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WOODLOT TIPS



FALL 2017

Programs

Saturday, February 24, 2018 at 10 a.m. — Winter Tree Walk and Potluck Lunch

County Forester Bill Guenther will lead a winter tree identification walk in the woodlands of Everett Wilson and Linda Lyon on Ballou Mountain in Halifax, Vermont. Ballou Mountain, the second highest hill in Halifax, has an interesting diversity of hardwood and conifer species. Bill will show us how to use characteristics such as branching pattern, bark, habitat, and growth form to identify about 15 species of native Vermont trees. Bring your snowshoes, as Ballou Mountain's north slope typically has snow cover well into April. For those who may not be up for snowshoeing, you are welcome to sip hot cider and talk about trees while the others are outdoors. After the walk, we will have a potluck lunch.

As space is limited, we are first offering this program to WRWA members. Please contact Linda (LindaALyon@gmail.com) or 802-368-2211 **by February 14** if you plan to attend. (After that, we will open any remaining slots to the general public.) Parking is *very* limited, so it will be necessary for people to carpool in four- or all-wheel drive vehicles to get up the steep driveway. When you contact Linda, please let her know how many people you will be coming with; whether you have a suitable vehicle for the driveway and, if so, if you are will-

ing to provide rides; what town you will be coming from; whether you plan to stay for the potluck; and your contact information. The activity level will be moderate as we wend our way up a hill, possibly in deep snow. But we will stop often to look at trees, so it will not at all feel like a forced march. If you have never snowshoed, don't let that discourage you. If you can walk, you can snowshoe. If you prefer to use poles, please bring them. This is a family-friendly event, and friendly, well-mannered dogs are also welcome.

Saturday, March 24 at 1:00 p.m. — Sugarhouse Tour at Dave Matt's sugarhouse in Marlboro.

Dave Matt's Sugarhouse is in Marlboro less than a quarter mile off Route 9 off Hall Farm Rd. The farm has been in his family since it was first settled in the 1770s. Dave has sugared there since 1980 on a 5x16 evaporator with a steam-away. He puts out about 1,800 taps annually. More details will be in the Winter newsletter.



Thursday, March 29 — *WRWA Members Only Field Trip* — Somerset Old Growth Forest Tour

County Forester Bill Guenther will lead a tour to a Somerset woodlot in what we believe to be a stand of old growth, which consists mostly of yellow birch. This 60-acre property was a gift to Leland & Gray High School many years ago. About 12-15 acres of this property are stocked with the big birches, the remainder in spruce/fir and beaver flowage.

Bill went out last spring just before leaf-out and measured what he thought was the largest yellow birch. Since the State champion yellow birch died up in Victory few years ago, a new champ was crowned out here in Somerset.

We offer this trip only to WRWA members and the group size is limited to 12. **Bill will need to hear from you by March 20th** if you are interested in going. We need a minimum of five folks to sign up for the trip, so please contact Bill by phone or email to let him know you want to go.

We will meet in West Brattleboro at 9:30 a.m. to carpool (with a later stop in Wilmington) as parking can be very limited out there in the winter. We will travel 1.5 miles up the Old County Road to the western edge of the property, then bushwhack east out to the old growth. **We recommend that people bring a combination of skis and snowshoes: skis for the road and snowshoes for the bushwhack woods where brush complicates movement on skis. So take your pick, but Bill probably will bring both.**

At about lunchtime, we'll stop at the campsite and have a picnic lunch. It will be a nice warm-up if you also bring a thermos of your favorite hot beverage. After lunch we'll head out into the birch stand and look at these magnificent specimens; many are well over three feet in diameter.

We hope to conclude our day by about 3 p.m. Keep in mind that Somerset is the icebox of Windham County, and even though the trip will take place in March, we could easily have some pretty severe winter conditions, so dress warmly and in layers. We want to assure a safe and enjoyable day for everyone.

You need to call Bill Guenther at 257-7967 X 305 to reserve a spot, get the specific meeting place, and to make sure you've got the right gear. This trip is moderate to somewhat strenuous, and we'll be a long way from anywhere. Bill also needs to ensure that the private road up to the dam has been plowed. Adverse road conditions could cause us to cancel. Spring comes very late out there!

