The New York Forest Owner

A Publication of The New York Forest Owners Association

For people caring about New York's trees and forests

March/April 2016



Members Profile: Jeromy Biazzo and Margaret Meixner



Volume 54 Number 2

THE NEW YORK **FOREST OWNERS** ASSOCIATION

Officers & Directors

Charles Stackhouse, President 3010 Esperanza Rd Bluff Point, NY 14478; (315) 536-9482 cstack14478@yahoo.com

Ed Neuhauser, Vice-President 434 W Groton Ave Groton, NY 13073; (607) 898-3614 edward.neuhauser@gmail.com

Jerry Michael, Secretary 15 Van Kuren Dr Binghamton, NY 13901; (607) 648-2941 GoTreeGo@stny.rr.com

Phil Walton, Treasurer

145 Craven Rd Delanson, NY 12053; (518) 895-5346 pwalton518@gmail.com

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Liana Gooding, Office Administrator PO Box 541 Lima, NY 14485; (800) 836-3566 lgooding@nyfoa.org

Peter Smallidge, Ex-Officio Board Member Cornell University, Fernow Hall Ithaca, NY 14853; (607) 592 3640 pjs23@cornell.edu

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In This Issue . . .

FROM THE PRESIDENT CHARLES STACKHOUSE
New Member Snapshots
2015 Northeast Timber Growing Contest Results Dean Faklis and Peter Smallidge
Ask a Professional Michael Farrell and Peter Smallidge
WILD THINGS IN YOUR WOODLANDS Karen Ceballos
GROWING TO RESTORE NY WOODLANDS Don Schlafer9
NYFOA Annual Meeting11
Is Seeing Believing? Tree Size Versus Age in Your Woodlot Brett Chedzoy
Woodland Health: The Southern Pine Beetle Jerry Carlson and Mark Whitmore
Member Profile – Jeromy Biazzo and Margaret Meixner Briana Binkerd-Dale

The New York rect

A PUBLICATION OF THE NEW YORK FOREST OWNERS ASSOCIATION

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

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Jeromy collecting maple sap from Wolftree Farm's small sugar bush and **COVER**: Margaret standing next to one of the legacy trees left standing during logging efforts that link the woodlands to their past. For member profile see page 21. Photos courtesy of Jeromy Biazzo and Margaret Meixner.

From President

L ast December, my wife and I were honored to represent NYFOA at the Northeast Regional Forest Industry and Landowner Association Gathering in Greenfield, MA. Other landowner associations present were the Vermont Woodlands Association, Small Woodland Owners of Maine, Massachusetts Forest Alliance, and New Hampshire Timberland Owners Association. The New York forest industry was represented by John Bartow,



Executive Director of the Empire State Forest Products Association.

The main topics of discussion were training and policy issues, from both landowner and industry

perspectives. While each state had unique issues and situations, there were far more things we had in common, such as the increasing levels of state and local regulation of forest activities, the need to manage the deer herd with its impact on forest regeneration, and the importance of forest management BMPs (Best Management Practices) for water quality and erosion control. A number of innovative things are being done to lower barriers to entry for young people in the forest industry, which is especially important as current workers are aging. Encouraging the use of wood biomass for renewable energy and the contraction in pulp and paper processing were major industry concerns. Not surprisingly, the landowner associations are quite concerned about maintaining and increasing their memberships, getting members to volunteer for leadership and encouraging good land management behaviors.

From the Capital District Chapter Newsletter for January, 2016, I learned that the US Forest Service recently released their most up to date report on forest conditions in New York (the report, New York Forests 2012, can be found online: http://www.nrs.fs.fed.us/ pubs/49753). Half of the forest land in New York State is owned by the estimated 200,000 family forest owners who own at least ten acres. The great majority of these landowners have not received forest management advice, do not have a written management plan, have not heard of the NYS forest tax law or any cost share programs. Over half have sold or plan to sell timber within the next five years. However, only 1% of these landowners are members of NYFOA. Our mission is to promote sustainable forestry practices and improved stewardship on privately owned woodlands. Our challenge is to reach out to our neighbors, friends and families who are woodland owners, tell them about the benefits of managing our forests, the environmental and financial costs of not managing our woodlands, and invite them to a NYFOA woods walk or meeting. Surveys have shown that almost 2/3rds of these landowners are prime prospects who have a stewardship mindset but are not engaged in managing their woods. What a great opportunity for NYFOA this represents!

Don't forget to sign up for the NYFOA Annual Meeting on April 16^{th.} (see page 11 for details). Come hear an excellent program, socialize with fellow members from around the state, and perhaps go home with a new chain saw, safety chaps or helmet. See you there.

> -Charles Stackhouse NYFOA President

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

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

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

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New Member Snapshots

Krista Gaverluk and Matthew Christopher Forest Land: 62 acres, Erie and Cattaraugus Counties Objectives: Hunting, Recreation, Wildlife Management, Timber

Krista and Matthew have two rural properties with one being a 12-acre homestead in Akron where they live with their three beagles. They manage a few dozen chickens and some ducks and Krista enjoys working on their extensive network of vegetable gardens. They take great care of and manage this farm property for wildlife, and have recently added a few acres of specialized food plots. They have owned the property since 2012.

In July 2015, they acquired 50 acres in South Dayton, Cattaraugus County, which is fully timbered with a substantial amount of

mature cherry, oak, and maple and carries an existing natural gas lease that is providing income and personal usage allotment. They plan to build a cabin there in Spring 2016. They own both properties primarily for hunting, recreation, wildlife management, and, with the help of forester Garrett Koplun, are planning a sustainable timber harvest. Krista and Matthew are both avid bow hunters and turkey hunters. They both work in the field of healthcare — Krista is a registered nurse and Matthew is a chiropractor in Amherst, where he owns his own practice (www.christopherfamilychiropractic.com).



Keith Nehrke and Krystel Huxlin

Forest Land: 42 acres, Monroe County **Objectives**: Recreation, Forest Regeneration, Wildlife Habitat Improvement

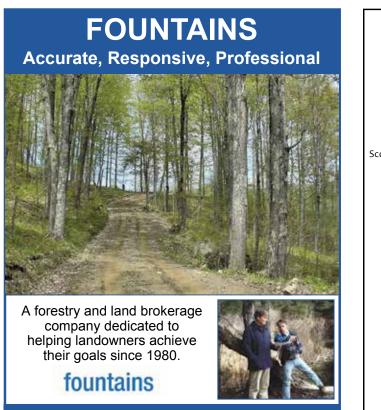
Keith and Krystel are both avid outdoor enthusiasts. Keith enjoys bow hunting, while Krystel hikes and loves to cross-country ski. Their teenage daughter Jaenelle enjoys these pursuits as well. Their property was acquired a year ago and has an extensive trail system, which allows easy access to all areas including a secluded campsite.

Their short-term goals include managing invasive plants and reestablishing native stocks to benefit wildlife. They worked with White Oak Nursery in 2015 to put in some hardwoods and



wildlife-friendly "bushes," in addition to the Dunstan Chestnuts that they planted in Spring 2015. Keith is propagating chestnuts from seed this winter and has hundreds of varying types of viburnum and conifers on order.

Keith and Krystel's long-term goal is to reintroduce diversity into the woodlot. In the early 1970s about a third of the property was planted with tamarack, which are now quite mature. Since another major goal is to provide recreational opportunities, they are focusing their management efforts on wildlife habitat. Large brushy areas comprised of dogwoods predominate at one end with a mix of deciduous trees, including a large number of wild apples, transitioning into the tamarack grove. They care deeply for the property and have vowed that it will never be developed under their ownership.



