to EAB? Have you pre-emptively sold ash timber in response to the threat? How have your management strategies changed in response to the potential or immanent loss of ash in your timber stands?

If EAB is affecting how you manage your woodlot, we would like to hear your story in preparation for an upcoming series of *Forest Owner* articles on the topic.

Contact Jeff Joseph at jeffjosephwoodworker@gmail.com or at (607) 659-5995



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Obituary

SUBMITTED BY DAN ANDERSON

Al Brown (1921- 2017)



On a very sad note, Dr. Albert Brown passed away on Monday, April 17th, at the age of 95. He retired as the President of Brockport College in 1981 to enjoy time at his home on Chautauqua Lake, which he loved to share with his wife Marge, family, and friends. He also loved spending time on his 186 acre farm/woodlot in Gerry, N.Y., which he co-owned with Dr. Ralph Gennarino.

Al had a real passion for the land and for forestry. He was one of the earliest members of the AFC Chapter of NYFOA. He was very active at both the local and state level of NYFOA. He was a member of the very first MFO Class in 1991 with Gary Goff. He loved to do woods-walks on other people's land as an MFO and brought a wealth of knowledge to share with them. Al was selected as Forest Landowner of the Year for Region 9 and won the prestigious Heiberg Award from NYFOA in 2002 (you can view the article in the 2002 May/June issue of the Forest Owner on the NYFOA website www.nyfoa.org).

Two years ago at the AFC Christmas Party, he shared stories about growing up on a dirt-poor farm in LaFargeville, which is near Watertown, N.Y. His wonderful sense of humor was on full display at this event, and many people have made fond comments about his presentation. Rest in peace, Dr. Al, your many friends will greatly miss you.

Dan Anderson is a member of the AFC Chapter. Al was his father-in-law, and his encouragement was the reason that Dan became active in NYFOA and entered the MFO program. He was truly an ambassador for forestry in NY.

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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 Ron Cantori	Chapter SFL
Mike Carrano	CDC
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Burch Craig	WFL
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Bill Kelty	WFL
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Michael Kratky	SAC
Rich & Maria LaTorre	SAC
Bill Leonard	SOT
Thomas Pavers	AFC
Leroy Post	CDC
Kaylee Resha	CDC
Kristen Schnepp- Giger	CDC
Don Snider	NAC
Aron Sotnikoff	CDC
Tom Wormell	CDC
Bong Yoon	SOT
Philip Zehr	NAC

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

Harvesting Aesthetics and Forest Sustainability

Question:

Many of the harvests that I see make me think these are only done for the money. I worry about whether these unattractive and destructive harvests can possibly be sustainable? (Jennifer A., WNY)

Answer:

Forest harvesting, or logging, happens throughout New York. Harvesting is often described with unfavorable terms, but those terms or labels need to be considered relative to some standard or measure of performance. Labels such as good, bad, or ugly are subjective. As with any endeavor, the outcome of any individual harvest will exist somewhere along the full spectrum of results. However, there are attributes of harvesting, aesthetics, and sustainability that tell an important story about the practice of forestry in New York.

In all cases, the first rule of harvesting is that the cutting of trees should support the owner's objectives. Harvesting is a means to an end. Harvesting can simultaneously support multiple objectives that might include revenue, wildlife habitat, recreational access, or forest health. Proper planning and execution of the harvest help ensure the objectives are satisfied.

One aspect of harvesting is that it necessarily applies economic principles and must satisfy some measure of financial or personal accountability. Harvests range from a woodlot owner cutting a few cords of firewood to large intensive harvests that remove all of the trees on dozens of acres. In all harvests, the people working on the job have invested some amount of time, energy, machinery, labor, and often money. They rightfully expect a return; the return might be non-monetary and as simple as

the pleasure of heating your home with your wood. Or, the return might be part of a complicated business structure of acquiring a raw material for processing and eventually delivery of value-added products. The former example of firewood may not pass muster with your accountant, but the later must be financially defensible.

Loggers are an inextricable part of forest practices. Loggers need to purchase and maintain equipment, make payroll for employees, buy and then sell the logs, and more (Figure 1). In this regard, the logger is not different from a farmer or plumber or dental hygienist. Each invests in their skill, acquires the resources they need to do their job, and anticipates some personal gain. Every logger is commercial in that they engage in commerce. As with any profession, just because money is involved doesn't presuppose a problem, nor should the influence of money justify mistreatment of other people or resources.

The question then becomes what constitutes mistreatment of the forest resource, and might contribute to a change in aesthetics or unsustainable practices. Aesthetics are important to most woodland owners, and harvesting changes the aesthetic of the woods. Aesthetics can be defined as judgements



Figure 1. The logging crew on this harvest includes 3 to 4 workers, 6 pieces of equipment, and contracts with two log truck drivers. They take pride in sustainable harvesting, but also sustaining their livelihoods.



Figure 2. These hardwoods all started growing after agricultural lands were abandoned. Although different sizes, they are all the same age. The bigger trees are the "winners" and should be retained to produce the seed to grow the next forest.

of sentiment and thus of beauty. The aesthetics of the harvest is in the eye of the beholder. The way a forest looks after a harvest may be a result of differences in the number of trees, the heights and diameter of trees that remain, the amount and height of woody material (known also as "slash") left behind, if there is damage to the residual trees, or the length and depth of ruts. The

extent of disturbance in a forest harvest is not different, and maybe less so, than new house construction or the annual harvest of agricultural crops. Judging the aesthetic of a harvest is complicated by the decades of almost imperceptible changes that precede the harvest. Our attachment, context, and expectations for a woodland influence our judgement of the harvesting activity.



