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 2022

Does Black Cherry Have a Future in New York?

Volume 60 Number 6

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New York Forest Owners Association
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Volume 60, Number 6

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Please address all membership fees and change of address requests to PO Box 541, Lima, NY 14485 or lgooding@nyfoa.org. 1-800-836-3566. Cost of family membership/subscription is $55.

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Cover: High quality, mature cherry sawtimber is a welcome sight in anyone's woodlot, but regeneration must be addressed prior to harvest. See full article on page 20. Photo courtesy of Jeff Joseph.

From The Executive Director

Why are leaves always taking risks?

Because they constantly go out on a limb.

How did the tree get lost?

It took the wrong root.

Why are trees great at networking?

Because they're always branching out.

Har. Har. Har. You got to love good ole joke jokes, or "dad jokes" as they call them, especially ones about trees—jokes only a NYFOAn can fully appreciate. But these tree jokes make me reflect on NYFOA.

I can say with confidence that NYFOA is pretty darn good at branching "in." The peer-to-peer network that is NYFOA is probably one of the top benefits that our organization has to offer its membership. The opportunity to connect with others who share the same passion for the woods. The opportunity to connect with someone who might be putting some practice to work on their property that you've never done but want to and don't know where to start. If you haven't had a chance to experience this yet, I encourage you to take advantage of the woods walks or workshops our chapters have to offer in order to meet your fellow NYFOAns. Look to your chapter newsletter, the Woodlot e-newsletter, the NYFOA website, or just contact one of your chapter leaders to get information about them. I promise that you won't regret participating in one.

I can say with less confidence, however, that NYFOA has been good at branching "out." We are certainly known, but our networking outside tends to be less consistent and less proactive. I'm not being critical; I am actually quite impressed with how well known we are, but who we really are is less known and NYFOA is often recognized more as a "social club" for landowners — which is a gross mischaracterization. We are so much more than that. We are the leading organization providing education and peer-to-peer learning to forest owners in New York. We are the leading voice of the private landowner on forest related issues. But we can do better, and more. We can, and need to, take it to the next level.

Have you ever heard the term "working forest?" It is a term I find myself using more as your Executive Director than before and one I strongly suggest you add to your own vocabulary. A working forest is simply one that is being managed. Some might argue that it is limited to those strictly managing for timber, but I would argue that any management, whether for habitat and wildlife, or to grow mushrooms or big trees, to control invasive species, restore a degraded woods, sequester carbon, or for any other benefit that directly or indirectly helps the forest be healthy and productive defines a working forest. It has been further described as the business behind keeping a

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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***, woodswalks, chapter meetings, and statewide meetings.

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Editor's Notes

By Jeff Joseph

By the time you are reading this sometime in early November, strong winds have blown most of the remaining leaves off the trees (except for those stubborn oaks and beeches, which seem determined to hang onto their foliage, in an act of either denial or protest, I'm not sure which), and we have entered that phase of autumn when it's starting to get cold but, for many of us, before any snow has fallen. If you're at all like me you are spending much of your spare time frantically doing all the chores necessary to get ready for winter before it's too late, or maybe you are better organized than I am, and are leisurely sighting in your 12 gauge in preparation for this fall's hunt.

If you burn wood for heating, presumably your supply is well-seasoned from the dry heat we had so much of over the summer. My woodshed is stacked to the rafters almost exclusively with ash, which keeps us plenty warm, but still bums me out. Most of the ash on my property is along the valley bottom and creek, but my woodlot has one isolated stand of large diameter ash up the hill where some springs come to the surface. I was holding out hope that these trees might somehow miss the EAB onslaught, at least for a while, but in late summer I confirmed that at least three of them are infested, which most likely means I will be culling all of them too beginning next year. And while it is unlikely, I still keep an eye out for any trees showing signs of resistance. It's a slim hope, but one I can't seem to give up just yet.

All that aside, the real reason I am writing here is to invite you, as a *Forest Owner* reader and NYFOA

Photo courtesy of author.

member, to participate in a dialogue with your woodland-owning peers by contributing to this magazine. The real strength of this organization has always been in the collective knowledge base of its membership, so in sharing your experiences you are helping to educate your fellow members. There are many ways that you can do this, with some new ones starting with this issue:

- Consider writing an article for this magazine! Everyone's woodlot is unique, so each of us has a unique perspective on woodlot management, and unique experiences along the way. NYFOA has always been a grassroots organization, so you need not be a seasoned veteran or a professional in order to contribute to the *Forest Owner*. If this might be of interest to you, feel free to email submissions to me, or better yet contact me in advance with your idea(s) so that I can give you some basic parameters for submitting an article, which will increase the likelihood that we can publish what you have written;
- If you are not interested in writing yourself, but have ideas about what you would like to see covered in these pages, your suggestions are always welcome;
- You can nominate yourself or a worthy peer to be the subject of the Member Profile column;
- You can send me photos and a short writeup of your notable activities and/or observations for an occasional new column to be titled "What's Happening in Your Woodlot?";
- Chapter Chairs: you can send me photos of your woods walks or other events along with brief captions to allow members of other chapters to see what's been going on in your area;
- If you are a woodlot owner, AND are under 40, I would like to interview you for publication, as demographics of woodland ownership are changing rapidly, and we would like to do all we can to better understand the motivations and priorities of younger woodlot owners, and to encourage the next generation(s) to become involved in woodland stewardship;
- Would you be interested in participating in a "want ads" section either in the *Forest Owner* or on the NYFOA website? If yes, I'd like to hear from you;
- Would you be interested in advertising your business in the *Forest Owner* at a discounted member-only rate? If yes, I'd like to hear from you.

Last, and as always, we welcome and appreciate feedback and suggestions so feel free to contact me anytime.

Jeff Joseph is the managing editor of The New York Forest Owner and can be reached at jeffjosephwoodworker@gmail.com.

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

Improving Access to Your Woodlands and Maintaining Water Quality

Question: We live in a watershed that the town says has special importance. Right now I'm using trails for my ATV (all-terrain vehicle), but I might have the property logged in the future. How do I protect water quality? (Scott S., WFL region)

Answer: Several common woodland activities disturb leaf litter and soils. These activities and ground disturbance aren't necessarily a problem, and often support the owner's objectives. These activities range in intensity from a regularly used foot trail to commercial forest harvesting with large, mechanized equipment. Recognizing there are differences in the extent of impact, one feature common to these activities is that the disturbed, and sometimes compacted, soil creates the potential for soil erosion. However, another common feature is that best management practices (BMPs) can be used to prevent concerns with erosion and improve woodland access.