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2015 Northeast Timber Growing Contest Results

DEAN FAKLIS AND PETER SMALLIDGE

T he contest is growing! Pardon the pun, but 2015 saw a big increase in participation! We're proud to present the 2015 summary and results for the Northeast Timber Growing Contest. 2015 marks the end of the second full growing season and the second set of adjudicated results. Here is a list of contest participants in 2015: Blough Family Forest: Christy and Gary

Blough (Ontario, Wayne County, NY) Edwards Family Forest: Kurt and Kristie

Edwards (Mayfield, Fulton County, NY) Piestrak Forest Lands: Josh Piestrak, Jeff

Piestrak, Ed Piestrak, Bruce Robinson (Forester) (Lindley, Steuben County, NY)

Dale Schaefer: Dale Schaefer (Canadice, Ontario County, NY)

Stackhouse Family Forest: Sarah and Charles Stackhouse (Bluff Point, Yates County, NY)

Team Smallidge: Kelly, Nathalie, Adelaide, and Peter Smallidge (Crown Point, Essex County, NY)

Team Springwater: Julie Faklis, Brice June (Forester), Dean Faklis (Springwater, Livingston County, NY)

As you will recall, Dave Williams and the Southern Tier Chapter held a fantastic Timber Contest Workshop in March 2015. There was a big crowd of enthusiastic contestants in attendance. Here is a list of contest participants that took their first set of measurements in 2015, getting ready for 2016 and beyond:

Oscar Williams: Oscar Williams (Age 10) (Barton, Tioga County, NY)

Del Allen: Del Allen, Jim Bagley (Forester) (Penn Yan, Yates County, NY)

Schlafer Family Forest: Don and Judy Schlafer (Hector, Schuyler County, NY) Winkler Family Forest: Frank and Vickie

Winkler (Andes, Delaware County, NY)

Spreutels Family Forest: Gordon and Marie Spreutels (Guilford, Chenango County, NY)

Dewey Family Forest: John and Jason Dewey (Unadilla, Otsego County, NY)

Dave Williams: Dave Williams (Guilford, Chenango County, NY)

The following contestants are on target to begin forest measurements 2016:

- Jerry Palmer: Jerry Palmer (Guilford, Chenango County, NY
- Anderson Family Forest: Emily and Clay Anderson (Guilford, Chenango County, NY)

John Murdock: John Murdock (Harpersfield, Delaware County, NY) Semanovich Family Forest: Ken and Sharon

Semanovich (Walton, Delaware County, NY) continued on page 10



Youngsters Oscar Williams and Baily Anderson help the elders understand the real purpose behind the Timber Contest at the Southern Tier chapter's contest workshop on March 14, 2015.

NYFOA STORE

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Ask A Professional

MICHAEL FARRELL AND 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

Buying and selling maple sap

Question: We have a few hundred maple trees on our property and eventually want to invest in an evaporator. As we save money to make that investment, is there a way to sell sap and generate revenue from our woods? Will tapping maples reduce their overall value? (Bob G., NAC)

Answer: Maple trees are an incredible resource for woodland owners. I'll focus my answer below on buying and selling sap, but let me first discuss different ways to use and value maple trees. Large diameter, mature maple trees with exceptional stem quality will likely have their greatest value for timber or veneer. Other maples may be worth more through annual revenue obtained by leasing for sap or collecting and selling sap. Calculators for maple tree value and sap selling and buying are available at *www.CornellMaple.com.* A webinar on buying and selling sap is available at *www. youtube.com/ForestConnect.*

Opportunities for woodland owners to sell sap, or lease trees, are increasing as the maple industry in New York continues to expand (Figure 1). Many sugarmakers have expanded their operations over recent years by putting out more taps on their own property or leasing additional taps from neighboring properties. Some sugarmakers don't have time to collect more sap, and they are considering buying sap. Maple producers who might buy sap, and also woodlot owners selling sap, can use a maple buy-sell calculator that allows the sugarmakers to calculate their revenue, on an hourly production basis, for buying in and processing additional sap. Woodlot owners could use this information to understand the types of sugarmakers who might be interested in buying sap, and the factors that influence the value of that sap.

There are several reasons why a woodlot owner might sell sap. A woodlot owner might collect and sell sap not for cash, but for syrup in-kind. Some woodlot owners want to ease into syrup production and can install a sap collection system that generates revenue while they save for additional investments in an evaporator or reverse osmosis equipment. Some woodlot owners want to generate annual income, and collect sap as one of several revenue streams that might also include gourmet mushrooms and firewood. Many woodlot owners have a family history or interest in maple production, but don't have time to process sap; selling sap allows them to be part of the maple industry. Finally, some woodlot owners have hills and valleys that are conducive to new innovations in smalldiameter tubing and natural vacuum that may make sap collection more profitable than with previous technologies.

There are few businesses outside of agriculture that make large capital investments in equipment that is only used part-time during a 4-6 week period each year. To get the maximum return from their investment, businesses can increase the time they use that equipment. Sugarmakers invest tens of thousands of dollars to build sugarhouses and buy evaporators, reverse osmosis units, filter presses, and other items necessary to produce high quality maple syrup in a cost-efficient manner. These fixed costs exist no matter how many taps are used or how good the sap runs. This large investment in fixed costs tends to lower the overall profitability for many sugarmakers. There are large producers with modern equipment who can gain economies of scale in their production and spread their



Figure 1. The maple syrup industry in the Northeast has roughly doubled in production over the past decade. The increased production requires increased raw material, namely maple sap. Many maple producers are exploring if and how to buy sap, a potential win:win that includes woodlot owners.



Figure 2. Woodlot owners learn about tree tapping and sap collection techniques during a training event at a Cornell sugarbush.

fixed costs out over a greater number of taps and increased volume of sap. Once a producer has made the initial investments in equipment, the variable costs for processing more sap are usually much lower than the revenues gained from selling the syrup. Generally speaking, the more hours you can spend processing sap and utilizing your equipment, the more profitable your operation.

Sugarmakers and woodlot owners selling sap will negotiate how the proceeds of syrup or revenue will be split. The split is usually as a percentage that depends primarily on sugar concentration in the sap and who transports the sap. A common, but not universal, split is 50:50. Revenue splitting is based on bulk syrup prices because wholesale and retail pricing include costs for marketing that are distinct from sap collection and syrup production.

Some sample numbers will put this in a context for woodlot owners. A healthy upper canopy maple tree in the woods might produce 15 to 20 gallons of sap per year in a vacuum collection system. The sap may average 2% sugar. Production without vacuum and without appropriate spout sanitation may be 5 to 10 gallons per tree per year. The gross revenue to the woodlot owner selling sap would be between \$0.28/ gallon with a 50% split and \$0.40/gallon with a 70% split assuming bulk syrup sells

at approximately \$25 per gallon. In areas with high demand for sap, the split is often 65% to the seller who delivers sap, or 60% without delivery of sap. To finish these rough calculations, assuming a 50% split and good sap collection methods, the woodlot owner could produce the equivalent of \$560 gross revenue per 100 trees per year. Installation costs will vary considerably depending on the number of trees per acre and the type of system installed (Figure 2). Material costs may range from as low as \$5 to as high as \$15 per tap for sap collection, depending on the materials used and how advanced the system is. Annual costs are mostly labor. One acre of maple woods could have 50 to 100 trees.

The "maple sap buy-sell calculator" allows sugarmakers who know their costs and production data to be able to determine their hourly profit from buying and processing sap. If the sugarmaker can estimate syrup production per hour, the bulk price of syrup, the fuel cost to produce a gallon of syrup, and how you will distribute the syrup revenues, they can assess whether it will be a profitable venture.