Figure 3 This seed tree harvest retained the best quality sugar maple having full crowns and no evidence of dieback. These trees will provide seed to grow the next forest.

The assessment of sustainability depends on how the forest changes relative to the outputs it will provide in the future. Will the future forest have at least the same benefits as the current forest? Forests are constantly changing, or, in forester jargon, "developing." Most eastern forests originated after agricultural lands were abandoned. The trees of these second-growth forests are all about the same age (Figure 2), but have trees of different species and different sizes (think about a class of 6th graders...all the same age and species, but all different sizes). Eventually, many even-aged forests are harvested and replaced by the next forest. This pattern is similar to your even-aged vegetable garden that is weeded, and eventually harvested and replaced. While your garden is replaced annually, your forest might exist for a century or more before the final harvest.

Broadly, there are two types of harvesting. One type should improve the residual forest, the trees remaining after the harvest, by reducing the amount of disease, increasing the growth rate on the best quality stems, and/or adjusting the mixture of species to favor some species over other species. These changes relate to composition, quality, and growth and are equivalent to the weeding you do in your garden. This type of forest harvesting includes the "intermediate harvests" (intermediate between the beginning and ending points of the forest as it develops) that have technical names such as: thinning, timber stand improvement, sanitation, or crop tree release to name a few. The other type of harvest removes the current mature cohort or age classes during one or more entries and allows a new age class to establish or if already established to further develop. This second type of harvest might include several harvests over a decade or more and are called "regeneration harvests." The common technical names of regeneration harvests include: clearcut, seed tree, shelterwood, or selection. All regeneration harvests ultimately involve the removal of the most mature age-class of trees to allow a younger age class to establish or to further develop if already established.

continued on page 19

Wild Things in Your Woodlands

Kristi Sullivan

NORTHERN WATER SNAKE (NERODIA SIPEDON)



They are dark colored, but their coloration varies from either brown, reddish brown, tan, or grayish. The belly is usually white, yellowish, or orangish with dark crescent-shaped black edges. They have dark crossbands on the back of their neck and a series of square blotches that alternate along their back and sides that may merge to form bands. Because of their patterning, northern water snakes are often mistaken for venomous cottonmouths (water moccasins) or copperheads. Northern water snakes will darken with age, and adult snakes can appear solid brown or black, especially when dry. Like many other snakes, juveniles have more vivid coloration, often donning reddish brown blotches over a tan, brown, or grey background. Adult water snakes grow up to 24 to 55 inches in length (61-140cm), and adult females tend to be larger than adult males.

The northern water snake is a medium to large sized snake.

Photo by Matthew M. Hayes

The northern water snake is one of the most common water snakes in the country, and easily the most common snake found near water sources in New York. They are often seen basking on rocks and in open spaces along the banks of rivers or ponds, or on branches overhanging the water. Northern water snakes are found in a wide variety of aquatic habitats, including ponds, creeks (both tidal and freshwater), rivers, lakes, ditches, swamps, and marshes (both brackish and freshwater). They prefer relatively still or slow moving waters, but are also capable of navigating strong currents. The species are excellent swimmers, and can be found three meters below the surface and several kilometers from shore. Occasionally they will move further onto land, especially the juveniles, but they never go too far from their aquatic environment.

Northern water snakes can be found throughout the eastern half of the US, especially in the Northeast and Midwest. They are present all the way from southern Ontario down to North Carolina and southern Missouri, and from Nebraska and Kansas to the Atlantic coast. Additionally, they have been introduced to California where they are considered an invasive species. They can be found throughout most of New York State.

These aquatic snakes are carnivores and scavengers, preying heavily on fish and amphibians. Unlike constrictors, they swallow their prey alive and whole. They eat a number of fish species, including brook trout, sunfish, smallmouth bass, minnows, and bullhead catfish, to name a few. For amphibians, they have been recorded eating toads, leopard frogs, bullfrogs, spring peepers, and tadpoles of these species. These snakes have even been known to herd schools of fish or tadpoles to the water's edge so that they can prey upon many at a time. Additionally, northern water snakes may feed upon crayfish, large insects, leeches, other snakes, turtles,

birds, and small mammals. Their feeding habits changes from day to night. During the day, they pursue fish, amphibians, and insects living among the plants along the water's edge. At night, they will target minnows and other small fish sleeping in the shallow water.

Most reproduction occurs while in or near their hibernation sites, between mid-April and mid-June, with temperature and latitude influencing variation in these times. Gestation can last from three to five months, and the young snakes are born from July to September. Unlike most snakes, northern water snakes are ovoviviparous, which means they bear live young. They can have anywhere between 12 and 46 at a time, though a record 99 young has been recorded. Larger females tend to have larger litters. At birth, the young snakes are independent and are capable of hunting and caring for themselves. In captivity, these snakes can live up to nine years, but their lifespan in the wild is unknown.

Northern water snakes face several

predators, including raccoons, skunks, foxes, opossums, larger birds, snapping turtles, and larger snakes. To escape predation, water snakes can dive deep below the surface and anchor themselves to vegetation or logs. While they typically remain submerged for only about 5 minutes, they are capable of remaining underwater for an hour and a half. When threatened, water snakes flatten their bodies and jaws (to appear larger), and may begin to strike and bite ferociously. They are not venomous, but their long teeth are adapted to hold struggling fish and can inflict a nasty bite. Their saliva also contains a mild anticoagulant, which can cause the bite to bleed more than usual, though this still poses little risk to humans. Needless to say, it is best to watch this snake from a distance to avoid agitating it. When agitated, northern water snakes also release a foul musk and may defecate to discourage predators. If extremely agitated, they will even regurgitate their last meal.