Forestry BMPs are practical and effective actions that prevent or minimize problems associated with the active use of woodlands. The use of BMPs is often associated with harvesting and the need to maintain water quality. Less commonly considered are those BMPs that are used for other outcomes, such as forest health, forest regeneration, or habitat enhancement. Many woodland owners have property where a commercial harvest has occurred, have an active harvest in progress, or plan for a future harvest. Other woodland owners conduct their own harvests with small-scale logging (Figure 1), or have lesser impact activities associated with recreational trails.

The development and more widespread use of harvesting BMPs followed what became the 1972 US Clean Water Act. In forestry, the concern is that water moves soil particles and results in erosion. Disturbed soils, such as after harvesting, are prone to erode. To minimize erosion, and keep soil on site, one needs to reduce the ability of water to move soil, by managing water to be in small quantities and moving slowly. Default to the mantra "manage small quantities of slow moving water."

Undisturbed forest soils are stable because they are protected by a mantle of decaying leaves, the impact of raindrops is deflected by downed logs and other coarse woody debris, and the porosity of the soils allow water to infiltrate rather than accumulate and move across the surface (Figure 2). Many of the BMPs address disturbance to forest soils that is typical of a forest harvest, and the need to stabilize the exposed and compacted soils of skid trails to prevent the onset of large quantities of fast moving water that causes erosion.

The primary role of harvesting BMPs is to address soil disturbances that might lead to erosion. Other harvesting related BMPs address thermal pollution of streams, communicating with foresters and loggers, and litter. The benefits of BMPs to maintain water quality during forest harvesting are the obvious reduction in the likelihood of soil erosion on disturbed

Figure 1. Personal-use activities can provide high levels of satisfaction, increased knowledge of forest ecology, and accumulated benefit to the growth and productivity of your woods. It is important to invest in training, safety equipment, and the correct tools.

Figure 2. All trails have the potential for compacted and exposed soils. Without BMPs, water accumulates on the road from the canopy and via lateral flow on upslope positions, and the aggregate of water increases speed. The result is a trail with complicated access and the movement of soil to some other location.

trails, but also access to trails and roads that might not otherwise be possible, utility of trails in seasons which might not otherwise possible, reduced wear and tear on equipment, improved access for other objectives, and enhanced wildlife habitat.

Foresters and loggers will all be familiar with harvesting BMPs, but it is still important to specifically include specific BMPs in all logging contracts. If you are planning a harvest, talk with your forester about BMPs that are appropriate for your situation. Don't include unnecessary BMPs in your contract. Owners can learn about guidelines for commercial forest harvesting BMPs from their state forestry agency (in NY look at *https://www.dec.ny.gov/docs/lands_forests_pdf/forestrybmp.pdf*), regional organizations (*http://www.u-s-c.org/forestrybmps.pdf*), and some county Soil and Water Conservation Districts (*https://www.ontswcd.com/forestry-bmps*).

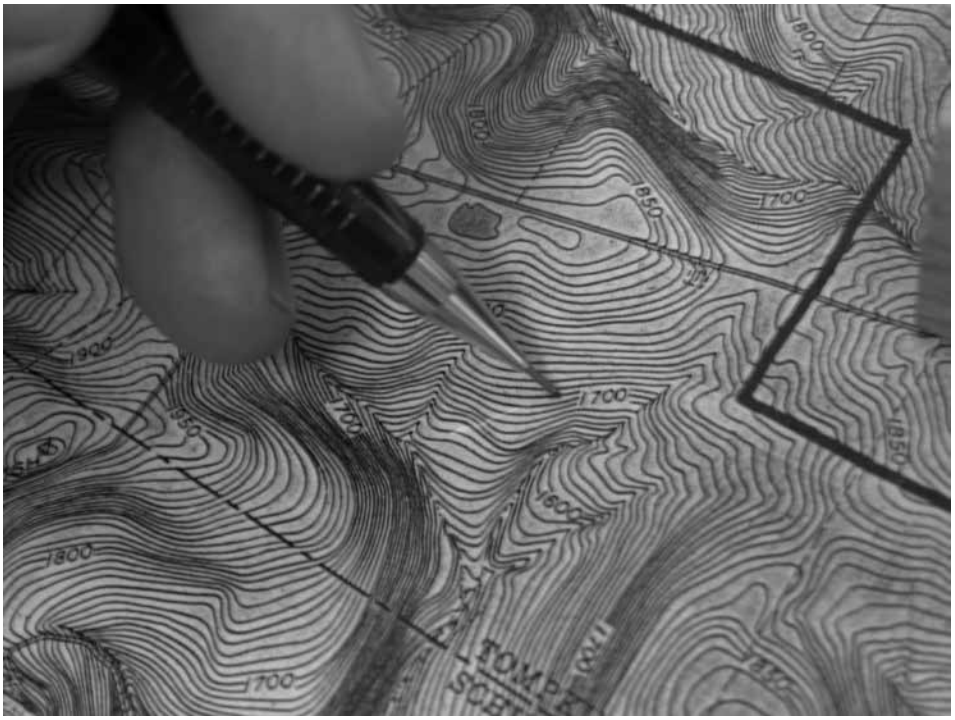

Figure 3. Traditional paper-copy topographic maps, or online digital models of topography, are great tools to visualize the potential for problems and solutions, for example where a trail meets a stream. Planning before activity helps mitigate consequences of these "check points."

If you are not harvesting, you can also contact a forester to explain how your past harvesting trails or current recreational trails might benefit from BMPs. Many of the BMPs for commercial harvesting can be adapted to other circumstances. For example, some elements of skid trail design are included in guidelines for the design of new trails (*https://open.lib.umn.edu/woodlandstewardship/chapter/recreational-trail-design/*).

Practices become recognized as best management practices through trial and experience. In some cases these have been tested experimentally for the frequency and effectiveness of use. Recent experience with severe-weather impacts on forest harvesting roads and trails resulted in new BMPs for commercial harvesting, as shared in a webinar (see archive at *https://youtu.be/ttr--IzFmi8*). The examples of extreme weather BMPs were collected by University of New Hampshire Cooperative Extension and partners based on what they had seen loggers use.