Following are three examples of sugarmakers that illustrate who might buy sap. Note that all of these examples overestimate the actual earnings by about 10%, as there are other costs with filtering sap and syrup, storage costs for sap and syrup, and depreciation on equipment that reduces the overall margins. However, it is useful to get a general sense of the potential profitability.

Large Sugarmaker with Energy Efficient *Equipment*. For the sugarmaker who has made significant investments in a large evaporator and reverse osmosis system, the marginal revenues for processing additional sap are quite high while the marginal costs are significantly lower. If the sugarmaker was able to produce 80 gallons of syrup per hour, the fuel cost to produce a gallon of syrup was \$2, bulk prices averaged 2.20/lb., and the producer gave the sap seller 50% of the bulk syrup revenue, the sugarmaker would still be earning \$900 per hour by purchasing and processing additional sap. Even if the producer gave the sap seller 65% of the syrup revenue, he or she would still be making \$630/hr. It is hard to imagine being able to make as much money in any other venture, and if a sugarmaker has already invested in the equipment to do this, it certainly makes sense to use this equipment to the greatest extent possible.

Small Sugarmaker with Older Equipment. For sugarmakers who have smaller, less efficient evaporators and do not yet use reverse osmosis, the marginal revenues are not as high and the marginal costs are much greater, so the hourly wage for processing sap is significantly lower. If the sugarmaker produced 6 gallons of syrup her hour, the fuel cost to produce syrup was \$10/gallon of syrup made, bulk prices averaged \$2.20/lb., and this producer gave the sap seller 50%of the syrup revenue, the producer would earn \$43 per hour. Although this is much lower than the wage described above, it is still profitable for sugarmakers to purchase sap under these circumstances. To be able to make \$43/hour doing something you love while generating a tremendous product is certainly a worthwhile venture (in my opinion).

Hobby Sugarmaker with Inefficient Equipment. For the hobbyists, it is difficult to make money boiling their own sap, let alone the sap that others gather and sell. For example, if someone can only produce 1 gallon of syrup per hour, the fuel cost to produce that gallon is \$12, bulk prices are \$2.20/ob., and the producer gives the sap seller 50% of the revenue, he or she continued on page 18



KAREN CEBALLOS

WILD TURKEY (MELEAGRIS GALLOPAVO)



The Eastern wild turkey is a large, ground-feeding bird. Adult males, called "toms" or "gobblers", have a dark glossy black-brown body, red, blue and white skin on their heads, and a long "beard" of hair-like feathers on their chests. Males have spurs on their legs that can be up to 1 1/2 inches long and are used to fight other males. Toms generally measure 2½ to 3 feet tall and weigh between 16 and 20 pounds. However, they can weigh up to 25 pounds. Female turkeys (hens) are smaller than toms, usually measuring 2 feet tall and weighing 9 to 12 pounds. Less ornate than toms, hens have a rusty-brown body and a blue-gray head, and almost all hens lack beards or leg spurs.

hile Benjamin Franklin was unsuccessful in making the turkey the United States' national bird, the turkey still holds an important place in American culture and environments. The wild turkey is native to North America and is one of only two domesticated birds native to the New World, the other being the Muscovy duck. Habitat loss and overhunting led to massive population declines in the 1800s, and the last original wild turkeys disappeared from New York around the mid 1840s. Wild turkeys did not return to the state until 1949, nearly 100 years later, when wild turkeys from Pennsylvania crossed the border into New York. Thanks to reintroduction efforts, an estimated 250,000 to 300,000 wild turkeys now roam New York woodlands. They generally form single gender flocks of 5 to 50 individuals, with home ranges varying from 400 to 2,000 acres. Turkeys need a variety of habitats to support their feeding, breeding and roosting needs, so ideal ranges include a mixture of woodlands, fields, meadows, brush lands and swampy forests.

Wild turkeys are omnivorous, and their diet varies greatly with what's available in the season. In spring and summer, adults feed on various vegetation (tubers, roots, flowers, fruits), insects (grasshoppers, dragonflies), other invertebrates (snails), and even small vertebrates (salamanders, frogs, small snakes). In midsummer, two or more broods will often combine, forming a flock that will roam over wide areas in search of food. In late summer and early fall, flocks will spend more time in the woodlands foraging on fruits, seeds, and nuts like beechnuts and acorns.

During the winter, turkeys will merge into large flocks, sometimes exceeding 200. They move around less, choosing to stay around valley farm fields where they can eat waste grain and manure, or near spring seeps usually free of ice and snow. They eat vegetation, fruits, and nuts left over from the fall, scratching through 4 to 6 inches of snow to find food if needed. Turkeys will spend a week or greater roosting if a severe winter storm hits, and can survive up to two weeks without food.

Turkeys can walk, run, fly and even swim. They can run at 12 mph and fly at speeds around 40 to 55 mph. They have keen hearing and superb eyesight. This is crucial for the survival of young turkeys, which are heavily preyed upon by mink, weasels, domestic dogs, coyotes, raccoons, skunks and snakes. Sixty to seventy percent of poults (young turkeys) die during their first four weeks of life. Their vulnerability is unsurprising considering their only defense is to scatter and remain still until their mother gives the all-clear signal. Mature turkeys are preyed upon by foxes, bobcats, fisher, coyotes and great-horned owls. Harkened by the tom's iconic "gobble," breeding season begins in late March or early April and continues through early June. Toms will stake out an individual breeding territory and gobble loudly to attract females and repel competing males. If a female approaches, the tom will begin his courtship dance, fluffing out his body feathers, fanning his broad tail, dragging his wings and strutting about. If he passes inspection, mating occurs and then the hen departs alone to nest. The male continues calling and dancing, and will try to mate with as many females as possible.

After leaving the dance floor, the hen seeks out a wooded or brushy area to create her loosely formed nest, a shallow depression in the soil lined with dried leaves. Areas with dense brush, tall grasses or plenty of fallen trees or branches make the best nesting habitat. In the absence of suitable nesting habitats or poor weather conditions, females can store sperm and delay fertilization for up to 8 weeks. She'll lay 10 to 15 cream colored or light brown eggs, which will hatch around late May or early June. Soon after, the hen moves her young (poults) to grassy areas where they can feast on insects. If the poults survive, they will leave their mothers and join hen and tom flocks in the fall.

Since 2000-01, wild turkey populations have been gradually declining. The causes

of this decline are still unknown, but has been attributed to predator increases, poor habitat quality, bad weather conditions (wet springs and summers, severe winters), and natural population contraction as turkey populations shrink to levels that can be supported by current environments. Another factor may be the arrival of a new disease in the U.S.: Lymphoproliferative Disease Virus (LPDV). LPDV is a tumor-forming virus affecting ground-feeding fowl, and was first confirmed in NY wild turkeys in 2012. Fortunately, preliminary research shows that the while the infection is quite widespread and common, the development of tumors in the internal organs and skin rarely occurs. LPDV is most likely not the main cause for turkey declines, but much is still unknown about the disease.

You can help support turkey populations by providing a variety of habitat types and plant species on your land. Keeping in mind that their home ranges can be quite large, think about your land and the surrounding area. Are there good brooding habitats with grasses and forbs that will host plenty of insects for poults to feed on and nearby brushy escape cover? Is there good nesting habitat with low brush cover? If you're logging an area, consider leaving and scattering the tops of trees to provide cover for nesting turkeys. Lastly, is there good winter feeding habitat? You may want to plant food plots of corn, sorghum, millet, sunflower and buckwheat, or simply support local dairy farms, which make up some of the best turkey winter feeding grounds. For more information on creating wild turkey winter habitat, visit http://www.dec.ny.gov/ animals/7279.html.

