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 2012

Member Profile: Charlie and Sarah Stackhouse

Volume 50 Number 4

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People Caring About NY's Trees and Forests
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In This Issue . . .

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Volume 50, Number 4

The New York Forest Owner is a bi-monthly publication of The New York Forest Owners Association, PO Box 541, Lima, NY 14485. Materials submitted for publication should be sent to: ***Mary Beth Malmsheimer****, Editor, The New York Forest Owner, 134 Lincklaen Street, Cazenovia, New York 13035. Materials may also be e-mailed to mmalmshe@syr.edu. Articles, artwork and photos are invited and if requested, are returned after use.* ***The deadline for submission for the September/October issue is August 1, 2012.***

Please address all membership fees and change of address requests to PO Box 541, Lima, NY 14485. 1-800-836-3566. Cost of family membership/subscription is $35.

This publication is printed on Finch Opaque, Smooth, 70 lb. text paper. Located in the beautiful Adirondacks, Finch has long understood that the viability of our business relies on the wise use—and reuse—of resources. Finch papers are made with renewable energy, post-consumer recycled fiber and elemental chlorine-free pulps. In addition, Finch Paper was the first integrated paper mill in the US to received both the Forest Management and Chain of Custody certifications from the Forest Stewardship Council and the Sustainable Forestry Initiative.

www.nyfoa.org

Cover: Charlie, Sarah and their daughter Sally by The Big White Oak, the biggest tree on the property. It is in the woods now, but you can tell from the size of the lower branches that much of its life was spent in the open. For member profile see page 21. Photo courtesy of the Stackhouse's.

From The President

Spring is planting season for many woodlot owners just as it is for farmers. Late this spring I spent several days at our Schuyler County property planting trees I'd obtained from DEC in Saratoga. Since many were hardwoods I also had to protect them with tree tubes. Ever mindful of Poor Richard's old adage, "Experience keeps a dear school, but fools will learn in no other, and scarce in that," I first tried to learn as much as possible from others (NYFOA is great resource for this, cf. Peter Smallidge's article on page 6) and then, to make sure I get my due for my invariable "tuition," keep notes on what works and what doesn't.

As a result, over the years, my new trees' survival rates have improved significantly. In addition to notes I make myself I now have a calendar on what to do when, e.g., note/mark in late summer what trees didn't make it and plan for their replacement next spring. Some of this is pretty obvious stuff but still I can overlook it. One perennial problem I have is restricting myself to a reasonable number to plant so I have enough time to plant the seedlings before they expire. However, as I often find I have trouble restraining myself, I have, perforce, learned how, by special handling, to keep them viable while awaiting planting for a few weeks more. In the end, seeing 15' high red oaks that were a mere 6" high a few years ago is quite inspiring. In any event, it's a great way to get outside and reacquaint myself with our property as well as make improvements to it.

NYFOA continues to work to expand its outreach, both to attract new members and to help educate the general public as to what's taking place in the woods around them. A new aspect of this outreach is to get articles written on woodlot-related subjects and have them placed in local papers. Some could also be used in chapter newsletters. We're starting to develop a "stock" collection of such articles. We invite members to suggest topics you'd like to see covered or think would be of interest in your community. We'd also welcome suggestions for the names of newspapers, Penny Savers and similar publications that you think would be an appropriate venue for such articles. Suggestions can be sent directly to me at *jminor@nyfoa.org*. Also, if there are radio shows that you think fellow woodlot owners listen to that would mention our events or be willing to host a discussion on woodland topics we'd like to hear about those as well.

And finally, a most heartfelt **thank you** to the very many of you who responded so generously to our spring appeal for donations. You have set what appears to be a new record for support of our shared mission. Your board and I remain committed to seeing that these additional funds are used most effectively to further that mission.

–Jim Minor
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.

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.

( ) I/We own _____acres of woodland.
( ) I/We do not own woodland but support the Association's objectives.

Name: _____
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State/ Zip: _____
Telephone: _____
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County of Residence: _____
County of Woodlot: _____
Referred by: _____

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The State Wildlife Grant Comes to a Close

RICH TABER

NYFOA finished its contractual obligations to the NYSDEC recently for the SWG project. SWG stands for "State Wildlife Grant," which was funded through a congressional mandate and administered by the U.S Fish and Wildlife Service. States were tasked to come up with management scenarios which would facilitate wildlife species of greatest conservation need (SGCN) from becoming threatened or endangered. NYFOA received this contract through a competitive bidding process. NYFOA's project dealt specifically with identifying landowner's who might own habitats which are conducive to SGCN (amphibians, birds, mammals and reptiles) and who would be willing to be involved in wildlife habitat improvement. Cornell Cooperative Extension of Chenango County was selected to spearhead this project as a subcontractor to NYFOA to carry out much of the actual work of the project. There were six objectives:

1. Develop a website and educational materials for landowners, (which can be accessed at *www.nyfoa.org*, and clicking on "Wild About Wildlife". Several publications, such as Habitat Stewardship Series brochures and Watershed oriented publications are available.
2. Disseminate information about SGCN through a multitude of methods.
3. Conduct one on one contacts with landowners. This was facilitated through the Cornell Master Forest Owner program managed by Gary Goff.
4. Develop a database of landowners in specific locations, who would like further involvement in wildlife habitat improvement. This effort was completed by conducting landowner surveys in several counties by Cornell's Department of Natural Resources Dr. Shorna Allred and Ph.D. candidate Ashley Dayer.
5. Develop maps of conducive wildlife habitat and correlate this information with Objective 4. This was done by using Geographic Information Systems by Cornell's Kristi Sullivan and Steve Morreale.
6. Develop a Strategic Action Plan for reaching landowners throughout New York State which could be adopted by the DEC, which included specific forestry habitat improvement practices, recommendations for landowner outreach, and human dimensions research.

A great deal was accomplished in this project; measurable improvements have been made in maintaining populations of SGCN, and will continue to do so.