These snakes are, for the most part, solitary animals. They are only social during the fall and spring after overwintering, during which they can be found in groups at basking sites, coiled together. They likely communicate using touch and smell. During the cold winter months, northern water snakes hibernate underground in mammal burrows, rock crevices, or in beaver and muskrat

lodges. During hibernation, they often share dens with copperheads and rat snakes.

Contrary to popular belief, northern water snakes are quite beneficial for fish populations. They feed on diseased and dying fish, and help to control areas where overpopulation may exist and can stunt fish growth. This service can actually help the sport fishing industry. While they may potentially pose a problem for fish hatcheries and fish farms, northern water snakes are usually a negligible threat. Though the species is quite abundant, waterfront construction and development and water pollution threaten both its habitat and food source. They are also occasionally killed because they are mistaken for venomous water moccasins (also known as cottonmouths), a snake that is not found within New York state. Therefore, as long as you are in New York state when you encounter what looks to be either a northern water snake or water moccasin, you can rest assured that you've just bumped into the non-venomous northern water snake. 🕰

Kristi Sullivan is director of the New York Master Naturalist Program. For more information on managing habitat for wildlife, as well as upcoming programs, visit arnotconservation.info

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Dealing with Tick-borne Diseases

PAUL D. CURTIS

s forest landowners, many of us Aenjoy walking through our woodlots. Whether you are doing active timber management, or just enjoying the natural world around you, there is an increasing risk of tick-borne diseases in many counties of New York State. Lyme is the most well-known disease, but depending on the county, ticks may be carrying other diseases such as erlichiosis, babesiosis, and the newly-emerging Powassan virus. I'm going to focus on Lyme disease, as it is the most widespread tick-borne illness in the state. Lyme disease is caused by bacteria transmitted by the black-legged (deer) tick (Ixodes scapularis). Lyme disease may cause symptoms affecting the skin, nervous system, heart and/or joints of an individual. Over 45,000 cases have been reported to the New York State Department of Health since 1986.

Lyme disease may affect anyone who spends time outdoors in grassy and wooded environments. Your chances of being bitten by a black-legged tick are greater during times of the year when they are most active (Figure 1). Young ticks (nymphs) are active from mid-May to mid-August and are about the size of poppy seeds. Adult ticks, which are approximately the size of sesame seeds, are most active during March to mid-May, and again from mid-August to November. Both nymphs and adults can transmit Lyme disease. Ticks can be active any time the temperature is above freezing, and infected ticks can be found in every county of New York. Deer ticks live in shady, moist areas at ground level. They will cling to tall grass, brush, and shrubs, usually no more than 18-24 inches off the ground. They get on humans and animals only by direct contact. Once a tick gets on the skin, it generally climbs upward until it reaches a protected area.

Not all deer ticks are infected with the bacteria that cause Lyme disease.

However, recent data from several counties in upstate New York show that half or more of adult ticks may carry the bacteria. Ticks can become infected if they feed on small animals that are infected. The primary small mammals that serve as reservoirs for Lyme disease include white-footed mice, Eastern chipmunks, and shrews. Larval ticks are uninfected, but acquire the bacteria during their first blood meal from an infected small mammal. Then as older nymphs and adults, they then carry the disease and may pass it to people and pets. The disease is spread when an infected tick bites a person and stays attached. Usually the tick must be attached for at least 36 hours before the bacteria can be transmitted. Lyme disease does not spread from one person to another, and transfer of the bacteria from an infected pregnant woman to the fetus is extremely rare.

In most (60-80%) cases, a bull's-eye rash or solid patch about two inches in diameter appears and expands around or near the tick bite. The early stage of Lyme disease is usually marked by one or more of the following symptoms: chills and fever, headache, fatigue, stiff neck, muscle and/or joint pain, and swollen glands. If Lyme disease is unrecognized or untreated more severe symptoms may occur. Severe fatigue, a stiff aching neck, and tingling or numbness in the arms and legs, or facial paralysis may occur. The most severe symptoms of Lyme disease may not appear until weeks, months or years after the tick bite. These include severe headaches, painful arthritis, swelling of the joints, and heart and central nervous system problems.

Fortunately, Lyme disease symptoms can be prevented with prompt antibiotic treatments. If you find an embedded tick that was likely on your body for

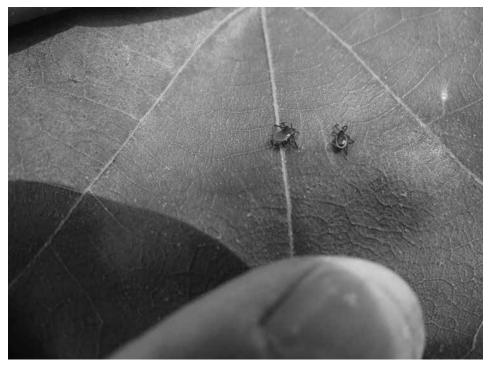


Figure 1. Male and female black-legged ticks. Photo by Dan Gilrein, Suffolk CCE.





Figure 2a and 2b. Deer are a common host for ticks, and can suffer significantly in tick-infested areas. Left photo by Peter Priolo, 2007. Permission given for CCE use. Right photo provided by Dan Gilrein, Suffolk CCE.

36 hours or more, visit your doctor as soon as possible. This disease can cause serious health consequences if left untreated. Also, not all infected tick bites will show the tell-tale red rash. It is not worth taking a chance, so if there is any question, get treatment.