You can also help wildlife biologists monitor wild turkey populations by taking part in the NY DEC Winter Wild Turkey Flock Survey conducted January through March. If you've sighted wild turkeys in your area and want to help the DEC monitor the health of wild turkey populations, visit *http://www.dec.ny.gov/animals/48756.html.* You can also help during August, when a similar survey is conducted to assess the reproductive success of wild turkeys this year *http://www.dec.ny.gov/animals/48732.html.*

Karen Ceballos is a sophomore majoring in Environmental Science and Sustainability at Cornell University. She is also the Program Assistant for the New York Master Naturalist volunteer program. Is there a certain animal that you would like to see featured in an upcoming "Wild Things" column? If so, email Kristi Sullivan at kls20@cornell.edu

Growing to Restore NY Woodlands

DON SCHLAFER

Many readers are participating in the Northeast Timber Growing Contest. However, often times it is difficult to obtain measurements on your own or mark trees. The timber growing contest is about collaboration and teamwork. This column is a way to keep individuals and families interested in the contest and to share their insights to what has worked best for them. To submit an interesting perspective please e-mail Emily Anderson at eja74@cornell.edu.

Awl Alone in the Woods: A simple method to measure tree diameters

When it comes time to take the standardized diameters of your trees, help is frequently not available. Working alone can be challenging and often comes with frustration and inaccuracy. The task of holding the end of the diameter tape at diameter breast height (DBH), which is 4.5 feet; or for the bigger trees, walking around the tree, ensuring that the tape is laying against the tree at a uniform distance from the ground, is difficult if not impossible to perform alone.

The basic problem is that two hands are usually not enough and this spring I tried various ways to make this three handed job work with only two. The solution was to screw an eye hook into the top end of your



After placing the awl through the eye hook and DBH tapes loop, you can walk around the tree to accurately measure the DBH.

DBH measuring stick, and using a DBH tape with an open ring at its end keep them together by pegging them to the tree with the sharp end of an awl. With the awl being inserted through both the DBH tape and the eye hook you screwed into the top of the DBH measuring stick's holes you can easily pin them to the tree at the appropriate height for measuring (see figure 1 and 2).

The shaft of the awl must be thin and sharp and have a handle that is large enough to allow you to easily push the point into the tree, thus locking the top of the measuring stick and end of the tape together against the tree. If you push the awl into the tree at a slight downward angle, the top of the stick and the end of the tape stay close to the bark surface of the tree.

The awl will not slip, thus allowing you to have an extra hand to lay the tape around even the largest of trees, and is easily and quickly removed when done.

"Awl Alone in the Woods:" A faster, easier, and more accurate way to make tree diameter measurements. This method works for me and hopefully will make measurements easier for you too!

Submitted by Don Schlafer, dhs2@cornell.edu



An eye hook easily screws into the top of the breast height stick.

Timber Contest (continued)

Twelve of NY's 62 counties are now well represented by 18 teams. Special THANKS! To Dave Williams and the entire NYFOA Southern Tier family for taking action!

There were three races in 2015; Hardwood – Board Foot Volume, Hardwood – Basal Area Increment, and Conifer – Basal Area Increment. The Hardwood – BA category received entries from six teams and was the most popular category. All the entries were normalized by site index to help create a level playing field. Sites with lower site index receive a beneficial handicap.

All competitors submitted their entry materials on time and in good order. The judges met during November to review the results and make the necessary computations. The rules that governed the judging process can be found at *www. timbercontest.com.*

Here are the **2015 Northeast Timber Contest Results**, with high score in **bold**:

Hardwood - BA

Piestrak Forest Lands	0.0569
Team Springwater	0.0389
Edwards Family Forest	0.0370
Dale Schaefer	0.0229
Stackhouse Family Forest	0.0203
Blough Family Forest	0.0178

Hardwood – Board Foot Volume	
Team Springwater	0.0575
Edwards Family Forest	0.0433
Conifer – BA	

Team Springwater0.0256Josh Piestrak and his team dominated
the Hardwood BA category this year
with a commanding lead over nearly tied
Springwater and Edwards. Schaefer's
results improved this year because Dale
removed several poor-quality red maples
from his southern plot. That wood is
stacked neatly next to his wood furnace!
Stackhouse and Blough now have a firm

baseline on growth with a full growing season now complete. Their plots are overstocked and will benefit greatly from Charlie's and Gary's chainsaws! Edwards and Springwater changed positions this year in Hardwood Board Foot Volume and there is a lot of new competition in this category coming online from the new competitors. Springwater needs a competitor in Conifer BA because they are getting cocky! Team Smallidge will submit an entry in 2016, which will indicate an average annual growth rate over the last two years.

All results were normalized by site index, so they are a bit difficult to compare using the typical units for board feet and basal area. To give a better understanding, here is some background on the raw data:

Hardwood Site Index

Team Smallidge	55.44
Edwards Family Forest	60.63
Stackhouse Family Forest	65.00
Dale Schaefer	68.50
Piestrak Forest Lands	69.33
Blough Family Forest	70.00
Team Springwater	70.00
Conifer Site Index	
Team Springwater	67.23

Hardwood - BA - Growth (average so ft

naluwoou – DA – Gi	owin (aver	age sq.m.
per acre)	sq. ft. %	Growth
Piestrak Forest Lands	3.2	3.95
Team Springwater	3.6	2.73
Edwards Family Fores	st 1.4	2.24
Dale Schaefer	2.3	1.57
Stackhouse Family For	rest 2.1	1.32
Blough Family Forest	2.3	1.25

Please note that growth of just one square foot of basal area is like adding a fresh new 14" diameter tree to your woodlot! With proper silviculture, you can choose what this "new tree" is....wood on high quality sugar maple sawlogs or red maple firewood! The contest framework helps you put the growth on your best trees and use your lower quality material for projects or heat. Let the winning trees get all the light, water and nutrients.

Notice that Piestrak Forest Lands, in cooperation with their forester, Bruce Robinson, is growing very well at nearly 4% growth. If the other teams want to challenge Josh, they'll need to mark some slow growers and take to their woods to do some thinning. The available growth will then be placed on the best growing trees and there will be fewer trees in the sample plots. This causes the *percent growth* to shoot up!

Think about creative ways to use the cull material or let it lay on the forest floor for wildlife. The Piestrak Family and Team Smallidge create building materials. Team Springwater uses some of the material for the Springwater Wood Bank, which helps those in need with free emergency firewood. Properly thinning out the slow growers is a key component of the contest and a key to the competitiveness within your forest. Here is some more raw data:

Hardwood – Board Foot Volume –Growth on 20 Treesbd. ft.%GrowthTeam Springwater2304.03Edwards Family Forest632.63

Conifer – BA – Grov	vth (avera	ige sq.ft.
per acre)	sq. ft.	% Growth
Team Springwater	3.6	1.72

Team Springwater's conifer plots are still way overstocked! Some thinning has occurred but not nearly enough. When trees are culled from the plots, their place is kept in the tally sheets, but their data is omitted in the computations. This way, the amount of timber harvested from the plots can be tracked over time but the culled trees do not contribute to the annual contest scores.