President's Message

Our WRWA president Marli Rabinowitz has yielded this space in the Fall newsletter to the editor, Barbara Evans, and to the WRWA clerk, Carol Morrison.

This is a time of change and transition for our organization, as we are seeking a new clerk and a new newsletter editor, and bidding farewell to a longtime trustee.

Sadly, we will all have to adjust to Carol Morrison's departure as the WRWA clerk. Carol wrote the following appeal for her successor.

A Farewell and an Opportunity

I became clerk of Windham Regional Woodlands Association (which was then called the Woodland Owners Association) in 1997. People who love the woodlands are an enthusiastic and likeable group, and I have enjoyed their company for two decades. However, my husband and I will be moving out of Windham County next spring, so, with regret, I will resign as clerk on March 31, 2018.

WRWA is now looking for a new clerk – its only paid position. The clerk's tasks take about twenty hours of work a month. They include keeping the member database up to date, sending membership renewal reminders, mailing checks to the Treasurer, taking minutes of the trustees' meetings and the annual membership meeting, and preparing and mailing out the newsletters by bulk mail.

If you have experience with this type of work and would like to earn some extra money working with a great group of people, please email windhamwoodlands@gmail.com and let us know you are interested in the clerk position. Or if you can't take on the job yourself, but can suggest someone who might be qualified, please let us know that as well.

The newsletter is ripe for a change in look and distribution method and a new editor will be the

one to carry us to that new place. Margaret MacDonald has been a strong and loyal co-editor of the newsletter these past few years, but she is unable to take on the editorship. However, she and Barbara will be available to help during the transition if needed. County foresters Bill Guenther and Sam Schneski and various trustees over the years have reliably contributed interesting and informative articles, and all our presidents have been persuaded to write their own messages, which has been another wonderful feature.

If you would like to spend a few days each quarter on editorial activity for a great organization, please let us know! This is a volunteer position, and Barbara has thoroughly enjoyed the work for over a decade. The requirements are new ideas, plus basic editing, graphic design, and computer skills. Some background knowledge of forestry issues can help a lot too in soliciting articles. When Barbara began editing the newsletter, she was serving as a trustee and continued to learn through field trips and other great programs. If this position appeals to you, please email us with your contact information at windhamwoodlands@gmail.com.

WRWA also recently bade farewell to Arthur H. Westing, author of "Woodland Secrets for Southeastern Vermont and a Bit Beyond," individually published in this newsletter and now collected in its third edition. Over the years Arthur served multiple times as a hard working trustee. He and his wife Carol recently moved north from their longtime home in Putney. We're glad that their lives may be a bit less strenuous in their new quarters, but we will miss both Arthur's deep forestry knowledge and engagement as a trustee and Carol's wonderful wildflower walks in Putney.

A Letter from a WRWA Scholarship Recipient

Dear Windham Regional Woodlands Association,

It's really quite nice thinking about writing to a group of individuals from back home that are involved in the environment. I hope some of you may find something to interest you in this little update of recent activities. Though I have not yet announced my exact field of study, I am thinking of a double major- *Parks & Forest Resources* and *Wildlife Biology*. The state of a forest's health and the state of the wildlife within in being so intertwined, it seems the logical path to take. Right now, I'm taking an introduction to natural resources in which we've begun learning about the management of the flora and fauna in natural areas frequented by humans.

Outside of the Unity College academics, I've recently joined the *Primitive Skills* club, of which I am now the secretary and there have been a few unofficial "one-time" experiences to participate in. As the semester progresses and my schedule gets sorted out better, I'll be looking at a number of other official groups and activities. Not sure which but there are a lot to choose from.

Your support and encouragement are greatly appreciated. Thank you and, if you like, I'll keep in touch.