Rich Taber, a member of the CNY chapter of NYFOA, is State Wildlife Grant Project Manager, Cornell Cooperative Extension of Chenango County

NYFOA STORE

Show your support for the Association! All items display the NYFOA logo.

1. Sweatshirt.....$20.00
   Green M, L, XL
   Grey M, L, XL

2. Long Sleeve T-Shirt.....$14.00
   Green M, L, XL
   Grey M, L, XL

3. Short Sleeve T-Shirt.....$10.00
   Green M, L, XL
   Grey M, L, XL

All shirts are heavy weight cotton with white lettering on the green and green lettering on the grey.

4. Baseball Style Cap.....$14.00
   Green with Tan logo, one size

5. NYFOA Member Sign.....$ 3.00
   12x12 Heavy Gauge Plastic
   Yellow with green lettering

6. Mugs.....$ 4.00
   White with green lettering

7. Cutting Boards.....$ 5.00
   Wood, 5 ½ x7 inches

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Make check payable to NYFOA. Send the completed form to: NYFOA, P.O. Box 541, Lima, New York 14485. Questions? Call 800-836-3566

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 affect 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

Planting a Windbreak

Question:

How do I establish a windbreak on my property? The area I'm interested in planting is next to an agricultural field. What species should I use, can I plant all the same species, and will a single row be sufficient?

Answer:

Planting trees and shrubs can be a fun and rewarding project. Thinking through the details and beginning the planning process in the previous summer is helpful because there are important steps to take before planting next spring. A good reference is the Cornell University Cooperative Extension 2009 bulletin *Northeastern Tree Planting & Reforestation* available as a free publication at *www.ForestConnect.info*

Windbreaks are linear or curved rows of trees and/or shrubs between two areas. Windbreaks will, presumably, break or slow wind speeds, but can also provide habitat for some wildlife, provide a source of forest products, and change the visual aesthetics. Windbreaks will likely accumulate a snow drift on the downwind side, so positioning the windbreak is important.

The National Agroforestry Center has a variety of publications on the topic of windbreaks. This "Working Trees" fact sheet is a good starting point and includes links to other resources *http://www.unl.edu/nac/Working%20Trees%20Info%20Sheets/wb.info.05.07.12.v.8.pdf*

After deciding the reason or reasons why you want to create a windbreak, there are three essential steps to increase the likelihood of a successful planting. The three steps are to (1) match the tree or shrub species planted to the existing soil type, (2) prepare the planting site to control competing vegetation, and (3) plan for protection of seedlings from herbivores such as deer, mice and voles.

There are many reasons why someone might create a windbreak, and those reasons influence the details of how the windbreak is established. Breaking or slowing the wind can benefit a home owner through reduced energy costs or lessened dust from the field. Adjacent to an area of crop production, the windbreak may shade the crops a bit, but the reduced wind stress can increase production for some species. Windbreaks can be developed with creative variations on straight-line planting to provide increased edge that might attract some wildlife. Species could be mixed in a windbreak with a plan for future products such as fence posts, livestock

Tree planting, as a windbreak or otherwise, can add a variety to the tree and shrub species present on your property. The opaque tree tubes shown in this picture will protect the seedlings from deer and other herbivores, but need annual maintenance. Without protection, most planted seedlings in NY would be damaged by deer, rabbits, voles or mice.

forage, maple syrup, or mushroom production. The desired outcome or objectives for the windbreak will influence the pattern of planting, space between rows (which is also relevant to the mowing equipment), the intermixing of species, the length and width of the windbreak, and the ease of management.

Step 1 – Know your soils. Tree and shrub planting, in a windbreak or otherwise, is rather unique as a forest owner activity because the most important consideration is less about the owner's objective and more about what the soil will allow. The second growth forests that dominate today's landscape, whether naturally or artificially established, demonstrate some of the problems that can happen when tree species establish on soils for which they are not suited. The trees may initially grow, but their long-term vigor and survival is limited if they are "off site."

A visit to the county's Soil and Water Conservation district office will help you to identify the soil type where planting is intended. The soil type descriptions include lists of species that are suitable for planting. Also, the soil descriptions, with the assistance of a soil technician, can be used to select a species that will grow well based on the soil's drainage and fertility. Owners can do some of their own research on the soils of their property from the data available from *http://websoilsurvey.nrcs.usda.gov*. The previously mentioned CUCE bulletin includes a table of species suitable for windbreaks.

Once the tree or shrub species appropriate for planting are selected, they can be ordered through local sources. The Soil and Water District may have some of the desired species available in their annual sale, or can recommend a nursery to obtain the seedlings. Plan to buy extra seedlings and cull out those with the smaller root collar diameters. Several studies have shown strong positive growth responses associated with the seedlings having the largest root collar diameter at the time of planting.

These planted sugar maples, not a windbreak as illustrated, show management by using tree guards to protect the base of the stem and regular mowing among trees.

Step 2 – Control interfering vegetation. The grasses and goldenrod that often dominate fields where seedlings are planted can have a double negative effect on the survival and growth of seedlings. In some cases, the planting site is dominated by interfering shrubs such as multiflora rose or autumn olive. In one capacity, these interfering plants have dense root systems that limit the ability of tree seedlings to acquire the water and minerals necessary for growth. Further, the interfering plants shade the seedlings limiting sunlight necessary for seedling photosynthesis and growth. In a second capacity, the interfering vegetation provides habitat for rabbits, voles and mice that might gnaw the tender bark of the seedlings (more on this below).

Either mechanical or chemical controls can be effective to reduce the impact of interfering vegetation on the planted seedlings. By late summer the planting site should be mown or brush-hogged. The root systems of interfering plants can be disrupted by furrowing, or spot or band herbicide treatments. In a Purdue University study (Jacobs et al. 2004) of 87 different hardwood plantations, seedling survival percentages were higher where chemical or chemical+ mechanical site preparation was used in comparison to only mechanical site preparation. After trees are planted, control of interfering vegetation will be necessary for several years.