Timber Beast Scores (Sum of all team scores across all categories)

cores across an categories,	
Team Springwater	0.2660
Edwards Family Forest	0.1913
Piestrak Forest Lands	0.1026
Team Smallidge	0.0613
Dale Schaefer	0.0353
Stackhouse Family Forest	0.0203
Blough Family Forest	0.0178

Please spread the word to your forestloving friends. Let's work together to grow participation in the Northeast Timber Growing Contest to help spotlight the importance of growing quality timber. Your grandiloquent contest committee men will also be working diligently to entice and ensnare new contestants in NY and other states. There is plenty of time remaining to enter *your* forest for 2016!

It takes only four (4) hours per year to begin to grow high quality timber and lots of help is available. If your forestry organization is interested in holding a contest workshop, there are free workshop materials available. The workshop will teach tips and tricks to get you started.

For questions or if anyone needs help measuring trees, email: dfaklis@ frontiernet.net. Also, check out the timber contest website at: www.timbercontest.com.

Thanks and congratulations to all!



NY Forest Owners Association 54rd Annual Spring Program, Saturday, April 16, 2016 Sustaining Family Forests

Marshall Hall, SUNY College of Environmental Science and Forestry, Syracuse, NY

8:15 a.m.	Registration and refreshments . Check out the displays from NYFOA Chapters and forestry oriented exhibits in Nifkin Lounge.
9:00 a.m.	Welcome: Charles Stackhouse, President NYFOA and David Newman, Chair, Faculty of Forestry, SUNY ESF.
9:15 a.m.	The Green Lie: Problem Plants in Forest Regeneration and a Process to Manage Them. Peter Smallidge, NYS Extension Forester, Cornell University.
10:00 a.m.	<i>Keynote Speaker:</i> America's Third Phase of Forest Conservation: Family Forests. Brett Butler, <i>Research Forester, US Forest Service</i> .
11:00 a.m.	Status of the Young Forest Initiative. Katherine Yard and Sandra Van Vranken, Wildlife Biologists, NYS Department of Environmental Conservation.
12:00 p.m.	NYFOA Annual Membership Meeting
12:30 p.m.	Luncheon and NYFOA Annual Awards Banquet
2:30 p.m.	NYFOA Board of Directors Meeting

Prepared by Conference Chairperson Rich Taber, CNY Chapter and with input from the NYFOA Board of Directors

As additional enticement to attend the annual meeting, we are offering some fabulous door prizes! A Dolmar PS-5105 chainsaw, two sets of chainsaw safety chaps, and two chainsaw helmets. *Dolmar Power Products* has donated the chaps and helmets and in conjunction with Dolmar dealer Dave Nielsen of Nielsen's Sales and Service in Penn Yan, they have subsidized our purchase of this great saw. It has an 18" bar, 50cc engine with 3.9HP and weighs only 11.9 pounds. List price is \$470. Someone is going to leave the annual meeting with a big grin and a great chainsaw, and four members will leave with some important protective equipment. *NYFOA thanks Dolmar Power Products and Dave Nielsen for their generous support.*

PLEASE REGISTER BY APRIL 4, 2016 BY RETURNING THIS FORM TO ADDRESS BELOW

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Credit Card No		Expiration Date	V-Code
Signature:			
Send the com	pleted form to: NYFOA, P	O Box 541, Lima, NY 14485 available online at www.nyfod	a.org

Is Seeing Believing? Tree Size Versus Age in Your Woodlot

O ne of the most important concepts in sustainable woodland management is understanding that when it comes to the trees in your woodlands, diameter is not always a good indicator of age — and therefore, of the potential to be a healthy, productive tree that will be worth keeping around for the future.

Foresters classify woods into two distinct types: even-aged (EA) and uneven-aged (UEA). Forest stands, like other natural ecosystems, rarely conform so neatly into one type or another. But when stripped down to its basic structure, a stand is either EA or UEA. The difference between these two types arises from their origin. EA stands are the result of most or all of the current existing trees becoming established around the same time. This is often seen on woodlots that formed on abandoned agricultural land, or where there was an extensive major disturbance such as wildfire or clearcutting. Wellstocked EA stands start out as +100,000seedlings per acre, which grow into 10,000 saplings, then 1,000 poles and eventually to the few hundred mixed sawtimber and pole-sized trees per acre found in a mature woodlot. Extreme competition for resources (primarily sunlight) results in the "best of the best" surviving to make up the composition of the current stand.

UEA stands, by contrast, are the result of past multiple mini-disturbances that gave rise to new age groups within the stand. Examples of such minidisturbances are when single large trees or clumps of trees in the main canopy die from storms, pests, or logging. A "balanced" UEA stand has roughly equal amounts of growing stock distributed across a range of age classes. This should look like "lots of little trees,

BRETT CHEDZOY



"Is Seeing Believing? Cross sections of two trees near stump level. The section on the bottom is of a 90 year old red oak that was 25" d.b.h. before being toppled in a storm last summer. The section on top is from a 5" d.b.h. sugar maple, which was the same age as the nearby oak. One of these trees has the potential to respond to management, appreciate in value, and contribute to ownership objectives. The other does not.

fewer medium-sized trees, and even fewer large trees," usually in a finegrained mosaic distribution. Balanced UEA stands can provide sustained yields over long periods of time because there are ample trees in multiple age classes, and trees within each age class have the potential to respond to management and grow into desirable trees.

A number of descriptors can be applied to more accurately describe the type: regular, irregular, two-aged (from a single past mini-disturbance), EA with remnants (the former hedgerow or shade trees scattered about that are probably the parents to the existing stand), etc. In a true UEA stand, diameter can be used with some caution as a proxy for age. In EA stands, it should not. To further complicate the situation, it's hard for the untrained eye to differentiate between EA and UEA stands, especially when the presence of a heavy beech or hemlock understory gives the false impression of healthy younger age classes. Therefore, it's important to understand the history and origin of the stand and assume that it's EA until proven otherwise. A simple way to verify the ages of different-sized trees in your woods is to count growth rings on the stumps the next time there's a harvest for firewood or timber. Note that it may be difficult to see the rings on small, old trees! I like to cut "cookies" and take them back to the house where I can run them through a planer and count rings with the help of a magnifying glass.

What happens when tree diameter is mistaken for age in EA forests? Larger trees are generally more valuable than smaller ones. So when the friendly neighborhood timber buyer comes knocking on the door, his or her interest lies in the most valuable (that is, larger) trees. As the saying goes: "It's just business," and the buyer's business is to procure trees that are valuable and profitable. A timber harvest where short-term profit is the main objective will result in the removal of the most valuable (for the most part, the largest) trees. Foresters refer to this as a diameter-limit harvest. When the decision-makers believe that larger trees are older, it only seems logical to remove the "old" trees to make room for the "young" ones. "This harvest will give a chance for those younger trees to grow" is a line commonly



In the foreground is cross section from a 5" d.b.h. sugar maple. Behind it are two 15" sugar maples of the same age (~ 90 years), which were released some years earlier by cutting the adjacent hemlock (stump at bottom right-hand side). This hemlock was 130 years old when cut, and probably left for shade when this woodlot was pasture over a century ago. Smaller hemlocks can be seen in the background, which formed about 40 years earlier during a past disturbance when some large white oaks and white pines were harvested in the 1970's to build a barn. Despite the range of ages and diameters, this stand would still be managed with an even-aged silvicultural system because the trees of value in the main canopy originated at the same time. A diameter-limit harvest in this stand would typically leave the inferior 5" maple and remove the larger ones behind it, thus greatly reducing the stand's future value and productivity.

found somewhere in the sales pitch of a timber buyer. The problem lies in that the smaller trees in EA stands are not younger. The two main reasons are species and genetics. Let's consider how these two variables play into sustainable woodlot management.