Many of the BMPs used in commercial harvesting can be scaled, as needed, to serve the interests of woodland owners with property where a harvest previously occurred or for other personal-use activities. BMPs can be organized or grouped based on when they are used: before, during, or after the activity.

Preparation to Prevent a Problem

One adage is that it is easier to prevent a problem than fix a problem. Planning is a BMP. Several steps and resources will help ensure that activities that disturb the soil will have no, or only localized, effect.

Planning is essential to anticipate the way the way soils will be disturbed, the season of disturbance, duration of the activity, soil and topographic conditions, frequency and locations of disturbance, and the flexibility to regulate the activity. Each circumstance will vary. During the planning process, consider if other

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Figure 4. Tractors were not designed to work in the woods (skidders are designed for woods work). The relatively high center of gravity of tractors necessitates extra effort to avoid problems (via planning and awareness) and protections if a problem develops. The Roll Over Protection System (ROPS) when the seat belt is used helps reduce the likelihood the operator is crushed if the tractor rolls over.

options (e.g., equipment, seasons, locations, etc.) provide the same outcome with equal or less risk and cost to manage soil disturbances. Also, topographic and soils maps can be used to identify and mark "control points" which are areas of particular concern (Figure 3). Control points might include steep or long slopes, a trail that slopes downhill to a creek, a stream crossing, areas of seasonally poor drainage, etc.

Resources that will help with planning include a topographic map with existing trails and roads, soils map, and list of current and future equipment. The current usage might be for logging equipment, but once a trail is available the temptation will be great for continued use. In fact, converting a skid trail to a recreational trail may be an objective of the harvest. Continued use may not be a problem, but decide in advance how the trail will be used after the harvest. BMPs for a logging trail will differ among future use by tractors, ATVs, or xc-skiing, for example.

A particularly good resource is the Natural Resources Conservation Service's (NRCS) web soil survey (websoilsurvey.nrcs.usda.gov). The web soil survey (WSS) together with online tools such as Google Earth Pro (GEP) provide insight and details about your property. Both programs require a bit of tenacity to learn to use, but several resources help. An article about WSS and GEP was published in this magazine (*www.nyfoa.org*, magazine archives, 2017, vol55 no.2) and as a ForestConnect factsheet (*https://blogs.cornell.edu/cceforestconnect/newsletter-content-for-educators/*). There are also tutorials that can be found by searching youtube.com for "web soil survey", including this link on the use of WSS to determine soil quality (*https://www.youtube.com/watch?v=z4zL8Yf7wZQ&t=7s*).

Owners not intending to harvest can also proceed with a similar planning effort and similar resources. These planning questions help increase the usability of trails throughout the year, reduce the effort required to maintain the trail, broaden the utility of the trail for multiple activities, and improve safety when using machinery. Some considerations in this circumstance include:

- Despite its current use (e.g., foot trail), what is the possibility of that trail becoming used by ATVs or other machines?
- If the trail passes through poorly drained or seasonally wet soils, can use be avoided during the wet season, or can protective structures such as bridges or corduroy be used?
- Are existing trails wide enough to accommodate ATVs and tractors? If you tow a wagon (e.g., to move firewood), is

Figure 5. Water bars are an example of a water control structure. Water bars help manage water in small quantities and slow the movement of water. Water bar spacing is closer on steeper slopes, and the water bar is angled to deflect water off the road.

Figure 6. The circle marks the location of a broad-based dip on a limited access road. Broad-based dips provide a gentler reconfiguration of the trail or road than do water bars. The broad-based dip includes a berm that deflects the flow of water and are out-sloped to move the water off the road or trail.

the trail sufficiently straight to avoid tight corners? Are their turn-arounds if you want to avoid backing up your trailer?

- Steep side-slopes and stumps in the trail, where an ATV or tractor might roll, must be corrected. All tractors should use a ROPS (roll over protection system), but don't use that as an alternative to safe trail design (Figure 4). Rebates on ROPS retro-fitting are available (*https://www.ropsr4u.org*).
- What equipment is owned or can be borrowed to assist with construction of sections of the trail needing greater inputs?

During Active Use

During active use, the soils are exposed to the action of water and are most vulnerable to erosion. During the planning phase, you will have identified the control points. Also, during the planning phase, you would have created a list of actions to reduce the risk of erosion at those check points.

The challenge of BMPs during active use is that the functionality of the practice might be limited by the active use. For example, water bars (Figure 5) are a highly effective structure that prevent aggregation of water and movement of the disturbed soil off of the skid trail. However, active use would quickly render the water bar ineffective. Thus, water bars are usually installed after activity ceases on a trail, or after the harvest.

In soils or topographic positions that are vulnerable, and the trail can't be positioned elsewhere, one tactic would be to use a broad-based dip (Figure 6) or similar out-sloped contouring of the trail. In some soils and high use situations, a broad-based dip would not be effective during the harvest. An alternative would be to ensure that all harvested wood to be skidded through that control point occurs in a short period of time, followed by the installation of a water bar. Thereafter, there is no subsequent use of that section of trail.

Owners not involved in a commercial harvest have a bit of an unusual situation given the active use phase may be sustained and of long-term use. In this case, some specific tactics warrant consideration and use as appropriate:

- Plan new trails and roads, or re-position existing trails and roads, to avoid problem areas;
- Designate the roads for use only during frozen or dry weather;
- Use traditional BMPs, but scaled for your circumstances (Figure 7);
- Invest in road and trail (re-) construction to improve its durability, which might include geotextile fabric, corduroy, or extra stone or gravel;
- Restrict speed of vehicles;
- Restrict use to high-flotation tires when soils are soft;
- Ditch the roadside and use the material to build the road surface higher (Figure 8).

After the Activity Ceases

The general goal after an activity such as a commercial timber sale has concluded is to leave the disturbed soil, usually the skid trail and landing, in a condition that prevents erosion and allows access and use by the owner. During the planning phase, the owner and forester should have discussed how the area will be used after the harvest.

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Figure 7. Appropriately scaled BMPs can provide the same benefit as BMPs used in commercial harvesting. This owner used micro water bars on an ATV trail. The water bars were effective and rebuilt as needed. Once vegetation was established on the trail, the need for these water bars diminished.