The relationship between black-legged ticks and white-tailed deer (*Odocoileus virginianus*) is much more complex. In areas with high deer densities, tick numbers and the risk of contracting Lyme disease is often higher (Figure 2a and 2b). Apparently there is a factor in deer blood

that may increase reproductive output of adult ticks, so consequently, deer are the ideal host for adult ticks. Recent research has shown that in areas where deer numbers are drastically reduced, populations of black-legged ticks will crash, and the associated incidence of Lyme disease drops. However, deer densities must be extremely low for this to occur, somewhere around 10 deer per square mile or so. Given that deer densities in rural New York woodlands may often be 40 deer per square mile or more, getting down to 10 deer per square

mile across the landscape would be very difficult, and is probably not practical. Recreational hunting and lowering deer numbers can provide many benefits for woodland owners, such as increased regeneration. However, it is very unlikely that recreational hunting will reduce deer numbers sufficiently to have any measurable impact on tick numbers.

As a woodland owner, your best protection is to avoid contact with leaf litter and vegetation. Walk in the center of trails if possible. However, if you hike, camp, hunt, work, or otherwise spend time in the outdoors, you can still protect yourself:

- Wear light-colored clothing with a tight weave to spot ticks easily.
- Wear enclosed shoes, long pants and a long-sleeved shirt.
- Tuck pant legs into socks or boots, and shirt into pants. Or duct tape your pant legs over the top of your hiking boots to seal the opening (Figure 3).
- Check clothes and any exposed skin frequently for ticks while outdoors.
- Consider using insect repellent, and treat clothing with permethrin.
- Stay on cleared, well-traveled trails and avoid contacting vegetation.
- Avoid sitting directly on the ground or on stone walls.
- Conduct a tick check in the shower at night after being afield.



Figure 3. Lone star ticks on sock. Photo by Dan Gilrein, Suffolk CCE.

Paul D. Curtis, is Associate Professor and Extension Wildlife Specialist, Department of Natural Resources, Cornell University.

Two Weeks Touring the Forests of Germany, France and Switzerland

ART WAGNER

The American Forest Foundation **I** sponsored a two week international European forestry tour in October 2016. The well-organized tour included visits to private, family-owned, city, state, and national forests in Southeast Germany, Southwest France, and Northwest Switzerland. Thirty-three individuals from throughout the United States participated and foresters, tree farmers, industry representatives, and loggers were all present. Our group had the opportunity to tour 20 different forests and learn about the silvicultural techniques utilized to enhance sustainable forest management.

Our tour guides were well-seasoned experts. The German guides were Professor Dr. Hermann Rodenkirchen (forestry professor and forest owner) and Franz-Josef Risse (forester and president ANW/section Baden-Wuerttemberg Forester Society). Our French guide was Roland Burrus (forest manager and forest owner) and our Swiss guide was Anne Hurzeker (Forester – Pro-Silva).

The first forest visited was that of

Baron Freiherr von Rotenham near Bamberg in the town of Rentweinsdorf, Germany. This 2,000 acre forest has been owned and managed by the same family for about 600 years(!). The Baron actively manages his forest with his two sons who have been groomed to assume the lead role in managing the forest for future generations. The morning spent with the Baron was a microcosm of the experience the group was to encounter over the next several weeks.

After a brief introduction it was off to the woodlot. The Baron at 6 feet 6 inches led us through his woods at breakneck speed. We noticeably didn't follow well-marked trails to get to his prized "Presidential Trees" where he aptly discussed his management techniques. The Baron knew his woods well. His forest is managed in the "dauerwald" manner. That is, "close to nature" or a continuous forest, which is uneven-aged with multiple species. His presidential trees were 150 year-old white oak, Douglas fir and beech (which is a valued species in Germany). The



Baron Sebastian Freiherr von Rotenham discussing his family forest and "presidential" trees in Rentweinsdorf, Bavaria.

Baron walks his forest several times per year and has a harvest rotation of every 8–10 years. His quote was "I walk through the forest and ask every tree three questions: Are you healthy? Are you producing value? If not, which trees are bothering you? And then I take those trees out."

Other topics discussed included certification and herbicide use. The Baron states he does not need certification because he grows his trees far better than the certification standards. His crop is in demand. Also,



Privately owned forest, part of 350 y/o Walter family farm producing high quality Norway spruce and Silver fir logs.

he does not use herbicides. If trees are infected (e.g. ash fungus), those trees are removed and healthy trees remain. At the completion of the woods walk, the Baron graciously provided us with a lunch of grilled bratwurst and locally brewed beer. A great start for our trip.

From there, we moved on to the Baden-Wurtenburg state forest and witnessed highly mechanized logging. Most forests visited have permanent logging roads and the heavy equipment remains on these logging roads to minimize soil compaction beyond that footprint. Hand felling is utilized in areas not accessible to the feller-buncher, again to avoid soil compaction. Tops are also left on logging roads to pad the soil from compaction. Hikers must be aware of the tripping hazard of this technique.

The next visit was at the Rottenburg College of Forestry. The college has 850 students, is highly competitive and provides both 2 and 4-year degrees. The 2-year technician program has specialties in logging, measuring, pruning and surveying. Whereas the 4-year forest science program includes specialties in bio-energy, water resource management, applied wood technology, sustainable rural development and energy competence.

At our next stop, Furstenburg, we observed a large forest enterprise. Their forestry program was data driven and had the capability of monitoring and predicting growth rates almost to the individual tree. The organization prided itself in the close working relationship among themselves, elected officials, forest agencies, the community and environmental groups. They have maintained successful deer hunting strategies to allow for excellent natural regeneration.

On to Freudenstadt, near the Black Forest, where we observed significant damage from Hurricane (Cyclone) Lothar, in December 1999. The woodlot was allowed to regenerate naturally and the results were excellent. Here the "Plenterwald" forestry technique was utilized. That is, recovered farm land or other similar disturbances are allowed to naturally

regenerate and only selected trees are cut, resulting in uneven-aged selection forests.