Step 3 – Protect seedlings from herbivores. All efforts for species selection and site preparation will be for naught if the seedlings are killed by herbivores. Likely possible herbivores include deer, rabbits, voles and mice. Deer and rabbits may eat the tops of the seedlings. Rabbits, voles and mice may strip the bark at the base and girdle the seedlings. Strategies for protection can include some combination of selecting species that are not preferred, installing barriers to prevent herbivory, and reducing habitat that supports the herbivores.

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New York State Tree Farm News

Erin O'Neill

The Four Sided Sign
Side One: WOOD

As you know, Tree Farm concentrates on the premise of ecosystem management. Last issue, I talked about the jargon that the different professions engage in and for the next few issues, I'd like to break down a few pieces of that.

Good forestry is at the base of the Tree Farm program. Ultimately this means the legacy of the forest and trees on your woodlot. This is your biggest opportunity to see a return on the investment of time and money you've made.

Timber stand improvement, or just TSI as its commonly referred to (you know how much we foresters like our acronyms), is generally the cutting or culling of undesirable species. It is done for the sole purpose of improving the vigor, stocking, composition and productivity of a forest stand early on. It's accomplished by identifying the crop trees and removing poor quality trees or trees of the wrong species.

Very often, we as foresters shy away from recommending TSI because it is often an initial out of pocket expense for you. However, it is an important step in realizing your return on investment. The residual trees will grow faster and better when released and pruned prior to a commercial thinning and it is possible to shorten the rotation age to financial maturity of a timber stand by engaging in early stand treatment techniques.

Many of these techniques you can perform yourself after consultation with a forestry professional and proper safety training. For example, both pruning and removal of undesirable growing stock at a stage where it is less than 4" DBH (diameter at breast height) are fairly easy to do.

Following a proper TSI treatment with a commercial thinning, then leading into a series of customized silvicultural treatments decided upon by you and your forester, can ensure a legacy for your forest that includes a stand of timber that is has vigorous growth, desirable species, is fully stocked and provides a profit at harvest.

As I mentioned before, timber management is just one piece of the puzzle. Proper planning and a written management plan is key to developing your goals and working toward them with your forestry professional. If you need a head start, you can download the Management Plan Template from the American Tree Farm System website.

There are currently over 1,800 certified tree farms in NY State. If this program sounds like something you would like to be a part of, remember, a Tree Farm representative is only a phone call (1-800-836-3566) or e-mail (nytreefarm@hotmail.com) away.

Erin O'Neill is the Immediate Past Chair of the NYS Tree Farm Committee.

Are you interested in a particular topic and would like to see an article about it?

Please send your suggestions to:
Mary Beth Malmsheimer
Editor
The New York Forest Owner
at mmalmshe@syr.edu

Kid's Corner

Rebecca Hargrave

This image accompanies the article below and was submitted by Rebecca Hargrave. This shows two of the 4-H participants taking part in the Tree Measurement Challenge.

Do you have a photo of you and your kids or grandkids in your forest? If so, *The New York Forest Owner* would like to see it! Send an electronic or hard copy to *Forest Owner* editor, MaryBeth Malmsheimer, and it may end up on this page!

2012 NY 4-H Forestry Weekend a Huge Success!

Cornell Cooperative Extension (CCE) conducted their 6th annual 4-H Forestry Weekend at Cortland County's 4-H Camp Owahta, May 11-13, with 87 adults and youth participating. There were 54 youth (ranging in ages from 10 to 17) representing 13 NY counties. This year's attendance was by far the largest since the program started in 2007, and doubled last year's attendance!

This three-day event is for youth from across the state, aged 10 and up (and CCE staff and volunteers), interested in learning more about forests, as well as to select the NYS team that will go to the 2012 National 4-H Forestry Invitational (must be 14-19 for the national event). Information about the National event can be found at *http://4hforestryinvitational.org/*. The NYS Weekend is one component of the NYS 4-H Forestry Program.

The goal of the 4-H Forestry Program is three fold: (1) to increase youth awareness of forestry as a future career, of the impacts that forest have in their lives, and to create better future land stewards; (2) to create easy to use curriculum and materials to facilitate the instruction of forestry by 4-H volunteers and leaders, and other community groups; and (3) to field a team of New York youth for the National 4-H Forestry Invitational. The 4-H Forestry Program Team also encourages more forestry education and activities in 4-H clubs, schools, and summer and special project programming across the state.

The 2012 NY Forestry weekend activities included education and competition in tree identification, tree measurements, compass use, and topographic map reading. Youth also heard about forests and forestry as a career from professional forester Justin Perry with NYS DEC. In addition, we

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2012 Attendees of the 6th annual 4-H Forestry Weekend at Cortland County's 4-H Camp Owahta.

2012 Attendees taking part in the Topo Map Challenge.

Wild Things in Your Woodlands

Kristi Sullivan

Eastern Coyote (*Canis latrans)*

Photo: Alfred Viola, Northeastern University, Bugwood.org

The eastern coyote is larger than coyotes in the west. Adult females average 35-40 pounds, while males typically weigh 45-55 pounds. The coloration of most eastern coyotes is similar to that of a German shepherd, with gray on the back, neck, and upper sides. Some coyotes may be a lighter reddish-blond color, or even solid black. From a distance, coyotes can be distinguished from dogs because they carry their bushy, cylindrical tail outstretched and pointed slightly downward. Coyotes also have yellow eyes, and pointed upright ears. They are much larger than foxes.

Across New York State, summer is the time of year when you are most likely to hear the complex sounds of coyote serenades. At this time, when family units are together, communication occurs through a series of overlapping high, trembling howls combined with a series of short, high-pitched yips. Hearing or seeing a coyote is a thrill indeed.