Owners having a commercial harvest should be working with a forester and have a sale contract that stipulates how the trails, roads, and landings are "put to rest." There are several common but few standard practices after a harvest. Note that all these practices require time and equipment of the logger. The number, design, and complexity of each practice should be stipulated in the sale contract, as well as if there is an added cost for that practice.

Standard practices, though not universal, include:

- Water bars
- Smoothing the landing
- Grading excessive ruts from trails (as defined in your contract)

Common practices include:

- The standard practices listed above
- Grading all, or specific, skid trails for use by specific types of vehicles or personal use (e.g., accessible by ATV or used for xc-skiing)
- Seeding trails and landings
- Installing culverts
- Building broad-based dips
- Construction of water control structures such as rubber belt deflectors
- Gates

Any of the above practices are also possible for owners who disturb soil through an activity other than a commercial harvest. Some owners have tractors, or access to other equipment to assist. Otherwise, the owner will need to be creative or hire a local contractor who has experience using machinery in the woods.

Woodland BMPs related to soil disturbance help prevent erosion into streams, reduce wear on equipment, keep users safe, and may enhance wildlife habitat. There is some effort and perhaps cost, but planned BMPs that align with the owner's objectives are worth the investment.

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Support for ForestConnect is provided by the Cornell University College of Agriculture and Life Sciences and USDA NIFA through McIntire-Stennis, Smith-Lever and the Renewable Resources Extension Act.

Figure 8. This owner invested in a backhoe and operator to ditch the upslope side of a woods road and pile the spoils onto the road. The result is a nearly year-round road that has served the owners for many years.

Wild Things in Your Woodlands

Kristi Sullivan

White-Breasted Nuthatch (*Sitta carolinensis*)

The white-breasted nuthatch is a small songbird with a short tail, large head, and pointed, narrow bill. Its underparts and face are white, and its upperparts are gray-blue. It has a black cap and a black "frame" around its face, though this coloration in females is typically gray. Both sexes have rusty patches near the rear. Despite its small size, it has a loud, nasally call. Males and females form monogamous pairs which are established after males perform a courtship dance and feeding. Most breeding occurs in the early summertime. The pair nests in a tree cavity and females lay 5-9 eggs per clutch. Both adults feed the chicks while they are still in the nest, and males even feed the female while the eggs are incubating, which occurs for 13-14 days.

The white-breasted nuthatch is common throughout North America. Their range extends from southern Canada to the north, parts of Mexico, northern Florida, and California to the south, and are found from coast to coast. In New York State, they can be found in all counties. They are non-migratory birds, and are permanent, year-round residents.

Their preferred habitats vary depend on their geographic location. In New York state, they can be found in mixed forests and open, deciduous forests. They also frequent disturbed areas such as parks, yards, and suburbs, if large trees are present. At higher altitudes, they prefer pine-oak woodlands. They nest in tree cavities or old woodpecker holes in both coniferous and deciduous trees.

White-breasted nuthatches are omnivorous and feed on a wide variety of insects, spiders, and seeds. Their diet tends to be more reliant on insects and spiders during the warmer months and more reliant on seeds during the cooler months. Some of their favorite prey include beetles, scale insects, caterpillars, ants, and various pest species. They are happy to indulge in bird feed mixtures containing sunflower seeds, suet, and nuts; sometimes, they take extra feed to store for the wintertime.

Their name comes from their tendency to "hatch" open larger nuts/seeds by using their beaks to hammer them into trees. They have a characteristic behavior when searching for food, hunting upside-down from the top of the tree to the bottom, using their strong feet to grasp onto branches. During the wintertime, they often join foraging flocks with other species (typically titmice and chickadees) to find food and to have extra awareness of predators. They are territorial birds, protecting their nesting cavity from other individuals by chasing them away and signaling agitation. It is thought that they protect their nests from squirrels by smearing beetles around the entrance, producing a smell that deters them.

White-breasted nuthatches play an important role in spreading seeds and controlling insect populations, especially as insect pests become more widespread and abundant. Though their numbers are high and stable, they do require the presence of live or dead trees with cavities to nest in. Landowners can do their part to protect and maintain local populations by leaving some dead trees standing, or creating several snags per acre of forest.

Photo taken by Syd Phillips.

Kristi Sullivan directs the New York State Master Naturalist Volunteer Program at Cornell. More information on managing habitat for wildlife can be found at https://blogs.cornell.edu/nymasternaturalist/resources/

Homestead Woodlot: Log Arch on a Budget

By Jeff Joseph

One thing you quickly learn when harvesting timber is that trees are *heavy*. This makes them potentially lethal, requiring care and skill in felling, but also simply cumbersome once safely on the ground. Lifting and moving even firewood length sections of logs can be surprisingly strenuous, and increasingly so as we age. But one of the benefits of age (we hope) is wisdom---learning how to work smarter versus harder.

What I once would heft out of sheer exuberance, or maybe just stubbornness or bravado, I now think twice about, and often find an easier way, as conservation of energy leaves me in better shape at the end of the day, and less sore the day(s) after.

For a while during the early stages of my woodlot ownership, when the excitement of felling and milling would perhaps override my better judgment (and when $ was too tight to own much in the way of equipment), I would fell a mature and promising looking hardwood stem, crosscut it to manageable lengths, then would carry a chainsaw mill into my woodlot, cut the sawlogs into slabs of varying thicknesses, and finally would carry out the slabs that I had cut *on my back*. I got a lot of great furniture wood that way, but the milling process is slow, noisy, dusty, and quite jarring with all the vibration from trying to rip your way through wood fibers (cutting *with* the grain), which is a whole different ballgame than the comparatively easy crosscutting that most of us are more familiar with, and that chainsaws are much better suited for. And those freshly cut slabs, some of which were 12/4, or 3" thick by 18-24" across (and 8' long), were full of water and brutally heavy. I am glad to have had the experience, and have some fond memories of that time, but also maybe a little trauma from the bone-crushing labor, and so these days am much more prone to bring a log or two to a friend or neighbor with a sawmill, which makes for comparatively quick and painless work.

This still leaves me with the need to move logs from my woodlot to my yard so they can be loaded onto a trailer and driven to a mill. If you are fortunate enough to own a tractor, a lot of this burden is alleviated, but for those of us (like me) who don't, there are still a variety of ways to move even large logs around without too much trouble.