Close by was the Walter Family Farm which has been in the same family since 1653. It is a full service farm producing, dairy, beef, pigs, vegetables and logs. The logs produced are high quality spruce and fir. A significant issue discussed was legacy planning, in that the next generation have not expressed interest in continuing the family farm.

The last days in Germany included visiting the Echtle sawmill in Nordach. The mill, which was located on a narrow two lane road, was fully mechanized, computer operated and produced cogen electric from wood waste. The mill provided electric and steam to the town and local hospital. There was no dirt or mud anywhere on-site at the mill.

At the Freiberg Town Forest we observed a "martelloscope" which is a one hectare rectangular plot with a complete inventory of each tree stem. This martelloscope is used for training forest techs and students in marking, ecology and financial studies.

Our last visit in Germany was to Seelbach to tour our guide Hermann Rodenkirchen's 560 acre forest. In addition to the tour we were welcomed and hosted for pastries by the town's mayor and family in City Hall. The forest, prior to Hermann's purchase in 1995 was clear cut, strip cut, and



A private family forest near Dambach, France. The forest is managed by the president of Pro-Silva France for high quality spruce and fir.

intensively planted. It has been managed with the Plenterwald technique and shows significant signs of recovery. After much family deliberation, a wind turbine was recently placed on the mountain top. The impact will be monitored on an on-going basis by

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Katie Wagner (author's daughter) giving perspective to depth of top soil, after blow down in Prof Rodenkirchen's forest near Seelbach.

Hermann and his family. It should be noted that wind farms and solar panels are widely used, and quite noticeable, throughout Germany.

The next few days were spent in France. This portion of the trip started with a drive through The Alsace wine region, on our way to Strasbourg. We visited both a private family forest and the Haguenau state forest. Both were multi-aged and had good production of oak veneer logs. The state forester discussed beech infestation and said it will eventually die off. He suggested two techniques for handling beech in a woodlot. For larger stems a hand held girdler is used. His foresters carry one with them at all time in the woods. For small beech stems, especially around desirable species (e.g. oak) breaking the tops (not completely) in a southerly

direction, will allow sun to reach the desirable tree and the broken branches may minimize deer browse.

The last stop in France was at the Graf Von Spree forest in Belfort. Here, after three generations of ownership providing good silviculture a healthy, productive forest has emerged. This is a family-owned forest business enterprise that also manages forests in Germany.

As an aside, it should be noted that logs coming from the Alsace region of France are routinely scanned for bullets and shrapnel from WW I and WW II.

The final leg of the tour was at Neuchatel, Switzerland. We visited the city forest which has open public access, separate mountain bike trails, a martelloscope, and no motorized vehicle access, except for logging equipment. We spent some time at Creux du Van which is a naturally formed amphitheater in the Jura mountains. The guided hike down the ledges was not for the faint of heart.

Our final tour was one of the more intriguing of the trip. It was to a private forest in Les Cottards that produces "resonance" wood for musical instruments. The tree rings



The Creux Du Van natural amphitheater near Neuchatel, Switzerland in The Jura (forested) Mountains.

grow consistently due to the climate and soils. The wood produced is sought after for the quality of the sound produced. The forest owners have both a full time forester and logger on staff to maintain the quality of its Norway spruce and silver fir. A resonance log can be worth upwards of \$15,000. We were joined on this tour by the local artisan that produces harps — his most recent was commissioned by the Berlin Philarmonic.

Some of the similarities between European and American forestry practices include, trends toward uneven age forest management, deer browse affecting regeneration, the balancing of social, ecological, and financial aspects of the forests, considerable research into BMP's, and the debate about forest certification standards.

Forestry practice differences include the differing geography, topography, and climate of the area (similar only to Northeast American forests), soil make-up, practically no herbicide use, no motorized access (including ATV's and snowmobiles) in forests, numerous specialty mills in close proximity to woodlots, logs being routinely auctioned to highest bidder roadside, better data, routine on-site foresters for both private and public lands, and cities and towns being clustered resulting in easy access to forests.

As a result of participating in this tour, I reaffirmed that forests owners (locally, nationally and internationally) are at the forefront in providing the stewardship necessary to ensure that forest resources will continue to provide the social, financial and ecological benefits necessary, now and into the future. The trip far exceeded expectations and also gave the entire group a more profound knowledge and understanding of forests throughout the world.

Art Wagner is NYFOA's vice president.

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COORDINATED BY MARK WHITMORE

BLACKLEGGED TICKS: A PRESENT AND FUTURE THREAT

By Nicholas P. Piedmonte

Ticks are a familiar affliction to hunters, hikers, gardeners, pet owners, and other outdoor recreationists. These parasitic arachnids are most often found in fields, shrub lands, and forests where they wait for potential hosts to wander near. Like mosquitos, ticks must take blood from animals to survive, develop, and reproduce. However, they require longer feeding periods than mosquitos ranging from 3–7 days depending on the developmental stage.