Once an animal associated with the west, coyotes now live in every state east of the Mississippi River. New York State is home to 20,000 to 30,000 coyotes. They commonly inhabit overgrown fields, brushy thickets, and woodlands, and tend to travel trails, dirt roads and habitat edges. Although common in many areas, people rarely see them. Coyotes are usually secretive, avoiding humans by day and becoming more active at nighttime.

Coyotes breed in February and give birth to 2-10 pups (average 5-6) in April. Larger litters are born when coyote populations are low and food is plentiful. Mothers give birth in a ground den (e.g. renovated woodchuck or fox den), in hollow logs or rock caves. Families stay together until fall or early winter, when the pups leave the family unit.

Coyotes are omnivores and eat just about anything. They are opportunistic, eating whatever is most abundant and easiest to obtain at any given time. Food includes small mammals, rabbits, woodchucks, beaver, insects, berries and other fruit. Coyotes also kill deer, both adults and fawns. However, they seldom prey on healthy adults and mostly feed on deer killed by other means (e.g. automobiles).

Although most coyotes are timid and stay away from people, some animals have lost their fear of humans. Coyotes that frequent highly populated areas are more likely to associate people with food and lose their fear. They can prey on house cats and may attack dogs, particularly as a territorial defense behavior during the breeding season and pup birthing period. Just seeing or hearing coyotes in the woods, fields, and brushy habitats in your area is little cause for alarm. However, a coyote that comes into your yard and refuses to leave even after you bang pots and pans to scare it away is a safety concern. The best thing you can do for coyotes is to prevent them from associating food with people by keeping garbage, birdseed and pet food safely secured indoors. Keeping pets indoors or under your control, especially at night, can also prevent conflicts.

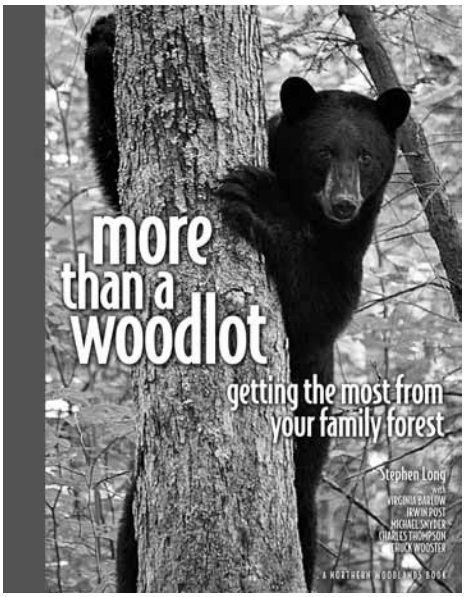
For more information about coyotes, visit *http://www.dec.state.ny.us/website/dfwmr/wildlife/coyinny.htm*

Kristi Sullivan is Co-Director of the Conservation Education and Research Program at Cornell University's Department of Natural Resources. More information on managing habitat for wildlife, as well as upcoming educational programs, can be found by visiting the Conservation Education and Research Program web site at ArnotConservation.info

Book Review

Kurt Edwards

More Than a Woodlot: Getting the Most from Your Family Forest, by Stephen Long. Retail: $19.95 Paperback; 224 Pages; Photos and Illustrations.
ISBN: 978-0-9786599-4-3



For the private forest owner with limited silviculture knowledge "More Than a Woodlot-Getting the most from your family forest" by Stephen Long will guide you in planning for the future of your land. Long lives in Vermont and manages his family forest of ninety-five acres. As an editor of the *Northern Woodlands* magazine for seventeen years he has written numerous columns, editorials and features. This book is written specifically for the novice forest owner looking to increase the value of their forest whether it is for timber value, improved habitat for wildlife, to increase biodiversity in your woods or just personal enjoyment and responsible stewardship.

Since most landowners have disparate needs and interests and want different things from their woods "More than a Woodlot" is a must have for every forest owner. This all important guide is simply written; it is an enjoyable read and imparts vital information on every topic pertaining to a forest. From the history of the forest, to the different types of forests and how they were used in the past, to how land ownership has changed, and how tree values have changed, Long raises the question of the future of the family forest. This book is instructional in how to manage your land using the forest's natural system to enhance your land and leave it in better condition. It will teach you to be better stewards. One thing I realized in reading this book was that I could do more damage than good to my forest; this guide has shown me how to make the right choice for my woodlot.

Stephen Long and his co-authors cover masterfully such topics as the forest eco-system, succession planning, invasive species, and tree value whether for saw logs, to host wildlife, provide seed or become fire wood. He explains how the life and death of organisms can benefit or cause the demise of other organisms and how trees, insects and fungi co-exist in the forest. He tells of the very valuable aspects of a forest most people take for granted like cleaning the water and air, lessening the effects of floods, cooling the earth, absorbing carbon and producing oxygen. You will learn how the forester is a management partner, someone with another set of eyes and set of experiences to draw from. Long discusses the different roles of the forester and the logger. Hiring a professional forester is like hiring a doctor for your forest. Foresters have different areas of expertise, whether it is in timber value or wildlife enhancement.

When planning for the future of your land this book can be your trusted guide. He includes a sample contract as a guide for a timber sale. Long explains how having a written management plan will help you stay on track to achieve your specific goals. This management plan is necessary if your state offers a tax reduction plan and you choose to participate. He covers how financial and tax implications are very complex and suggests you seek a good timber tax accountant. And after all your years of being a responsible steward you should consider talking with an estate planner to be sure your wishes are followed concerning the future of your beloved forest.

In conclusion this book is a great tool for the family forest. It gives a great framework and direction, it provokes thoughts you may not have considered. The author is clearly looking out for the future of preserving forests, the health of the forest and to help the forest owner continue to get pleasure from their forest land.

If you would like to order this book, contact: amy@northernwoodlands.org or 800-290-5232

Kurt Edwards is chairman of the SAC chapter of NYFOA. He lives in Mayfield on his 193 acrea of forest land with his wife Kristie. He delivers for Stewart's Shops Corp. and has been a member of NYFOA for 3 years.