Thankfully I now own a sturdy ATV (all-terrain vehicle) dedicated to woodlot tasks, and a heavy-duty cart which allows me to haul firewood from any corner of my woodlot with little difficulty, but hauling whole logs is another matter. One option I next considered was to buy (or perhaps make) a skidding cone, which is an open-ended thick plastic sleeve that slides over the front end of a log to be dragged, and which reduces friction and keeps it from getting stuck on roots and other obstacles while in transit. A chain that hooks to a hitch on the ATV threads through the front end of the cone and attaches to the log to be dragged. After asking around, the consensus seemed to be that these work fairly well to facilitate moving logs, and as they can be purchased for around $150, it seemed a very economical choice.

The next step up would be some form of log *arch*, which is a towable welded steel frame with wheels that lifts the front of the log, or sometimes the whole log, off the ground entirely (and holds it there with an attached winch and/or chain), and so greatly reduces friction and drag, which in turn also greatly reduces the necessary power required to

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Author with ATV and miniature log arch. Despite its small size and bargain price, this arch has proven to be both durable and effective in its operation. Photo courtesy of Jeff Joseph.

haul a log. Keeping the front end lifted also helps keep logs cleaner---less embedded dirt in the bark helps keep saw chain and mill blades sharp. These arches range from a variety of homemade designs, often welded from repurposed steel and salvaged car or truck tires, to a variety of fancier (and pricier) commercial designs. As my budget was limited for such a tool that would perhaps be used a handful of times each year, and as access to my woodlot requires traversing a relatively narrow bridge, I had thought that an arch would be both too large and expensive for my needs. I was in fact online looking to purchase a skidding cone when I by chance happened upon an arch that fit both my size and budgetary constraints.

At the time of this writing, Northern Tool (www.northerntool.com) sells their *Strongway ATV Log Skidding Arch with Winch* for $340 plus shipping (it was $299 when I bought mine in spring of 2021). It is rated for up to 1000 pounds, and logs up to 18 inches in diameter, but has a surprisingly small footprint, and weighs well under 100 pounds, so is easy to move around and store when not in use. At its price, I had feared it being of poor quality, but was very pleasantly surprised to find that its simple design is very sturdily built of a heavy gauge of square steel tube. The 16.5" tires and rims are also of a surprisingly good quality. It attaches to the ATV with a 2" quick coupler that is bolted to the welded arch frame.

The assembly was straightforward, and I quickly put the arch to its first test hauling a freshly-felled 13' x 8" diameter black birch log to be used as a beam in a cabin I was preparing to build. The winch performed admirably in lifting the leading end of the log off the ground, and the arch skidded the log over uneven terrain seemingly without any strain on its components. I have yet to put its weight or diameter limits to the test, but with the shorter length logs I customarily need I imagine it will be up to the task if handled with some care.

The one flaw to the arch is the chain that is included to wrap around the log to be transported, the links of which are of too small in their internal dimension to be attached to the hooks welded to the frame for that purpose. I just replaced the stock chain with one with larger links that I had on hand, and it works as intended. I suppose they had to cut costs somewhere, so while this was an unfortunate oversight on their part, considering the whole package, in the end this was a minor concern that was readily rectified.

Overall, this arch is a very impressive addition to my arsenal of woodlot tools, exceptional really when considering its price point, and makes things much easier on my back than the old days. While it will not have the capacity (or perhaps the durability) for regular use with very large diameter and exceedingly long sawlogs, for anyone looking to have some fun moving an occasional log around on a budget, this is a very attractive option. If you are looking for something even smaller and cheaper, consider buying a skidding cone, which are readily available from a variety of sellers online.

Jeff Joseph is the managing editor of The New York Forest Owner and can be reached at jeffjosephwoodworker@gmail.com

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

The Dry Summer of 2022

By Mark Whitmore

As it gets colder and snow is on the horizon, I have the firewood put up, so its time to kick back in the recliner and reflect on the past summer. In my mind, the summer of 2022 was notable for drought over much of New York. The impacts of drought to forest health were both dramatic and subtle. I think that most people, when they think of drought, associate it with trees with browned leaves in the in mid-summer. This is an extraordinary event for long-lived forest trees. Trees are generally adapted to the sites they have been living on so when they brown up, I take notice. That is exactly what I observed when visiting some sites in Westchester, Putnam, and Dutchess counties this summer. Those rocky outcrops that are so scenically beautiful and beat up on mowers, harbor thin soils that dry out rapidly. All those brown leaves are the result of "hydraulic failure" in the trees vascular system. Trees don't wilt like tomatoes, when the demand of their leaves for water outstrips the capacity of their roots to draw in water from the soil, an air pocket will form in the conductive tissue of the wood, causing what is called an embolism. It's like when you get a big bubble in a siphon tube, it stops working. When there is no water in the wood the leaves will die, then then the inner bark will dry up. If this happens over a majority of the tree, it will die. There are many examples of trees that have adapted to avoid hydraulic failure by losing

Beech leaf disease. Photo courtesy of NYSDEC.

Beech leaf disease. Photo courtesy of Jim Chatfield.

their leaves before an embolism forms. Unfortunately, they don't live in New York. I observed many different tree species impacted by the drought, but the oaks seemed to fare the best.

Only time will tell if there has been widespread tree mortality from this event, but with a changing climate it would be helpful to know which trees to plant in landscaping or a woodlot. This is where local expertise is important. New York is a big state, and trees adapted to some areas may not be the best in others. Yes, the oaks and hickories are a good bet, but local knowledge can help determine which species work best. Even within a species, individuals can differ in their tolerance of drought. A couple recent studies demonstrated that different clones of balsam poplar responded differently when stressed. This emphasizes the potential importance of working with locally adapted growing stock if you are planting.

Drought killing a whole tree or a large part of a tree is definitely dramatic, but not common. Far more frequently, we encounter impacts that are much more subtle and often associated with the impacts of forest pests. It is far more common to run across drought impacts that the scientific literature refers to as "carbon starvation". This happens when trees shut down their leaves to avoid hydraulic failure. In doing so, trees are diminishing their uptake of carbon, the building blocks they need to produce carbohydrates, or sugars etc., that they need to survive. In a worst-case scenario, this might lead to the tree dying, but most often it leads to subtle changes in the tree's capacity to produce exotic chemicals, like defensive compounds in leaves. A couple of the best examples of this are found in defoliating insects like forest tent caterpillars or the spongy moth (formerly known as Gypsy moth). I've seen many times with these insects that defoliation in a region starts in stands of preferred species on water stressed sites. With the most recent outbreak of forest tent caterpillar in the Finger Lakes, defoliation first appeared in sugar maple

continued on next page

stands growing on bands of sharply drained rocky strata along the steep lakeside slopes. This is also common with spongy moth outbreaks starting in oak stands on the sharply drained ridgetops in Pennsylvania. Indeed, last year I saw the same phenomenon on rocky outcrops around Lake George.