Cordially,
Sam Stevens
Unity College

Annual Meeting 2017

Twenty-four WRWA members, and two dogs, gathered at Molly Stark State Park on September 9 for WRWA's 2017 annual meeting. WRWA president Marli Rabinowitz greeted the participants and noted that the park had waived its use and admission fees for the WRWA meeting. Robin Joslin, assistant park manager, welcomed the group and gave a brief history of the park, including some biographical information on Molly (really Elizabeth) Stark, the wife of Revolutionary War general John Stark. She noted that the Mount Olga trail on which we would later walk connects to the Hogback Mountain Conservation Area (HMCA).

Business Meeting

Marli opened the WRWA business meetings by distributing copies of the minutes of the previous annual meeting, which were unanimously approved.

Treasurer Phyllis Wertz then distributed copies of the corrected treasurer's report for the fourth quarter and the year to date and said that the budget for the 2017/2018 year would be approximately the same as last year's. She also highlighted that high expenses in connection with the WRWA website had forced the Association to borrow money from the scholarship fund, but that the money has since been repaid. Website committee chairman Andy Snelling noted that the expenses were so high because the new site was created from scratch. For

the coming year, expenses for the website will consist only of a nominal maintenance fee.

Phyllis said that the Association had also incurred relatively high expenses for printing brochures; these expenses should not recur because WRWA now has 500 brochures on hand. Debbie Cohen, an accountant not affiliated with WRWA, has reviewed the Association's books and approved them. The membership approved the budget unanimously.

Woodlot Tips editor Barbara Evans urged members to contribute articles and ideas to the newsletter. She will work with Andy to find more user-friendly software for producing the newsletter.

Carol Morrison, who chairs the Membership and Finance Committee, urged us to pick up brochures and leave them in locations, or at meetings, where potential new members might see them. She asked us to write on the brochures where we have left them; that way, if new members join, Carol will know what organization or meeting they attended. Ann Kerrey said that she will leave brochures at the Conservation Committee meeting on November 11.

Linda Lyon, chair of the Program Committee, noted that we had invited the Hogback Mountain Conservation Association (HMCA) to attend the WRWA annual meeting and that two HMCA

members were present. WRWA tries to hold one program a month; programs are a mixture of indoor and outdoor activities. The committee welcomes all program suggestions. Some have attracted more attendance than the venue can handle. Several programs occur annually; the winter tree identification walk, a sugarhouse tour, and the tour of the Cersosimo Lumber Company facility in Vernon. Marli commented that WRWA seeks to hold more programs in cooperation with other organizations.

Bill Guenther reported that the WRWA library has had to move from the Vermont Learning Collaborative to the Winston Prouty Building of the Austine School, and will be set up near the Agricultural Extension Office. Scholarship Committee Chairman Bob DeSiervo announced that WRWA had awarded two \$3,000 scholarships for the 2017/2018 academic year: one to Samuel Stevens and one to Tanner Bell, both of whom have just started their freshman year at Unity College in Maine. Bob commented that Vermont is fortunate that young people want to pursue formal education in forestry-related disciplines rather than assume that they can simply pick up the necessary knowledge casually. Marli added that the networking available through WRWA can be important to scholarship recipients, and they should know that we are here for them. Bob then presented \$1,500 checks for the first semester to Marshall Stevens and Marybeth Fleming, Sam's parents, and Michelle Bell, Tanner's mother; on behalf of their sons, Marshall, Marybeth, and Michelle thanked WRWA for its support. Bill Guenther asked that the scholarship winners send a brief note to WRWA reporting on their studies. (See Sam's letter to WRWA, above.)

On behalf of the Nominating Committee, Bill Guenther noted that four people will leave the WRWA Board: George Weir, Arthur Westing, and Charlie Richardson because of other commitments, and Linda Lyon because she has completed the second of the three-year terms allowed by the bylaws. Bob DeSiervo has completed his first three-year term and is eligible for a second. Penfield Chester and Munson Hicks (son of Halsey Hicks) have agreed to accept nomination to the board; Bill provided some background information about them. The membership approved the slate of three nominees unanimously.

Bill Jewell spoke about the Vermont Urban and Community Forest Council, which is looking for a member representing a local volunteer organization like WRWA. The Council is comprised of up to twenty members representing professional associations, educational institutions, nonprofit organizations, regional officials, community tree boards, and state agencies. The organization holds four all-day meetings a year on weekdays at different locations around the state; council members can also attend meetings on line. Anyone interested should let him know, or visit the Council's website.