The Economic Potential Unlocked

Carl Wiedemann

Last year I wrote an article about unlocking the economic potential of your woodlot in the *New York Forest Owner* (November/December 2011 issue, page 12). Woodland owners were urged to use silviculture to develop the commercial value of their forest. I wrote that the annual growth in most woodlots is worth perhaps $5 per acre per year because of an abundance of low value trees. I also speculated that silviculture could raise the value of annual growth to $45 per acre per year—a significant increase. To bolster that case I'd like to move from theory to the real world. So here is the story of our woodlot and how management has improved commercial value and productivity.

Forty years ago I worked for the Conservation Department (now DEC) in western New York. I was assigned to assist landowners in all aspects of forestry—a great job for a young forester which I enjoyed for several years. My experiences as a service forester fired my ambition to own and manage a woodlot profitably.

Ten years later we bought a woodlot. Although every woodlot is unique, the one we bought typifies many in New York State. There are "two rocks for every dirt"—but that dirt can grow some good timber. Two hundred years ago this property was entirely forested. During the 19th century the forest was cleared and the land was used for pasture. Farming ended about 1900 and trees quickly reclaimed the site—including red oak, red maple, sugar maple, and hemlock. About half of the privately owned woodlands in the state have a similar history of conversion from forest to farm and then back to forest.

By the 1960's some of the trees that were reclaiming the land were large enough to have timber value. The owner at that time cut these trees and in 1966 sold the logged-out woodlot. The next owner planned to build a camp for recreational use, but he didn't know much about the forest or even the location of the boundary lines. The camp was never built and he sold the 83 acres to us in 1980.

Residual stand after logging in 2011

Looking Back

We still own the woodlot, and I have collected many statistics over the past thirty years. Here is a brief summary that shows how things have turned out so far.

Wiedemann Tree Farm

	1980	2011
Number of trees over 16″ in diameter	420	1,170
Timber volume (board feet) in trees > 16″	73,000	255,000
Stumpage value of trees > 16″	$8,000	$69,000
Annual growth per acre in board feet	40	185
Value of annual growth per acre	$4.38	$50.06

Over the past thirty years we have had three timber and firewood sales. These sales generated $33,000 in income—more than covering the original cost of the land plus thirty years of property taxes. The commercial harvests also removed poorer quality trees and gave better trees more room to grow. The positive impact of forest management is reflected in the dramatic increase in the value of annual growth from 1980 to 2011.

Here are some forestry lessons learned and confirmed from owning and managing a woodlot.

Lesson #1 – Harvesting trees will not destroy your woodlot

When I was a service forester I occasionally met landowners who were uncomfortable with the idea of harvesting trees. They were afraid that cutting trees might damage the fragile forest ecosystem and/or was inconsistent with forest preservation. However, consider the history of most woodlots in New York State. Millions of acres of forest were cut and burned to clear the land for farms during the 19th century. The remaining woodlots were repeatedly cut over and sometimes grazed. As economic conditions changed, millions of acres of fields and pastures were abandoned and

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Woodland Health

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

Coordinated by Mark Whitmore

Insects and Fungi Associated With Hickory Decline

By Douglas C. Allen, John J. Graham and Kim B. Adams

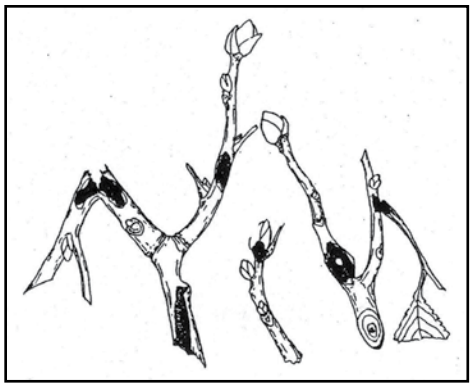


Figure 1. This illustration depicts twigs with typical damage (dark areas) caused by crotch feeding.

Problems with hickory decline continue in New York and I thought this excellent article would be timely as the bark beetle season gets underway. Please note this second part of a two-part article originally appeared in The New York Forest Owner *in January/February 2009*

—Mark Whitmore

This is part II of a discussion about hickory decline initiated in the last issue of the *Forest Owner*. In our previous article, we emphasized that hickory bark beetle appears to be the principle agent attacking stressed hickory. Historically, circumstantial evidence of hickory's predisposition to attack by this insect has been attributed to such things as drought, heavy grazing and a variety of unfavorable site and stand conditions.

Recently, Dr. Jennifer Juzwik, a forest pathologist with the U.S. Forest Service lab in St. Paul, Minnesota, identified several species of fungi that are suspect as predisposing agents. One intriguing possibility is a vascular disease caused by fungi in the genus Ceratocystis (sir-at-toh-sis-tis). This group of fungi should be familiar to some readers, because one species in the genus plays a similar role in Dutch elm disease. Both stress their respective host once the fungus becomes established, because eventually they plug the tree's water conducting cells.

The biology of hickory bark beetle is very similar to that of the smaller European elm bark beetle, a well known vector or carrier of the Dutch elm disease fungus. When beetles emerge from an infected hickory, their first impulse is to fly to branch tips. Here they feed on tender inner bark, often in crotches where two twigs join (Fig. 1). During "crotch feeding", fungal spores the insect picked up while developing beneath the bark of the previous host dislodge and eventually germinate beneath the bark of the new host. As the fungus develops, it weakens the tree to the point where the tree becomes very susceptible to infestation by a new generation of the bark beetle.

More than one species of both *Ceratocystis* and a canker fungus, *Fusarium* (few-zair-ee-um), were recovered by Dr. Juzwik. All were consistently isolated from log sections of declining hickory and associated with the presence of hickory bark beetle. *Fusarium* was most often obtained from sunken, diffuse annual bark cankers (Fig. 2). The latter are important only because when these cankers are overgrown they often leave dark streaks in the wood.