I'll bet there are many of us, myself included, who were awaiting spring 2022 to see what the spongy moth was going to do. With massive defoliation events in the western Finger Lakes and northern Hudson Valley up to Lake George, I was braced for continued defoliation and expansion. However, I really didn't know what to expect since this was the first big outbreak for almost 30 years. In Pennsylvania, they deal with outbreaks much more frequently and have a good idea what will happen. In NY in the 1980's, spongy moth populations collapsed because of a buildup of virus and fungal pathogens after heavy defoliation for a couple years. After that, I would find spongy moths here and there but there always seemed to be enough of the pathogens to keep populations in check. Those of us who study forest health in New York have no idea why this changed over the past few years to allow the dramatic defoliation. However, it appears that the pathogens have returned and defoliation decreased in 2022. Indeed, cursory egg mass counts and drooping carcasses in places I've visited indicate defoliation will not be a big problem next summer, BUT, I encourage woodlot owners to do their own egg mass surveys (instructions on the NYSDEC website). The big takeaway for me from the recent outbreak was the impact on hemlocks. Broadleaved trees can usually sustain a couple years of defoliation and recover. Hemlocks die with just one year of severe defoliation, even if they've been treated for hemlock woolly adelgid.

Beech leaf disease (BLD) continued its alarming range expansion last summer. You might recall from an earlier article that BLD was first detected in 2012 near Cleveland, Ohio. First thought to be caused by a nematode, it has since been demonstrated to be a complex association between the nematode and a common fungus, *Colletotrichum*. This is a tree killing disease, with smaller regeneration succumbing in 2 to 3 years and larger trees in 6 to 10. There are two very puzzling things about BLD: first, we have no idea where it came from, it just appeared in Ohio; second, we are baffled about how it spreads. We can guess until blue in the face, but we have no solid evidence for any particular mechanisms. What we witnessed in 2022 was the continued rapid spread of BLD. Since 2012, infections have been found from Maine to northern Virginia and west into Michigan and Ontario. In NY it has been found in 20 counties from 2018 to 2021, and in 2022, BLD was found in 11 more counties, from Buffalo to eastern Long Island. On a local level, NYSDEC has been observing an infected stand of beech near Cortland over the past three years, finding the infected area to increase from 1 to 15 acres. The sad part of this is we don't know how to manage BLD. I'm hoping some of the bright pathologists working on BLD will find a way to save this important forest tree. However, for now, following its spread is an important part of developing a management plan. There are no leaves on the trees now, but get the search image in your mind and occasionally look at the beech leaves as you walk in the woods. If you find it, let NYSDEC know! Saying nothing is doing nothing, and the beech need all the help we can muster.

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

From the Executive Director (continued)

forest healthy, both ecologically and financially. Why is this important? What does this have to do with a couple of dad jokes and NYFOA's networking? I thought you'd never ask.

You may have noticed in the last year that there has been a barrage of legislation addressing climate issues. Most notably the Climate Leadership and Community Protection Act (CLCPA) signed into law in 2019 that mandates a near complete elimination of carbon emissions by 2050 in NYS. The draft scoping plan for the CLCPA that will guide the creation of legislation, regulations, and programs to do that was released earlier this year. Fortunately, it recognizes the important role that forests play in our environment. Unfortunately, it fails to recognize who actually owns most of the forestland in the state. It is not government, and it is physically and financially impossible for the government to own it all. I think you all know that most of the forestland and woodlots in NY are owned by private landowners like you. Unfortunately, it fails to recognize the importance of private working forest. NYFOA submitted comments on specific parts of the scoping plan relative to our mission but ultimately sought to bring recognition to who owns the forest and that working family forests are critical to protecting the forest. [FYI – NYFOA's scoping plan comments will be posted on the NYFOA website.]

Some of you might wonder how "working" the forest *protects* the forest? Don't confuse protection with preservation. For the forest to be ecologically healthy, it must also remain financially healthy, which protects it from fragmentation and conversion. Financial health is not just dictated by the income from timber products, it is also dictated by the costs of ownership (maybe more so) — property taxes, income taxes, operating and management costs. When the costs to keep and care for a forest exceed a landowner's financial ability to do so, that forest often gets carved up and fragmented by development or permanently converted to some other use that is more financially lucrative; this is not good for the forest and its ecological health. But when the forest is financially healthy it is more likely to remain forest — it is protected. Whether you subscribe to the idea that climate change is manmade or not, is irrelevant and not the argument being addressed here or by NYFOA, but I think we can all agree that working forests are good for the climate and the members of this organization have been doing more than their part to protect the environment long before this was such a hot topic of debate and discussion.

As the leading organization representing private family forest owners in New York, NYFOA recognizes the need to be more proactively involved on your behalf. So, we are "going out on a limb," we are taking a bold "root," and we are "branching out." NYFOA is exploring ways in which it can expand its influence with private forest owners, to develop collaborative relationships with other kindred organizations, and to better engage with policy makers and bring recognition to who owns the forest, as keeping family forests working is the best way to protect the forest. We seek to be a resource for policy makers, government agencies, and the public. We seek to encourage and support legislation, regulations, and programs that would help forests be more financially healthy, so we can continue doing our part to keep them ecologically healthy — to be sought as a partner in protecting the climate. We seek to make our voice heard as an organization, but encourage you to engage as individuals as well — let your working family forest owner voice be heard. We seek to be known as more than a just social club for landowners.

Until next time…go to the woods — take it all in and love it until you can't.

–Craig Vollmer
NYFOA Executive Director

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Would you like to see an article about a particular topic we haven't covered?

Please send your suggestions to: Mary Beth Malmsheimer, editor at mmalmshe@syr.edu or Jeff Joseph, managing editor at jeffjosephwoodworker@gmail.com

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
Lynn Anderson	CNY	Jim Malseed	CNY
Marilyn Cole	LHC	Charles Muscato	NFC
Christine Cook	CDC	Nicole Valentine	LHC
Richard Engelhardt	NFC	Jeffrey Wilburn	SFL
Bill Goodman	SFL		

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Does Black Cherry Have a Future in New York?