Species – Different species grow at different inherent rates due to evolution and survival strategy. Sun-loving species like oaks and black cherry have to win the race for the sky or perish. Sugar maples, beech and hemlock will not only survive but also grow in the moderate shade of larger trees, so slower growth does not jeopardize their survival. This means that in an EA stand, the sunlovers are not only going to be taller, but also broader in diameter thanks to converting extra solar energy into wood.

Genetics – Not all trees within a single species were created equal. Just as with pigs and puppies, there are also runts in the realm of trees. Shadeintolerant runts (the "sun-lovers") usually perish early in the life cycle of the stand, but those that can make do with less (sunlight) can persist for many years in the shadows of larger neighbors.

Other factors can account for differences in relative tree diameters within an EA stand, such as health, micro-site and past damage. But even when these other variables are accounted for, the larger trees in an EA stand are the best-doers and will grow and appreciate in value at a greater rate than inferior ones. Consequently, when diameter-limit harvests occur in EA stands (most stands in New York are EA), there is greater short-term return but significant long-term reduction in productivity, value and other important characteristics like health, resilience and aesthetic quality. After a diameter-limit harvest, the remaining poor-doers may grow larger. But due to inherent slower growth, spent vigor, biological maturity and other suppressing factors, they will often fail to develop into much more than what they currently are.

In the September/October edition of the Forest Owner, I submitted an article titled: "Walking the Talk When It Comes to Forest Stewardship: The Experiences of a Family Tree Farm." The story discussed my rationale for heavily thinning our woods via a commercial pulpwood harvest, which I referred to as "weeding out the woods." The process of weeding out the smaller, inferior trees in an mature EA stand is known by foresters as "thinning from below" and seeks to reduce competition around the best trees while preemptively harvesting those that may otherwise eventually die due to natural competition. Diameterlimit cuts, in contrast, "thin from above" and remove the upper tier of highestvalue and highest-potential trees. It's contrary to what we're accustomed to with other bounties of the land: picking

the red tomato instead of the green one, or slaughtering the plump animal instead of the thin one. But those are examples of production systems where one unit can readily be replaced by another of the same quality in a season or less. The trees in your woods, on the other hand, take many decades to replace with trees of the same size, quality and value and doing so relies of the availability of quality genetics from quality parent trees. Diameter-limit harvests not only remove the genetic quality, but also leave behind a legacy of inferior trees that will prevent a new generation from forming. That's why we need to understand how our woods formed, grew and will continue to grow as influenced by our management decisions. "Just Say No To Diameter Limit Cuts!" is a bumper sticker that every woodland owner should have on their car.

"The Trees" *There is unrest in the forest There is trouble with the trees*

There is trouble with the trees For the maples want more sunlight And the oaks ignore their pleas

The trouble with the maples ... And they 're quite convinced they 're right! They say the oaks are just too lofty And they grab up all the light But the oaks can't help their feelings If they like the way they 're made And they wonder why the maples Can't be happy in their shade

There is trouble in the forest And the creatures all have fled As the maples scream 'Oppression!' And the oaks just shake their heads

So the maples formed a union And demanded equal rights 'The oaks are just too greedy We will make them give us light' Now there's no more oak oppression For they passed a noble law And the trees are all kept equal By hatchet, axe and saw — from **Rush** "Hemispheres"

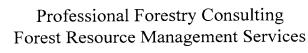
Brett Chedzoy, Cornell Cooperative Extension of Schuyler County.

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
Tom Battley	WFL	Tim Muffit	AFC
Chuck Parker, President		Tim & Rose O'Neill	CNY
NYS Conservation Council	CNY	Stenley Orford II	WFL
Diane Corvetti	SAC	Ian Powell	CDC
Richard Dale	SFL	Phil Race	WFL
Charles Dando	SOT	Elliott & Judy Reitz	SOT
Chara Dow	WFL	Gabe Russo	SAC
Kristina Ferrare	CNY	Greg & Suzanne Scholand	NFC
Jeff Fitts	WFL	Clinton Smith	WFL
John & Eleonore Herman	WFL	Daniel Spengler	NFC
Sharon & Ronald Hillman	NFC	Matthew Taylor	WFL
Dick Holmes	NFC	Raymond Wahl	CDC
David Kunsch	WFL	David Weinstein	SFL
Graham Lamb	NAC		

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Got Trees? Got Questions? Visit the Woodland Owners Forum at: http://CornellForestConnect.ning.com to share ideas, information and questions with fellow woodland owners, foresters and other members of the forest community across New York



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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

THE SOUTHERN PINE BEETLE, A NEW AND SERIOUS PEST FOR ANOTHER NY ICON: THE PITCH PINES OF LONG ISLAND

By Jerry Carlson and Mark Whitmore

limate is changing and the forests we love and work in are receiving weather patterns they are not used to. Trees can't move or run away so they either adapt or die, often killed by something they never had to cope with before. Over the past century or so we have seen commercial markets grow worldwide and with this growth comes a massive increase in shipping of both the goods and unintended exotic animals and diseases. We know of many exotic insects and diseases have entered our forests and become serious and unexpected pests. Some of our native species of trees, other plants and several animals have not been able to adapt and so they are no longer with us. The latest invasive insect that threatens the survival of another precious New York forest is the southern pine beetle (SPB).

SPB seems to have always been a resident of North America, found regularly throughout the pine forests of the deep South. Southern pine forests have seen this insect move through boom and bust cycles killing trees by the millions. These cycles continue to this day in forests from Texas to Georgia. The SPB strategy is to spend all its resources on reproduction, building massive populations, rather than protecting itself from winter weather. It is also among the smallest of bark beetles and so needs less food and time to complete its life cycle allowing multiple generations and rapid population growth over a growing season. The susceptibility of SPB to lengthy periods of freezing

temperatures has been well documented and the northeastern winters implicated in keeping it out of our pine forests until now. Over the past 30 years or so it has slowly moved north to Pennsylvania, then New Jersey and now Long Island and likely up the Hudson Valley as well.

SPB kill their pine hosts by attacking in such huge numbers they overcome the trees defenses and eventually "girdle" the tree by feeding on the inner bark, disconnecting the roots from the shoots. The beetles have developed a pheromone based strategy that helps ensure these "mass" attacks kill the tree. When an SPB attacks a tree it emits a strong "perfume" that wafts downwind and beckons all the other adult beetles in the area to attack the same tree. The trees defenses are quickly overwhelmed and it dies within a few months. We don't know yet how many times this happens during a single year on LI but it seems like at least four generations occur between April and November and this year we saw beetles actively flying and attacking trees in early December.

SPB was first detected in New York in a trap placed in 2014 by our Department of Agriculture and Markets, Plant Protection Division. They had been looking for evidence that the SPB may be in Long Island's Pine Barrens (LIPB). Pitch pine is common on Long Island, the dominant or co-dominant tree species on over 100,000 acres of the LIPB. After SPB was confirmed, the area was surveyed for symptomatic pine trees. We found SPB in many thousands of trees in October of 2014. They seemed to be so far scattered throughout the LIPB that many of us think they were blown in by a storm event. The infestations were all still relatively small and seemed to be less than 5 years old so they might even have come in on hurricane force winds. The LIPB is not an ancient forest but it has recently reached mature ages and the effects of competition and decline are evident. Weak, drought susceptible trees are already dying from local pests like gypsy moth, orange striped oak worm and turpentine beetle. These susceptible forests allow SPB to flourish and build their populations such that the defenses of nearby vigorous and resistant trees are overcome. Population increases over the past two summers have been remarkable, increasing in area by some 30 or 50 times at uncontrolled sites.