Marli then introduced State Forester Tim Morton, who noted that as part of managing state lands, Department of Forests, Parks, and Recreation (FPR) foresters must assess resources and types of owners, and set restrictions on use, whether for habitat, recreation, or other purposes. FPR publishes all proposed management plans and invites input from the public; for a large parcel, this process may take three years. Once a plan is assigned, only light tuning occurs to define annual and long-range plans.

Field Trip

Tim then led us on a steep climb through debris deliberately left from a clear-cut that FPR performed this past winter. The debris is good for the soil and makes it harder for deer and moose to eat saplings. In places it was dense enough to impede regeneration, which Tim believes should be managed better in future harvests of this type. Deep slash piles offer good habitat. As described in the Spring issue of *Woodlot Tips* (see "Harvest with Snowshoe Hare Habitat in Mind," by Marli Rabbinowitz), the harvest removed largely spruce, making way for regeneration of spruce, balsam fir, and hardwoods. At the first stop, Tim explained that we were on a 58-acre parcel that fell under the Brattleboro Unit Management Plan; the goals were to conserve and create habitat, protect water, foster long-term forest growth and harvesting, and allow recreation. No serious management had taken place since the state took over ownership of the land; a hardwood harvest had been planned for 1980, but was delayed by stressor events such as storms and warm winters, and then forgotten.

In planning the harvest Tim carefully checked the view from Wilmington and Route 9 to ensure that the cuts did not create unsightly gaps. He made

adjustments to the configuration and location to minimize visual impacts. FPR has received very little negative feedback on the effects of the harvest.

Habitat has the greatest impact on snowshoe hare populations; more than weather or predators. Therefore, the timber harvest maintained some older trees to provide shelter for the hares when they travel, young hardwoods because the hares feed on the buds, and softwood for cover. Tim noted that based on previous project results many more hares will likely come into the area within two to three years.

Tim described two types of management schemes that foresters use: even- and uneven-aged forest. Even-age management plans promote a forest in which all trees are approximately the same age, so they mature and are harvested at the same time. Uneven-age plans group trees into three age classes: 0–20 years, 20–80 years, and 80+ years. The middle range, into which the hardwoods on this parcel fall, tends to be over-represented. Tim commented that uneven-age management normally features gaps less than two acres, but that the limited size of the harvest and poor condition of spruce resulted in the need for larger gaps.

Long View Forests, Inc., used a feller-buncher and a forwarder to carry out the harvest (see Marli's article in the Spring issue for a description of the equipment and methods used). Getting the wood out was a problem because access is bad, and only a small area was available as a log landing. Tim could have used a skidder if the landing had been larger and there would have been more desirable soil scarification. Half of the harvest was completed last winter; the second half will be done this winter.

The cut was designed to protect a nearby riparian zone and the hiking trail, while adding some views. It also harvested timber and pulp that employed two loggers for five weeks as well as a log trucker periodically. The trees remaining in this area are about 100 years old, and the harvest cut mostly 100+ year-old trees. Tim would like to set up permanent photo points to track forest regeneration over the years; Bill Guenther said that he would do this when he retires.

The area we stopped at was a donation of 14 acres along the parcel boundary to give access for har-

vesting. The cut at the last stop followed the boundary line. Most of the high-value hardwood trees were cut with a chainsaw; the less valuable trees were cut by the feller-buncher. Hares have a better chance of survival if they have a long strip of cover. Tim commented that the harvest was constricted by the trail and the boundary, which gave less flexibility in how to approach the job. George Weir commented that he had managed a harvest for snowshoe hare in Newfane, but there he had a bigger landing and could leave 60-foot wide strips where spruce and fir could more easily regenerate.