Ticks develop through three blood-feeding stages: larva, nymph, and adult, taking one blood meal per stage. But how exactly does a tick get on you? They cannot jump or fly, and contrary to popular belief, have not been documented dropping from trees (they rarely climb higher than a few feet). Although some ticks actively "hunt" towards nearby hosts, most exhibit a unique behavior called "questing". Questing ticks climb vegetation and hold onto their perch with their back



Figure 1. Left to right: Blacklegged tick larva, nymph, adult male, and adult female on a dime.

six legs while extending their front pair of legs in front of them. They wave this pair back and forth, using them much like insects use antennae to collect information from their environment. However, ticks cue in on particular signals, like heat and carbon dioxide, indicating nearby hosts. Upon sensing these cues, a questing tick's movements become more directed, and if the host brushes past its front legs, the tick can climb aboard and start seeking a feeding site. If a tick manages to remain attached and find a suitable patch of bare flesh, it will cut the skin and anchor its mouthparts which are lined with numerous recurved teeth. Some ticks even secrete a cementlike substance in the wound to further deter removal. All of this often occurs without notice due to compounds in tick saliva that suppress sensitivity and immune response near the bite, which is why many don't even know they were bitten. While many ticks are repulsive nuisances to humans, some also represent substantial threats to human and companion animal health.

Of the ~ 30 tick species in New York State, 10 have been documented biting humans, and 4 carry diseases: blacklegged ticks, American dog ticks, lone star ticks (not found in central N.Y. yet), and woodchuck ticks. Foremost among these are blacklegged ticks, or "deer ticks". Blacklegged ticks are among the most commonly encountered ticks in N.Y., and associated with areas in and around forests because they require humid environments to survive. They can feed on a wide variety of wildlife, though mammals and birds are their most common hosts in the northeast. While we aren't their favorite meals, people and pets can also serve as hosts. Blacklegged ticks act as vectors (organisms that carry and transmit disease) for five human diseases: Lyme disease, human anaplasmosis, human babesiosis, Borrelia miyamotoi infection, and Powassan encephalitis. While Lyme disease is the most well-known, the remaining diseases can involve similarly debilitating, or in some cases, deadly symptoms.



Figure 2. Adult female blacklegged tick engorged with blood.

Unfortunately, despite concerted efforts to control tick populations, research has documented an increase in their numbers and a proportionate increase in tick-borne disease moving away from historically infested regions.

Southeastern and eastern regions of N.Y. have long suffered from high tick populations and tick-borne disease, but over the last two decades other regions, like central and western N.Y., have experienced steadily increasing blacklegged tick populations and Lyme disease cases. The New York State Department of Health (NYSDOH) performs annual tick and pathogen sampling in all N.Y. counties, but limited personnel often restricts the extent to which they sample in "Lyme-emergent regions" in central and western N.Y. I was fortunate to contribute to our knowledge in the region during my graduate work at SUNY ESF, and gladly share some of our findings to help raise awareness about the threat these organisms pose.

One of our project goals was to increase the resolution of tick sampling and pathogen screening efforts in Onondaga County. Risk of exposure is a combination of two factors: tick density and infection prevalence. In collaboration with the NYSDOH, we set out to measure tick populations across the county and evaluate them for infection with pathogens of human disease. We sampled forests from rural state and county parks, to patchy

urban forests in and around Syracuse. Our results indicated both urban and rural parks can host tick populations. Surprisingly, urban parks often yielded equal or higher average tick densities in comparison to rural parks! Ticks may seem like a threat more relevant in rural areas, but this is far from the truth. Our pathogen results were similarly insightful, and indicated Onondaga infection rates are consistent with those documented in eastern N.Y. in the last decade with 16% of nymphs, and 47.1% of adults being positive for the Lyme disease agent, though some sites had higher infection rates than others. Agents of human anaplasmosis and Borrelia miyamotoi infection were less common with infection rates for all ticks under 3%, however, these were most common in urban vs rural sites. Agents of human babesiosis and Powassan encephalitis were not detected in any ticks tested.

So how do you avoid becoming a tick's next meal? There are a variety of ways to reduce exposure to ticks and tick-borne disease. While it won't win you any fashion awards, mechanical barriers like tucking your pants into your socks (finely knit white socks are ideal to ensure younger stages can't squeeze through and you can see the ticks) and your shirt into your pants can increase the distance a tick must travel to reach bare skin. This provides greater opportunity for a tick to fall off, or be noticed and removed.

Using chemical barriers like DEET or permethrin enhances your protection, but should be applied as instructed to ensure safety of you and your pets. Concentrations of up to 30% DEET are recommended, and are most safely applied to one's clothes as opposed to bare skin. Permethrin, while effective, should not be used in households with cats, as it can be harmful to them. and is also toxic to bees and other pollinators. Additional methods include periodic "tick checks" involving a brief examination of one's clothes and showering within two hours of outdoor activity. These measures provide additional opportunities to find and remove any ticks on your person.

Creating hot and dry environments around your lawn, free of leaves or other debris ticks can use as cover reduces domestic exposure risk. Eliminating or moving cavity forming structures (woodpiles or stone walls) away from your home lowers the chance small mammals (especially white-footed mice) will carry ticks into your lawn. Similarly, bird feeders should only be operated in winter, if at all, to reduce visits from tick-carrying wildlife in your backyard. If you do find a tick attached to you, proper removal is important. Old practices like using heat, detergent, or other irritants should be avoided, as these cause ticks to regurgitate potentially infected fluids into the wound prior to detachment. The safest method of removal is using fine-tipped tweezers, although other mechanical means of removal are commercially available. Keep an eve on any bites for up to 30 days, and if a bulls-eye rash, extreme fatigue, or flulike symptoms develop, promptly see a physician. For a thorough overview of tick removal, more information is available at https://www.health.ny.gov/ diseases/communicable/lyme/.

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

Vernal Pools

ED PIESTRAK

his past fall I had the opportunity to attend the WFL chapter meeting, which had a presentation on vernal pools. Mr. Robert Benton, Jr. from Sherburne, NY was the featured speaker and he had a vast background and enthusiasm for vernal pools and did an excellent presentation. For the average forest owner, incorporating vernal pools on their property may appear to be something that is difficult to get in place. However, it does not have to be that way.