A local task force was established on Long Island to identify and describe SPB issues. The task force gathers and informs stakeholders, helps formulate work plans, and facilitates the coordination, monitoring and reporting on activities. The Department of Environmental Conservation (DEC) Forest Health and Protection has established an incident command structure to manage the effort with operations, financing, and reporting proceeding through a defined chain of command. SPB traps were deployed in the LIPB and up the Hudson River valley to Albany. Traps in Bear Mountain and Minnewaska State Parks in the Hudson River Valley captured SPB, showing that it has also moved further north but no infested trees have yet been found.

Aerial surveys of the LIPB in 2014 and 2015 mapped about 31,000 acres of pitch pine forests with SPB infestations of varying sizes. Subsequent ground surveys have confirmed SPB in about 300 acres of LIPB forests which were targeted as high priority treatment sites. However, resources have been limited and many lower priority sites have yet to be examined. About 6,500 trees at the priority sites were marked for cutting during the fall of 2015 and crews eventually cut about 8,000 trees by the end of January 2016. The strategy is to identify freshly attacked trees and remove them before the beetles mature and fly off to attack new trees. Cutting



Southern pine beetle adult being pitched out by a healthy pine.

a buffer zone around these trees ensures all attacked trees are treated and nearby weakened host trees are also removed. This tactic provides both direct SPB removal and opens the stand to increase the vigor of the remaining trees. Open stands also more readily dissipate the SPB pheromone plume thereby reducing the beetles' ability to find and mass attack a tree.

Suppression efforts continue through the winter of 2015-16 and stands treated earlier will continue to be monitored. Although we do not know how successful mitigation efforts have been, ground crews report some sites in total decline. Compared to SPB management efforts in southern pine forests, management efforts in the LIPB have been complicated. Stakeholder interests in the LIPB are very different and there are a unique set of legislative and community based barriers to some operational tactics. The LIPB are protected by legislation and management philosophy similar to the Forest Preserves of the Adirondack and Catskill Parks and LIPB plant communities occupy the ground surface atop the Long Island Aquifer which supplies the potable drinking water for most of Long Island's residents. The large number of local political interests charged with conservation of the LIPB creates an unwieldy body of opinions on best management strategies and hampers a timely response. Most agree that the

rapid and total loss of the pitch pine resource is unacceptable but the unique and unprecedented nature of the current SPB infestation lead to a large amount of uncertainty about outcomes.

The felling of infested trees is one example of the uncertainty surrounding treatment. With limited resources and a short window of time in which to operate, it seems prudent to treat as many sites as possible with a suitable SPB killing strategy. An alternative would be to treat a smaller, more specific pine forest with the best known tactics. Cutting and leaving infested trees on the ground will definitely lead to SPB mortality, but it will not kill them all. Chipping or grinding infested trees will kill all the beetles but the effort is much slower and costs are much higher. To cut and kill all of the beetles on a small, high value area or to treat many areas with a less than optimal tactic is a necessary strategic decision. The acceptance of these strategies, tactics, and site priorities is rarely unanimous.

SPB is yet another exotic insect pest invading New York's forests. It is now established in the pitch pine forests of Long Island and appears to be spreading northward in the Hudson River Valley. The impacts of climate and other population regulators have yet to be fully understood yet management efforts are underway to slow SPB spread and make forests more resilient. We are fortunate to have efficient traps for early detection and efforts to monitor SPB expansion northward are important when considering how to manage this threat to our iconic pitch pine forests.

Jerry Carlson works at the NYS Department of Environmental Conservation, and is Director of Forest Health and Protection.

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

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Ask a Professional (continued)



Figure 3. The sap seller and buyer will need to be able to accurately measure sap sugar concentration and sap volume. A totaling meter is the most accurate method to determine the

would only be making \$6.25/hr. When it is very time consuming and energy intensive to process sap, it is hard to offer someone 50% of the revenues and still make decent money. Even when hobbyists get to keep 100% of the syrup revenues by boiling their own sap, that only equates to \$12.50/hr, so it is quite obvious that hobbyists are not in syrup production to make money.

It may seem to the woodlot owner that the sugarmaker is making more money. Note that the calculations for hourly wages do not include the fixed costs for the evaporator, sugarhouse, reverse osmosis, filter press, storage barrels, and more. These costs can easily be more than \$100,000. The hourly wages help the sugarmaker decide if the extra cost of sap is worth the extra revenue. The higher hourly wage reflects greater capital investment in equipment.

Since a producer cannot control sap sugar content and bulk syrup prices are set by the market, the only variable that a sugarmaker can change is the percentage of the bulk syrup price that he or she provides the sap seller. The higher the percentage of syrup or syrup revenues a sugarmaker can offer a sap seller, the happier that person selling sap will be. The person selling sap will have a greater incentive to gather and deliver more sap and more people will be enticed to get into the sap selling business. When both the person selling sap and the person buying/processing sap can both earn a reasonable return by collaborating, it's a win-win for everyone involved.

So what can a sugarmaker afford to pay for sap? Sap prices should be based on the price of bulk syrup, sugar content of the sap, and the percentage of the bulk syrup that the sap seller receives. As described and illustrated, the maple sap buy-sell calculator helps a sugarmaker assess how they approach the negotiation with the sap seller.

Should a maple producer buy sap to supplement their existing operation? There are many aspects to consider, including whether the sap can be delivered or would need to be picked up, whether the sugarmaker is able to or wants to spend more time in the sugarhouse processing sap, and whether the additional syrup can be sold at a decent price. The sole purpose of this analysis is to assist sugarmakers in determining the financial aspects of this decision, in particular the amount of money they would make per hour of equipment time for buying and processing additional sap. It is important for large sugarmakers to realize that the marginal revenues for processing additional sap usually far outweigh the marginal costs of buying this sap. Therefore, sugarmakers who are interested in making the most of their equipment and recouping their large investments in a sugarhouse, evaporator, RO, etc (fixed costs) should put out more

taps themselves and/or purchase as much sap as their facility can reasonably handle.

For sugarmakers who are already buying sap or decide to do so, there is another spreadsheet on the Excel file that allows sugarmakers to keep track of volumes and payments throughout the course of the sugaring season. Simply download the Excel file and use the tab entitled "blank worksheet", follow the instructions on what variables to provide input data for, and the spreadsheet will keep track of payments for each load of sap purchased.

Finally, anyone selling or purchasing sap should have two reliable ways of measuring the sugar content. They will also need to measure volume of sap delivered (Figure 3). Refractometers and sap hydrometers should be tested annually and throughout the course of the sugaring season to make sure they are accurate. Whenever sap is transferred to a sugarhouse, it should flow through a totaling water meter to precisely measure the volume delivered. Sellers and buyers will want a contract before the season to ensure transactions run smoothly. This contract should stipulate the terms of delivery, quality control mechanisms for the sap, payment schedules and rates, right of refusal for soured sap, and any other issues that could arise between a sap seller and buyer.

Resources and References:

- Farrell, M.L. Maple tree net present value calculator. Cornell Maple Program. *www. CornellMaple.com*
- Farrell, M.L. Maple sap buy-sell calculator. Cornell Maple Program. *www. CornellMaple.com*

Editors Note: In the "Ask a Professional" column for January/February 2016 Peter Smallidge incorrectly stated that Caroline hemlock (*Tsuga caroliniana*) occurs in NY. Its range is limited to the states of the southern Appalachians.

Response by: Dr. Michael Farrell, Department of Natural Resources, Cornell University Cooperative Extension. Director, Cornell University's Uihlein Sugar Maple Research Forest, Lake Placid, NY, 12946. Dr. Peter Smallidge, Department of Natural Resources, Cornell University Cooperative Extension. Director, Arnot Teaching and Research Forest, Ithaca, NY, 14853. Support for ForestConnect is provided by USDA NIFA and the Cornell University College of Agriculture and Life Sciences.