We have noticed that during the later stages of this disease in New York State the stems and larger branches of declining bitternut hickory may be heavily infested with two species of long-horned beetles (Figs. 3-5). These wood borers do not attack healthy trees. They are purely secondary agents that are able to take advantage of recently killed and dying hickory. A few forest owners and other people who utilize declining hickory for firewood have asked about these insects. They are concerned, because the beetles can be very abundant around piles of firewood. Neither species is likely to successfully re-infest firewood, however, nor are they capable of infesting household wood.

The pigeon tremex (tree-mex) is another secondary organism that com-

Figure 2. Annual cankers caused by Fusarium, *fungi associated with a declining hickory.*

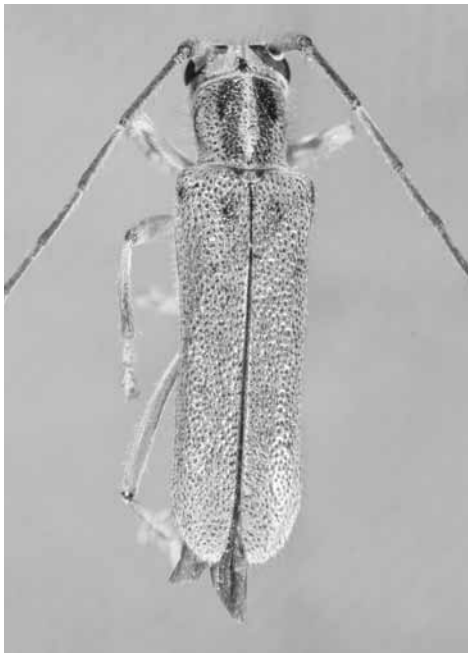
monly attacks declining hickory. This large (females may be as long as 1.5 to 2.0 inches) wasp-like insect breeds in a variety of weakened or damaged broad-leaved trees, including hickory. During the process of laying eggs in wood, the reddish-black female often dies in place when she is not able to withdraw her egg laying device (ovipositor). A number of eggs are laid at each oviposition site, and this area of the tree eventually will be riddled with larval galleries. Members of this family of insects are called wood wasps. Adults are illustrated in the November/December 2005 issue of the *Forest Owner*.

As mentioned in Part I of this series, rapid salvage of declining hickory is important if a forest owner considers timber a valuable management objective.

The objectives of Dr. Juzwik's work are to determine the frequency and severity of hickory decline in the northeastern United States, including New York State; to quantify relations between decline incidence and severity and fungus and/or insect presence; and, finally, to quantify relations between hickory decline and site and stand features. Hopefully, in another year or so we will have enough information about this disease to generate more definitive management recommendations for forest owners.

Dr. Douglas Allen is Distinguished Service Professor at SUNY-ESF, John Graham is a forester with the NYS DEC in Cortland, and Kim Adams is an Instructional Support and Extension Specialist at SUNY ESF.

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



Figures 3-5 (left to right). These round-headed borers attack declining hickory in large numbers. All three belong to the genus Saperda. Figures 3 (female) and 4 (male) are the same species.

Maintenance of the planted seedlings should include mowing between rows (as illustrated), but also strategies that effectively control vegetative competition adjacent to the seedling. Controlling vegetative competition near the seedlings, and browse protection, significantly increases seedling height growth.

Tree shelters, either the opaque plastic-like tubes or cylinders made from hardware cloth, are common protections against these herbivores. Another option that has shown some success with conifer seedlings is the use of bud caps (Ward and Mervosh 2008). Bud caps are fabric or waterproof paper sleeves attached to the terminal stems just below the terminal bud. The position of the cap allows for expansion of the terminal bud in the spring. Tree shelters and bud caps will require annual maintenance until the seedlings are above the reach of deer standing on snow pack, typically when seedlings are approximately 5 to 6 feet tall.

The on-going maintenance of the windbreak will likely need include mowing between the rows and/or herbicide applications carefully applied at the base of the seedling (protect the foliage of small seedlings). Control treatments will be necessary for several years, until the seedlings are several feet tall and thus well established. Faster seedling height growth, associated with adherence to the steps above, will shorten the number of years maintenance control treatments are necessary. These on-going control treatments reduce competition of interfering vegetation with seedlings for sunlight and soil resources. The control also reduces the availability of habitat where voles, mice and rabbits might live and thus may reduce their impacts on seedlings.

Citations

Jacobs, D., A. Ross-Davis, and A. Davis. 2004. Establish success of conservation tree plantations in relation to silvicultural practices in Indiana, USA. New Forests 28:23-36.

Ward, J. and T. Mervosh. 2008. Strategies to reduce browse damage on eastern white pine (*Pinus strobus*) in southern New England. For. Ecol. Mgmt. 255: 1559-1567.

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Kids Corner (continued)

4-H particpant working on Distance and Bearing of a Line

had a little fun with some geocaching, a night hike, a pest hike, AND A LOG MILLING DEMO!! On-site! (Thank you to Leon Redenback and Tom Dumas!)

Many of the youth have attended for multiple years, and this weekend is, for some, their only formal exposure to forest science and forest management skills each year. Youth have the opportunity to learn skills they can use in many future careers, meet youth from across the state, and become better stewards of our forests.

This year's winning team was from Orange County and plans to represent NY State in the National 4-H Forestry Invitational Competition to be held at West Virginia State 4-H Camp at Jackson's Mill in Weston. Our team is Jason Maendel, Todd Mercer, Carolyn Durgin and Alissa Robertshaw. Congrats!

Rebecca Hargrave (CCE Educator, Chenango County), Gary Goff (Sr. Extension Associate, CU Dept. of Natural Resources) and Ingrid Hill, (CCE Educator, Orange County) coordinate the event. Youth and adults are charged a small fee to attend. The program could not have taken place without the assistance of the *many* wonderful CCE County Educators, 4-H volunteers, and parents who promoted the program in their counties, brought the youth, and helped out as chaperones, cooks, and score keepers, as well as assisted with a myriad of other program activities. Thank you.