By Jeff Joseph

There's a battle going on in our woodlots. While seemingly a peaceful place, there is an intense and incessant competition being waged there. The competitors are of course the trees, and the goal—the prize of the competition—is *light*. Access to direct sunlight is the key factor in determining the winners and losers, so once a regenerating stand reaches the point where the upper canopy is fully crowded with outstretched branches and photosynthesizing leaves, the trees less able to keep up with those more dominant will atrophy and begin to decline. Over time most will die.

Different timber species have evolved varying strategies to cope with this battle, which offer both advantages and disadvantages, depending on the growth stage of a forest stand. If you remember Aesop's fable of the tortoise and the hare, it provides a good analogy for this fundamental variation in strategies taken by forest trees.

Following a disturbance which creates a break in the canopy and allows sunlight to reach the forest floor, certain 'pioneer' species have evolved the ability to put on very rapid early growth, giving them the initial advantage needed to stay competitive with the surrounding trees. The tradeoff comes in a distinct lack of ability of these species to remain competitive without the benefit of full access to light. These are the *shade intolerant* species, and are the ones you see springing up first in old fields, or anywhere there has been a removal of trees substantial enough to bring lots of light to ground level (whether caused by hurricanes, tornadoes, fires, widespread clearing for agriculture, or heavy timber harvesting). These pioneering species, such as the aspens, most of the pines, paper and gray birch, and the cherries (among others), are the hares, which with their abundant youthful vigor run circles around their competitors at the outset, seemingly unconcerned about what the future may hold.

The tortoises are those species whose strategy is more long-term. They are not as vigorous at the outset, so may fall behind early on in a regenerating stand, but the strength of their approach lies in the fact that they are very comfortable biding their time in the shade and growing slowly until opportunity (disturbance and increased sun exposure) presents itself, at which point they spring into action and take full advantage, seemingly no worse for wear after the long wait. These are the *shade tolerant* species. The species most successful at implementing this strategy in our region are beech, sugar maple, hemlock, and red spruce.

With these two strategies at play, short of periodic disturbance, a forest stand will inevitably shift toward being dominated by the most shade tolerant species, in a process known as forest *succession*. This shift can be seen in full effect across our state, now that the vast majority of the second growth timber stands that have developed in New York (and the entire northeast) following the widespread abandonment of agriculture over the past 100+ years are maturing and entering a *late successional* phase of growth. From one perspective this is a benign development, as there is certainly no lack of trees overall as a result. But what we are losing—slowly but steadily—in the process are the hares, or the shade intolerant species, with vast consequences for the ecology, economics, and aesthetics of our woodlands statewide.

As the intolerants in our timber stands fail to reproduce or *regenerate* themselves in the low light conditions of a closed canopy forest, over time these species begin to disappear from the landscape. Without healthy, mature trees to produce seed to fall on sunlit soil, they inevitably die out. No seed, no trees.

This looming crisis of regeneration failure, especially of intolerants, is what gave rise to NYFOA's Restore New York Woodlands (RNYW) initiative, as a means of spreading the word about the quiet but inexorable failure of our woodlands to maintain their diversity and resilience heading into the future. In addition to the challenge of retaining shade intolerant species in this late stage of forest succession, there are three other distinct challenges to the regeneration of a vast range of timber species across the state that are highlighted by RNYW: 1) an unsustainably high deer population, which are annually eating their way through billions upon billions of tree seedlings that would otherwise comprise the next generation of forest; 2) the explosion of invasive plants, insects, and other non-native pathogens, which are either crowding out tree seedlings, or killing trees of all ages outright; and 3) the prevalence of high-grading (harvesting of *only* the biggest and best trees with no plan for regeneration) and other non-sustainable forms of exploitative timber harvest. It has been estimated that up to 70% of New York's forestlands are not regenerating.

Yet, for most of us living here in New York, it's all too easy to take wood and trees for granted. With so much of it all around us—19 million acres of timberlands, comprised of nearly 100 distinct tree species totaling countless

billions of individual trees—it is in some respects an understandable perspective. To the average layperson, there are simply trees *all over the place*, so what's the problem? You cut trees down, they come right back from seed and/ or stump sprouts with a vengeance. Most any open patch of land here is destined to become a timber stand if it is not one already, with no human intervention required. It is actually almost comical at times how much effort is required to maintain areas of our landscape without trees rapidly taking over.

This is all true, as far as it goes, and unless you're trying to keep a field a field, it's great, as historical research has shown us how many currently desertified areas of the earth were once fertile forestlands. But *what* trees are going to take hold and grow on vacant or disturbed lands? And how is the mix of tree species going to change and evolve over time—are those the same trees that will be there in 100 years? 500 years? Are our actions (or inactions) affecting the outcome? Does it matter?

Pretty much all wood is valuable and useful in some fashion, if not as sawtimber, at least as firewood, or habitat, or as a source of nutrients for the soil food web—and the next generation of trees—when it decays. So while assessing the full value of any given tree species is somewhat subjective, and while no one species can serve all potential uses equally well (which is one reason why diversity in our timber stands is such a good thing), the wood of certain species is truly unique—either for its utilitarian value, aesthetic value, financial value, ecological value, or ideally a combination of all of the above.

Do you have any black cherry in your timber stands, or maybe in the hedgerows around the fields on your property? While I have some (I would estimate no more than maybe 2% or so of the total in my woodlot), I wish it was a LOT more, as after working with wood for over 30 years, I have found it to be by far my favorite domestic timber, as it is extremely versatile, and excels in a variety of ways.

One of many towering black cherry trees seen along the loop trail in Pennsylvania's Hickory Creek Wilderness. Photos courtesy of author.

Cherry is extremely dimensionally stable once dry, is structurally strong without being too dense or heavy, is finely grained and so is very workable with either hand or power tools, has good rot resistance, is simply beautiful in its color (along with walnut it is one of our only dark domestic furniture/ cabinet woods) and grain patterning, takes a lustrous finish very nicely, and has a very good (although variable) value in the marketplace.