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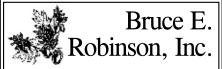
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Member Profile: Jeromy Biazzo and Margaret Meixner

BRIANA BINKERD-DALE

eromy Biazzo was born and raised in the **J** Town of Cortlandt Manor in the Hudson Valley, about an hour north of New York City. Perhaps partially inspired by the 50 acre block of forest "playground" behind his childhood home, he went on to attain his master's degree in horticulture. He is currently a biologist with the USDA-Agriculture Research Service, developing biological control for exotic invasive weeds. His wife Margaret Meixner, raised just outside Albany in Delmar NY, has her master's degree in environmental education and currently works for SNUG Planet in Ithaca. Their first child, Marcella, was born December 1, 2015.

Jeromy and Margaret moved to Ithaca in 2000 and purchased their 92 acre property in the Town of Hector in Schuyler County in 2005. They first heard about it via word of mouth from a friend who knew the previous owner. Captivated by the proximity to the National Forest and Finger Lakes, the gorge, and the beauty of the parcel, they fell in love with it. After a year of uncertainty, they were able to make it their own. They have ten open acres for grazing and blueberry cultivation, with the remaining 82 acres in woodland. In the blocks of woods surrounding the open fields there are many walnuts of timber quality. The back 50 acres were never plowed due to the steep terrain. Hemlock and some yellow birch predominate in the gorge, while the upland woods are mixed transition woods with maples, red and chestnut oak, some hickory, white pine, a really nice stand of red pine, and iron wood, spicebush and witch hazel in the understory.

In addition to the blueberries, Margaret and Jeromy started raising Icelandic sheep in 2010 for meat and fiber. Their business, Wolftree Farm, is certified organic through NOFA-NY Certified Organic LLC. They had to think creatively about how to extend grazing opportunities due to their limited open acreage, and decided to go the silvopasture route. Brett Chedzoy of Cornell Cooperative Extension in Schuyler County "is a great resource," Jeromy said. They ended up pasturing the sheep on blocks of woods that were former fields abandoned in the 1950s and 60s. Jeromy spoke highly of the sheep's skill as woody foragers (even with honeysuckle), very comparable to goats in their ability to clear



The sheep of Wolftree Farm enjoying their silvopasture.



Some of the hemlocks on the property that are struggling with hemlock woolly adelgid and will most likely be lost to it as a result of lack of funding and slow responses to biocontrol efforts.

out the understory and create opportunity for further pasture regeneration. They will even strip bark off saplings Jeromy cuts and leaves on the ground for them.

Both Margaret and Jeromy make the decisions on woodland management and share in the work. When they first purchased the property, Jeromy did some research and learned that the DEC charter includes a mandate for their foresters to provide services to local landowners looking for advice on forest management. Jim Bagley, the DEC forester for their region (now retired), constructed a forest stewardship plan for them, which is a prerequisite for the Environmental Quality Incentives Program (EOIP). They received Natural Resources Conservation Service (NRCS) EOIP funding for two years to renovate logging road water bars and assist with crop tree thinning and interfering vegetation control. The efforts have been successful in managing their beech scrub and increasing growth rates in the already established over-story.

The first management activity they tried was planting trees in tree tubes, with the notion that they might get some targeted species to establish. "We quickly learned that this effort can be expensive and time consuming with very little return," Jeromy reminisced. "Our efforts have changed, driven by the understanding that it is far better in the long run to put management efforts towards letting the forest regenerate itself." However, this has been a struggle due to threats from invasive species and deer pressure. "While I enjoy providing food for my family with deer meat I am under no illusion that my hunting efforts can change the deer impact on my forest," Jeromy said. "Forest regeneration happens on a landscape level — landowners need to try and influence lawmakers to do more about deer pressure. It has to be a community effort."

The need for cooperative efforts to address forest regeneration issues is a passion of Jeromy's, one that comes up again where the hemlock woolly adelgid (HWA) is concerned. They have many hemlocks on the property which are infected with HWA. While Margaret and Jeromy plan on attempting some chemical controls to save a few trees, they are aware that many of them will be lost. He considers their biggest challenges when it comes to managing their property and the woods to be lack of regeneration from deer pressure and understory invasive woody vegetation (mostly honeysuckle), and the current lack of vision and funding from the state to support private landowners to regenerate the forest resource. Also a tax system that seems not to support conservation, i.e. land taxes that encourage people to exploit their wood lots at the expense of forest health in order to cover the tax burden.

"New York State makes a lot of money on timber resources, and the only way that is going to continue to happen is to support private landowners in sustainably managing their forests," he said. "Some of my neighbors have loggers come out every two years, and their woods now have no crop trees, no seed trees... everything is gone." While he is pleased with some current efforts, including the DEC's new draft of a management plan for deer that is currently under public review. Jeromy would like to see more being done to support landowners who are participating in forest regeneration efforts, including funding for more DEC foresters, deer exclusion, and biological controls for HWA and other invasive threats.

Margaret and Jeromy have had success, however, with the 200 black locusts they planted in 2006 on a portion of a sloping hay field. In addition to being an excellent cash crop, they plan to harvest them for use as fence posts; due to their organic certification they cannot use pressure treated wood in proximity to their livestock. Jeromy owns and uses a chain saw, and has a 65 horsepower tractor with a folding rollover protection system and belly mounted exhaust pipe which enables him to drive in the woods. He participated in Game of Logging level 1 & 2 classes that were subsidized through the New York Center on Agricultural Medicine and Health (NYCAMH), which also administers the Roll Over Protection System (ROPS) rebate program.

When Jeromy and Margaret aren't at work or busy tending to the farm, they enjoy hiking in the woods, observing wildlife, and



Bowls and spoons made with wood collected during walks through the forest.



The gorge on the property that helped Margaret and Jeromy fall in love with the land that they now call home.

collecting plants and mushrooms. "We're both biologists," Jeromy laughed. "We can't walk five minutes without stopping to examine something." He collects wood for greenwood working projects such as spoon and bowl making, using a pole lathe to turn bowls with foot power.

Jeromy appreciates the connection to other forest owners, both local and farther afield, that membership in NYFOA has brought him. He has completed the Master Forest Owner training and is very supportive of the role he sees it playing in forest management, lending opportunities to gain a deeper knowledge, as well as license to visit with other interested forest owners and help make them aware of resources that are available to them. His advice to other forest owners is to enjoy their woods regardless of the state they are in, but also to advocate for public funding and policies that will encourage regeneration, such as deer herd reduction. "We are a species that relies on wood and woodlands for our survival even in the face of utilizing so many synthetic materials," he said. "I love tree diversity, their beauty and utility. That is why I steward this plot of land while I have the opportunity."

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



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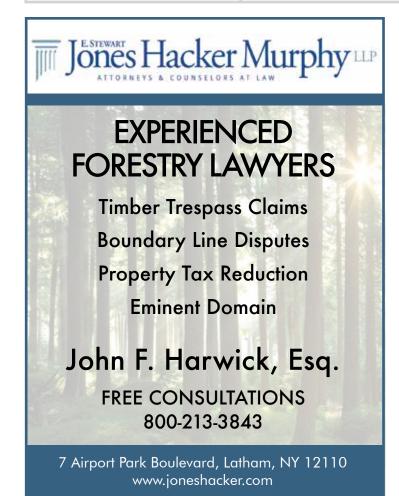
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