The program is partially funded by a donation from the Southern Finger Lakes Chapter of the New York Forest Owners Association.

For more information on NY 4-H Forestry visit *http://cce.cornell.edu/chenango/4-h-forestry/*

Rebecca Hargrave is the Community Horticulture and Natural Resources Educator at Cornell University Cooperative Extension in Chenango County.

reverted back to forest with little or no help from the landowners. The climate, soil, and rainfall in the northeast is conducive to the development of forests. Consequently, in spite of a long history of abuse, forests, along with associated wildlife species, have largely recovered. In this context, the occasional harvest of some trees is not a significant threat to most woodlots.

In the past thirty years more than a thousand trees have been cut in our woods and logging equipment has crossed from one end to the other. But the property is still used by wildlife, has three vernal pools, a small wetland, wildflowers, stone walls, a cellar hole, den trees, snags for woodpeckers, and some trees that have been protected because of their unusual character. The logging operations have added a recreational trail network. Our experience shows that harvesting timber can be very compatible with most other owner objectives.

Lesson #2 – Harvest trees to grow timber

Many woodland owners don't cut trees often enough. As a consequence, their woodlots have slow growing trees because the trees are competing for a fixed amount of growing room. As trees grow, they require more space. In a maturing woodlot cutting some trees can be beneficial because it reduces stocking density (i.e., the number of trees of a given size per acre. This allows the remaining trees to grow much faster. But remember, within a few years after thinning the remaining trees will once again begin to compete for growing space. To keep timber growing it is necessary to remove some trees every 15 to 25 years.

Three years after we bought the woodlot I sold hundreds of cords of wood to a local firewood producer. This harvest generated about three thousand dollars in income, but more important, it shifted the annual growth to better quality timber. The strategy was to cut the worst trees and retain the best. Note that this is the direct opposite of selling the most valuable trees and leaving everything else – aka high-grading. Periodic harvests of low value timber and firewood can significantly improve the growth rates of higher value residual trees.

Lesson #3 – Keep timber to grow timber

Another mistake landowners make is to sell all of their marketable timber when they have an opportunity. Most of us are tempted to "cash in" if we are contacted by a timber buyer. But unless you need the money selling all of the timber is probably a mistake. In banking terms, selling every marketable tree is like liquidating the principal as well as the accumulated interest from your account. Liquidating all the timber in a single harvest will not destroy the woodlot, but it diminishes future income opportunities and it sacrifices trees that would earn high rates of return if left for the future.

Keeping an adequately stocked residual stand of good trees is necessary for a highly productive woodlot, and larger trees grow more board feet than smaller trees. Therefore, when you sell timber, keep some large trees in reserve - as long as they are healthy. Most loggers and sawmills will work with landowners who want to leave some trees that would otherwise be harvested. The forest products industry is strengthened when the quality and productivity of the timber resource is improved. Of course, landowners will not maximize short term income when timber is reserved. Some landowners would rather have the money, and they have the right to make that choice. But they should also make an informed choice, and many don't recognize that there is a trade-off.

You can see the benefit of leaving residual timber in the statistics from

Access road

our woodlot. Compare the standing volume of timber in 1980 (73 MBF — MBF=thousand board feet) and annual growth (40 bf/ac/yr — bf=board foot, a board that is 1" x 12" x 12) with the standing volume in 2011 (255 MBF) and annual growth (185 bf/ac/yr). The amount of growth, measured in board feet per acre, is directly correlated with the volume of timber per acre. Selling all of the timber back in the 1980's would have generated additional income, but it would have significantly reduced the amount of annual growth as well as the opportunity for future harvests.

Lesson #4 – Silviculture matters

Silviculture is to woodlot management what agriculture is to farming. Imagine how farm productivity would suffer without the application of agricultural

Beaver pond

science. Yet most woodlots are not managed using silvicultural science. Foresters have silvicultural training. But surveys have shown that only 20-26% of the landowners who harvest timber in NYS use a forester. Most timber harvests maximize short term profit and the woodlot is typically left with a low volume in the residual stand along with a high percentage of slow growing, poor quality trees. The commercial potential of New York's forest resource is unrealized because, with some exceptions, timberland is not managed for long term production of high quality, high value timber.

A silviculturally sound timber harvest can ensure that growing space is fully utilized and that the most valuable trees grow quickly. Silviculture can also enhance non commercial values such as biodiversity, forest health and wildlife habitat. Our timber harvests over the past thirty years have removed some of the poorest trees in the woods. The timber volume has tripled and the value of the timber has increased eight fold since we bought the property. About one third of the increase in value is due to stumpage price increases since 1980. Clearly, silviculture can make a positive difference in value and productivity. Here is a summary of the silvicultural strategy I have tried to follow:

- Cut the worst trees first to improve quality - the opposite of "cut the best and leave the rest".
- Increase the average diameter by leaving some large healthy trees when trees are harvested.
- Shift the composition toward more valuable species.
- Maintain adequate stocking - i.e. avoid either understocked or overstocked stands.

Conclusion

The dramatic improvements in the timber value and productivity of our woodlot may sound like a special case, but there is nothing special about it. Most woodlot owners have the same opportunity. Woodland ownership can be financially rewarding if the timber resource is wisely managed. We started with a very average woodlot which had been cut off about seventeen years earlier. Most woodlots have a similar history. We used commercial sales of firewood and timber to give the remaining trees adequate growing space by selling poor quality, low value trees. Most landowners can do the same. This common sense approach has significantly increased the value of annual growth, as well as the total volume and value of the standing timber. Some basic silviculture, good loggers, and markets for the sawlogs and firewood were all that we needed. Many other woodland owners have had similar financial success stories, but landowners who actively manage their timber resource are in the minority. Most family forest owners do not fully appreciate how timber harvests can be used to improve the value and productivity of their woodlots. Most allow all of their best trees to be selectively cut without realizing that there are other options. Our woodlot experience shows that there is a better way.