This past January I purchased a piece of

property that had a recent timber sale and had quite a few trails and roads in place. When going about the property in early spring we noticed multiple areas whereby water was retained on the trail system. The wet areas had an abundance of egg masses from various types of amphibians, especially frogs. We felt very uncomfortable going on these trails since we would have to run over sale in a dozen or more years, we decided to

the egg masses and in turn destroy the future creatures. Instead of waiting for an additional



Photo of a recently constructed vernal pool is what we mean by dithcing the side on the trails. We placed some logs in them to have a place whereby the frogs and turtles can relax and enjoy the safety of the pool, especially if a predator makes an appearance.



This is a vernal pool on a trail that we would not utilize due to it being in a low area. This makes an excellent breeding spot.

improve the road system by ditching the side of the roads and have the water retained in the ditches, which then became vernal pools. Next spring the amphibians will have a safe place to have their young without humans disturbing their habitat.

The Eastern red-spotted newts utilize the vernal pools for breeding purposes and produce red eft when they hatch out. Then they will leave the pool and travel up to one mile through the forest to spend two or three years in the soil as eastern spotted newts before returning to the vernal pool for breeding the next generation. Therefore pools located in unbroken forest areas provide an excellent environment for their success and survival. This area provides a couple of hundred acres of undisturbed forestland which is an ideal habitat situation should the forest area be broken with a highway, agriculture field, etc. This could interfere with the overall movement of the eastern spotted newts.

Thus our suggestion would be if and when you have a timber sale, you need to discuss with your forester and logger where wet spots are and how you can preserve them – however small – into vernal pools. Our forester, Mr. Bruce Robinson, was very effective in this process. Usually the logger will come back after the sale to return the trail system to a usable area. With a dozer, the process of incorporating vernal pools would not take much time with minimal or no cost to the landowner. The benefits are valuable if you enjoy going about your property and seeing all the small and large water areas being utilized by these small important creatures. Depending on the soil, we have found that some of the vernal pools will hold a little water on a year round basis, which is okay since the frogs will utilize them as homes. The newts and salamanders will seek the safety of your forest understory and return to those wet areas in the ongoing years.

These small and large vernal pools have many uses. They are regular feeding areas for turkeys and raccoons as we have observed multiple tracks surrounding them. However, with so many of them in each pool their survival rate is quite high. Also, multiple animals utilize the pools as drinking areas and birds enjoy bathing in them.

It is a win-win situation for the landowners. Like we have quoted in the past, "If you build it, they will come," and we can surely attest to that.

Ed Piestrak is a member of the WFL chapter of NYFOA.

Ask a Professional (continued)

By knowing these types of harvests, and their intended outcomes, one assessment of sustainability can consider whether the intended outcome was attained. As an additional tool to assess sustainability, the misuse of the language of harvesting may indicate an unsustainable activity. For example, someone suggesting the need to "thin the woods to let some new trees establish" is mixing the language of intermediate and regeneration harvests, and suggesting they will accomplish an ill-conceived outcome. If the intent is to improve the current forest, then the trees selected for harvest should exclude trees that have one or more desirable criteria (Figure 3). In intermediate harvests, the average size of residual trees should typically increase as should their health and vigor. If the intent is to regenerate or favor an established new age class, then the harvest should provide appropriate conditions of sunlight and soil disturbance to ensure success.

There are some unfortunately common examples of unsustainable harvests. One example is typified by statements such as "just cut some of the over-mature trees", or "cut the big ones to let the little ones grow." These imply, falsely, that the



Figure 4. Deer can significantly and negatively impact the sustainability of the forest. The fence in the harvested area shows what can happen if deer are excluded. By selective browsing, deer can impair or prevent the regeneration of the next forest. (Photo courtesy of Dr. Gary Alt)

larger trees are older than the smaller trees of about the same height. Certainly a seedling is younger than a canopy tree, but two trees in the canopy are almost certainly the same age. These examples of cutting practices are exploitive, and occur by cutting all trees above a certain diameter threshold or only the

most valuable trees. These are called "diameter-limit" or "selective" harvests. Another example, increasingly recognized as unsustainable, is a regeneration harvest that fails to manage the impacts of deer or the abundance of interfering vegetation. Deer and interfering vegetation merit a broader discussion, but either can result in an unsustainable regeneration harvest (Figure 4).

Aesthetics and sustainability are both important, and both can be managed to satisfy the objectives of the landowner. The first step is to hire a forester who understands your values relative to aesthetics and your commitment to sustainability. Then, if your forester doesn't suggest it, ask to participate in a New York Forest Owners Association walking tour of a managed woods (Figure 5) so you can visualize different types of harvests and how the forest changes with time after a harvest

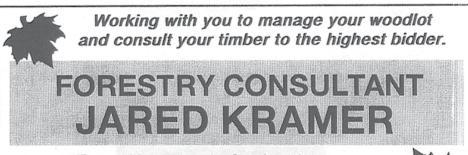
harvests and how the forest changes with time after a harvest

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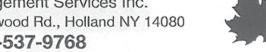


Figure 5. Chapters of The New York Forest Owners Association sponsor walking tours of managed woodlands, called woods walks, to help members and others learn about sustainable woodland management.





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The New York Forest Owner 55:4 • July/August 2017

Member Profile:

Charles and Karen Starks

BRIANA BINKERD-DALE

harles Starks grew up on the property where he now lives with his wife Karen. After receiving a BA in military history at Empire State College, he spent most of his career as an internal investigator for the postal service, retiring in 2011. Karen grew up in the Berkshires and worked as a veterinary technician, a book editor, and an artist prior to also retiring in 2011.