Unfortunately, in most parts of our state, *Prunus serotina* is a relatively minor presence in mixed hardwood stands, and only very rarely appears in pure or near-pure stands. It took me a

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Veneer quality cherry logs such as this one are highly prized around the world.

while of getting to know my woodlot before I had mentally tallied all the cherry on the property, as it is sparsely distributed, usually just individual stems mixed in with more abundant species. It is currently ranked as the 8th most abundant species statewide among all trees over 5" in diameter at breast height (DBH), which puts it at somewhere under 4% of the total. It is 14th in the number of saplings (1-4.9" DBH), which is down 24% since 2007, and 8th in seedlings (<1" DBH), which is down 35% since 2007.

As a shade-intolerant pioneer, cherry requires disturbance and full sun for successful regeneration. In excessive shade, most cherry seeds will simply not germinate and instead remain dormant in the soil; the seedlings that do successfully take root in low light conditions will rapidly die off, while larger trees that are denied sun by surrounding trees that overtop them will grow more slowly until they too decline and perish. Yet when direct sun is abundant, and it is successful in becoming established, cherry can become very prolific.

Some years back, my wife and I went on a camping trip to the Hickory Creek Wilderness in the Allegheny National Forest in northwestern PA. There were no grand vistas and not a lot of changes in elevation along the 13 mile loop trail, but the timber along the way certainly did not disappoint--mile after mile of unbroken, closed canopy forest dominated by the highest quality, arrow straight and fully mature cherry sawtimber I have ever seen (along with an endless knee-high carpet of New York and hay-scented ferns, but that's another story). Sadly, but not surprisingly, what we did *not* see in the shade of that unbroken canopy, was any sign of cherry regeneration. But for anyone who appreciates the rarity of such high quality, cherry dominant stands, and certainly for anyone who works with wood and appreciates the value of the world-class lumber within these massive stems, it was an incredible sight, transitory as it may be with little or no prospects for cherry regeneration in the shady, fern-laden understory.

But in the long run, forest composition is transitory, as natural disturbances or human disturbance clean the slate, and forest succession then cycles from pioneering, shade-intolerant species toward more stable 'climax' forest conditions, with the most shade-tolerant

species coming to predominate until the next widespread disturbance event starts the cycle over. In the case of the black cherry in Pennsylvania, these stands are a prime example of how man-made disruption of forest succession has so radically reshaped the composition and character of woodlands across the northeast that in the aftermath we have come to expect (or hope for) these ephemeral stages of succession to be more permanent than they are.

Prior to about 1875, today's cherry dominant stands on the Allegheny Plateau in north-central PA were predominantly hemlock/beech/maple (extremely shade tolerant, late-successional). In the 25 years that followed, those stands were largely clearcut (for timber, bark for leather tanning, industrial chemicals, charcoal, etc.), setting the stage for cherry to explode across the landscape. While black cherry made up an estimated 1% or less of Allegheny Plateau trees prior to the clearcutting, over a century later PA alone now supplies an estimated 70% of all cherry harvested in the US.

While all intolerants are faced with a substantial regeneration challenge, black cherry may unfortunately have a particularly hard road ahead. In a 2021 study entitled ***The Forest of Unintended Consequences: Anthropogenic Actions Trigger the Rise and Fall of Black Cherry*** (see References), the authors analyzed a range of factors that seem to be leading to a sharp decline of black cherry health and regeneration across the Allegheny Plateau, which encompasses the exceptional cherry growing region of Pennsylvania, but also areas along the southern tier of New York that are home to some of our state's best quality cherry. In addition to the threats identified by Restore New York Woodlands that affect a broad range of timber species, they found that there are a number of specific factors responsible for cherry's decline:

- Climate: The past 70 years have been warmer and wetter on the Allegheny Plateau. Native tree ranges can simply not keep up with the rapid rate of climate change, so many species are no longer in their ideal climatic niche; as the region has warmed and precipitation increased, this has altered the environment to favor an increase in cherry-specific pathogens;
- Excessive deer population: cherry is not a preferred deer browse, but they will eat it when the seedlings of more desirable species have been eradicated, or when the regeneration of preferred species has failed;
- Senescence, or declined seed production and increased mortality with tree age: cherry has a lifespan of +/-100 years, so in mature even-aged stands it is now aging past its prime reproductive years, leading to smaller mast (seed) crops annually;
- Negative plant-soil feedback loops: basically, the trees in a given area will increasingly change the ecological balance of their environment over time; in the case of cherry, there has been a substantial buildup of fungal pathogens that target cherry in areas where it has been prevalent, leading to a downward spiral of tree health and vigor;
- Altered nitrogen deposition: the Allegheny Plateau is directly downwind of one of the most heavily industrialized areas of the U.S. This historically resulted in a massive amount of nitrogen pollution being spread across the landscape, and cherry has been shown to be one of the most responsive in its growth rate of all of our timber species when fertilized with nitrogen (2nd only to tulip poplar). Over the past three decades, with the passage of Clean Air Act legislation, nitrogen being released from Midwest smokestacks has declined by nearly 50%, slowing cherry growth and competitiveness.

With all of these threats to black cherry's health and reproductive success, one thing is very clear---if we want cherry to remain as a valuable component of our woodlands into the future, we will have to deliberately manage for it. A few ideas to consider:

- If you haven't already, identify all the black cherry on your property, noting its age and state of health;
- If you haven't already, develop a management plan for your timber stands that includes specifics on how you intend to regenerate cherry and other intolerants;
- Prior to initiating a timber harvest, work with a forester to develop a plan to open the canopy in areas where there are quality cherry seed trees on your property to help ensure some advance regeneration;
- Create small patch openings (mini-clearcuts in circles or strips around cherry seed trees, minimum size as wide/long as your trees are tall) to allow adequate light to reach germinating cherry seeds;
- Use crop tree management to release the crowns of potential cherry seed trees;
- Identify and control invasive and interfering plants;
- Harvest deer in your woodlot annually, or consider allowing others to hunt your property to try and keep the population in check;
- **Don't** engage in high-grading or diameter limit cutting.

Short of very large and widespread disturbances across the landscape once again giving cherry a broad competitive advantage (such as happened post-clearcut in Pennsylvania, and which is *very* unlikely anytime soon), it will be up to us to ensure that cherry has a fighting chance, as what we do (or don't do) today will largely determine its fate long into the future. It would be a tragedy if a century from now future woodland owners (and woodworkers) were to look back on our time as the "end of the cherry era."

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Jeff Joseph is managing editor of this magazine.

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