Carl Wiedemann is a member of the Capital District chapter of NYFOA.

Welcome New Members

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

Name	Chapter
Stephen Burns	CNY
Walter Cain	NFC
Diane Colbert	NAC
Doug & Vicky Davis	WFL
John S. DeGolyer	SAC
Kathy Kimber and Artie Dietschler	WFL
Bryan K. Gaines	NFC
Justin Gansowski	CDC
Martha & Harry Gardner	NAC
Karen Hibbard	SOT
John Keidel	WFL
Kenneth W. Kemp	WFL
NA Prince Natural Resouce Asset Trust	CDC
Setanta O'Ceillaigh	NAC
Mark Odell	AFC
Scott Richmond	WFL

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

Member Profile:
Charlie and Sarah Stackhouse

Carly Neumann

Charlie and Sarah Stackhouse own 311 acres of diverse land in Bluff Point, NY near Keuka Lake. Charlie has been a surgeon for the past 28 years and Sarah does the bookkeeping for his practice. They are also both active with NYFOA, Sarah currently serves as the treasurer, and are both Master Forest Owner Volunteers. The couple also enjoys participating in other volunteer work.

Charlie says it best when he says they "crept" into owning woodlands. They have always been interested in the woods because they enjoy hunting, hiking, camping, canoeing and fishing as well as cutting their own firewood. Their original property bought in 1988 was 35 acres and later in 2004 an adjacent 276 acres. They were initially interested in the larger property because it was a better building site for their home. Although their home has the added benefit of immense privacy and the opportunity to be surrounded by nature, they have also become stewards of the land they own. Most of the property had been farmed at some point in its long agricultural history. Even now 22 acres are still active vineyards and about 70 acres of fields are being farmed. The rest of the property has diverse habitat, which serves as an excellent wildlife habitat as well as a management challenge. Most of the 130 acres of woods, primarily mixed hardwoods ranging from saplings to small saw timber, has grown up on old fields or pastures and has been high graded.

From overgrown vineyards to maturing stands of saw timber every sort of habitat can be found on their property. Their goals for managing their forestland include improving and maintenance of valuable timber, enhancing wildlife habitat and using firewood as a byproduct. They began forest management when they consulted a DEC Forester, Jim Bagley, to help them determine which trees they should cut for firewood in order to improve their stands. Bagley first created a stewardship plan, which helped them to set goals and prioritize the work that needed to be done. In fact, the stewardship plan was developed around 10 unique stands on their property all that require different management. They are leaving some of the stands to "sort themselves out" while others are undergoing active work. In thinning the woods they have seen two of their management goals come together - improving their woodlands and having the thinned trees provide enough firewood for them to heat their house and domestic hot water nine months of the year.

Sarah cross country skiing. Cross country skiing is a great way to get around the farm in the winter and see what is going on in the woods, fields and vineyards.

Charlie helping DEC wildlife biologist Scott Smith band some of their resident wild turkey population.

Invasive species are another challenge - particularly in areas that were grazed in the past. Their property is a showcase for almost every problematic invasive species in New York but they are paying particular attention to buckthorn when they opened up a previously forested area via a TSI thinning. So far they have thinned about 40 acres and sprayed 20 acres for invasives. Charlie completed about 15 acres of the timber stand improvement work himself. They utilized their private forester from Future Forest Consulting, Corey Figueiredo, and technician Stan Stek do the work they are unable or don't have the time to do, such as laying out and constructing forest trails, finishing up the TSI work on schedule and some herbicide treatment.

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We enjoy doing woodswalks on our property. With the help of our DEC forester Jim Bagley, Corey Figeureido and Stan Stek of Future Forest Consulting, Inc., and Yates Co. CCE and MFO's, this one was a big success.

In order to enroll in the 480A program, the Stackhouses worked with their consulting forester to develop a more detailed management plan, building on the stewardship plan already in place. The money saved from enrollment in the 480A program helps to defray the cost of implementing the management plan. Right now, with property taxes so high and timber prices so low, it is difficult to make the land pay for itself. Enrollment in the 480A program certainly helps this problem even though they don't plan any major timber sales in the near future.

Another focus of the management plan is improving wildlife habitat. The couple enjoy the foxes, deer and wild turkeys and other wildlife that wander through the field in front of their house. There are brush piles, snags and den trees located throughout the property. They have even designated wildlife sanctuaries of 5-10 acres where no one goes so that the wildlife has a safe retreat. They have also created food plots and put up three dozen blue bird boxes.

Taking the time to learn about their property has been beneficial outside of their woodlands too. With all of their forestry knowledge Sarah was able to navigate successfully the precommercial thinning of a property she owns in Maine.

Charlie and Sarah joined NYFOA in 2008 after their DEC forester informed them of the organization. They started by attending the annual dinner meeting of WFL Chapter and now attend three or four events a year. They volunteer at the NYFOA info booth at fairs and events and work with Yates County CCE and the other MFO's to organize forestry workshops and woodswalks in their county. The interaction with other private forest owners and the opportunity to gain quality opinions has been a huge benefit of joining. For example, if someone is looking for a consulting forester, he can call three or four nearby NYFOA members and ask their opinion and receive candid information otherwise unavailable through the DEC or Master Forest Owner Volunteers who do not recommend individuals. The Stackhouses recommend that all forest owners develop a forest stewardship or management plan to understand their woodlands better and set priorities for achieving their ownership goals. Another essential step is creating access roads. The trail system on their property provides access for forest management work and future harvests, hunting, cross country skiing and walking in the woods. Having access allows them to connect the diverse landscape as well as perform any needed work. The Stackhouses also recommend taking advantage of the resources available through NYFOA, the Master Forest Owner Volunteer Program, Cornell Cooperative Extension and the DEC. As DEC continues to cut the number of service foresters available to help private landowners, NYFOA, CCE and the MFO's can help to fill some of that void.

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Magazine Deadline

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