Charles and Karen currently own 115 acre parcel on the north side of Dean Hill Road in Canaan, NY, and another 15 acres on the south side of Dean Hill Road (which is land locked). Charles's

grandparents bought the property in 1942 as a 145 acre defunct dairy farm. After Charles's grandparents passed away the property descended to his mother, who had to sell 30 acres in 1975. Charles inherited the land locked 15 acres when his father passed away in 1981, and the 115 remaining acres of the dairy farm when his mother passed away in 2000.

The property runs up the side and over the top of a southward facing hill, overlooking the NYS Thruway. It's mostly on a gentle slope, except for one steep section near the road. There is no

year-round water on the property, but there are a few seasonal streams. The soil is Dutchess county stony loam with shale near the surface in spots.

In 1942, when Charles's grandparents bought the property, only 10 acres were forested and the remainder was farmland. The farmland was mown for hay for a time. However, by the time Charles (born 1954) was a teenager, the formerly farmed acreage had gone to brush. Today, 113 acres are forested, with just the two acres



White ash measuring 21 inches DBH, with only one knot in the 32 feet of height shown.

surrounding the house currently mown. Nothing was planted except for a few poplars. All of the forested acreage grew on its own from the existing seed bank and hedgerows – though a former dairy farm, there were no wolf trees present. "Wolf tree" was a term popularized by some foresters during the second half of the 20th century, who suggested that the wide-spreading, old trees (often left in pastures to provide shade for livestock) were preying on forest resources and, like a wolf, should be culled to make way for merchantable timber.

The woods are mixed northern hardwoods; the only softwood present is eastern white pine. About 60% is white ash, which is bad timing for the Starks given their proximity to confirmed emerald ash borer (EAB) populations in Steventown NY (20 miles north), and Valton MA (25 miles northeast). "I am encouraging understory tree regrowth, in preparation for losing the ash," Charles said. He also performed an experiment where he took three sets of three crop trees each, girdled them, took them down the following season, and put them inside screening to see if any emerald ash borers hatched out. He did not see any evidence of current infestation, but expects that it will not



Red oak measuring 21 inches DBH, with 40 feet clear.

continued on page 22



Red oak measuring 24 inches DBH, with 24 feet clear.

be long before it reaches him. However, he is grateful that there is no Asian longhorn beetle (ALB) in the vicinity.

Charles and Karen do have a forester – they interviewed several for the position before settling on James Kelly, who works out of Sheffield MA. However, Charles does all of the physical work himself. He started managing some woods on the family property around 1980 after ending up in a writing group with a woman whose boyfriend was a forester. "His back was going out on him, so I started helping him out with the labor," Charles recalled. That led to working as a subcontractor doing timber stand improvement (TSI) for a time.

Charles enjoyed being in the woods, and after inheriting the 15 acres from his father in 1981, decided that rather than selling it or turning it back to farmland, he would manage it for timber. There have been times today that he wishes he had been a bit more ruthless with his thinning back in the 1980s, but he is glad that he got started when he did. "I had difficulty with being hard hearted," he remembers. "I was talking myself out of thinning instead of into it, and missed growth I could have gotten over the decades." Though Charles did some TSI work on the land in his 20s, there was no formal forest management plan

until 2013, mostly due to the fact that he wasn't living in the area until he retired in 2011.

"Some parts of the property have still never been managed in any way-I left the parts with marginal soil for last," Charles laughed. "But everywhere with good soil has been gone through at least once." He discovered NYFOA while looking for forestry resources for landowners, and got involved about 4-5 years ago, appreciating the additional information and resources available. woodswalks, and representation in state government. He enrolled in New York State's 480-a Forest Tax Law exemption program in 2013 and, long-term, is planning on leaving the property to family. "I've always liked being in the woods, and wanted to

do something to make our property more economically viable for the next generation," he said.

Charles has made good use of the US Geological Survey's (USGS) aerial photographs and maps, available on their website, both to track the growth of the forest over time and as a safety measure. He took the original USGS photo and enlarged the part showing just the Starks property. "I kept enlarging it until it is now 20" x 20", had it laminated, and marked the property lines and my logging trails on it. I numbered the intersections," he said. "When I go out to work, I tell my wife and put a post-it on the laminate, what intersection I am going to be working closest to, in case I need the EMTs."

The land is not used much for



Cherry measuring 20 inches DBH, with 32 feet clear.



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recreation, except for walking for Charles and Karen. They do have friends who hunt deer on the property, but Charles does not see that as an effective control for deer pressure, which they have a significant level of. "The deer have been browsing mostly oak seedlings; we get good regeneration on the forest floor, but the seedlings are gone after a couple of years," he said. They do have good maple and cherry regeneration, while the canopy is too closed for pine. He is going to be having a small 4-5 acre logging job done this fall/winter, and plans on leaving the tree tops behind for protection for tree seedlings and to discourage the deer. Charles is also considering putting in an exclosure or two. He continually fights against bittersweet and honeysuckle, and has multiflora rose, but not badly yet.

Charles's biggest challenge is finding the time to get things done, and, as he gets older, the energy. His 40 horsepower four wheel drive tractor helps a lot, as did taking the Game of Logging course, which he highly recommends. One suggestion that he had regarding thinning technique was to put the trees on the ground from the get-go, rather than double girdling them. This avoids girdled trees snapping off at the girdle and potentially landing on or otherwise damaging nearby crop trees. His advice to other forest owners is as follows, "Think long term. Educate yourself about how the woods evolve with forestry. Don't have preconceived notions of how forestry/logging makes the woods look better or worse."

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

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