Afternoon Program

Hogback Mountain Conservation Area

We then returned to the picnic pavilion, where we enjoyed hot dogs and burgers prepared by Grillmeister Sam Schneski, as well as the potluck dishes contributed by members. After lunch, Diana Todd, president of the Hogback Mountain Conservation Association (HMCA), spoke about the organization's 10-year program to develop early successional habitat (ESH) on former ski trails on Hogback Mountain, which is now a conservation area owned by the town of Marlboro. She urged all of us to take a walk on the trails at Hogback sometime this fall, and noted that it will give us an opportunity to compare what HMCA's volunteer group did to what FPR and professional loggers did at Molly Stark State Park.

Diana noted that the management plan for the conservation area has three main goals: conserve wildlife habitat, enable public recreation, and maintain forest resources. She briefly reviewed the land use history of the Hogback area. Early settlers did subsistence farming. Commercial farming was never very successful, and farms were already being abandoned before the Civil War. Timber harvesting took over as soon as the abandoned fields grew their first crop of trees. Farsighted entrepreneurs in the 1930s were the first people to envision tourism as a way to make money from land, so their goal was to preserve beautiful scenery. Next came the ski boom, but when it ended, the Hogback ski area was sold to developers, who divided it into small lots, but the lots did not sell. Bob and Nancy Anderson formed a committee that raised \$1.7 million to buy the land and donated it to the town of Marlboro.

The 10-year plan to increase habitat variety by reopening the five major ski slopes, one every two years, was developed as an effort to capitalize on the conservation area's history as a ski area. When the ski area went out of business, the young forest that started growing up on the ski slopes created excellent early successional habitat (ESH) for wildlife. That young forest was already 35 years old when the conservation area was created. Cutting the slopes and letting the trees regrow would turn back the clock and create new patches of young forest for wildlife. In the first few years after each slope was cleared, it would also create recreational opportunities for DIY skiing and open up spectacular views for year round hikers.

The program was approved based on accomplishing the work through largely volunteer efforts. Now in its fifth year, it has involved more than 90 different people who have worked one or more days on the project. The work is done on fall weekends. The areas are essentially clear-cut, although apple and hawthorn trees are left standing. First, volunteers use loppers to get rid of the smaller vegetation; they are followed by others who use chainsaws to cut the larger trees. The debris is either piled or left as a mat, which may inhibit hay-scented fern, thus allowing better tree regeneration.

The first area to be cleared, with work taking place in 2013/2014, was the former "Meadow" slope; in 2015/2016 the volunteers cleared the "Great White Way." As expected, the regrowth has been vigorous and rapid. HMCA has to keep cutting to maintain views where the hiking trails cross the ESH patches. Phase 3, on the former practice slope, will begin this year.

Diana noted that HMCA can judge success in several ways, for instance by performing periodic bird inventories in the ESH areas. A University of Massachusetts study of bird migration netted 420 birds in the ESH patches in the fall of 2015, representing 43 species, including 9 of 12 species that need protection. The Hogback Mountain Preservation Commission, a government body, is planning to conduct a biodiversity inventory.

HMCA is also concerned that the project may have unwanted consequences, such as encouraging the growth of hay-scented ferns, which inhibit growth of other plants because of the thick mats they form; inviting in invasive plants, or encourag-

ing tick populations. So far HMCA has found no tree-sized buckthorn, and when a student from Lyndon State College trapped small mammals in the fall of 2015 and checked them for ticks, he found only one tick after examining about 50 animals. HMCA is also concerned whether the cuts are so long and narrow that birds nesting in the openings are not far enough away from the forest to protect them from predators such as fisher cats and foxes.

County Forester Report

Bill Guenther presented an update on recent legislative developments. The FPR department budget is steady, and the sales tax exemption on harvesting equipment has been extended to loggers. Governor Scott emphasizes economic development, and therefore policies favor use of mechanical harvesters because of the lower chance of injury (and resultant need to pay high insurance rates and workmen's compensation) compared to manual harvesting techniques.

H.233, which confers a "Right to Forestry," has gone to the Senate for review and a vote in the upcoming session. Changes to the Use Value Appraisal regulation have come about largely because of agriculture. Landowners can self-certify for the Agricultural Certification Program and can prepare their own management plan if the property is less than 400 acres. If a farm has greater than 25 acres of forestland, a forest management plan is required, prepared either by the landowners themselves or by a licensed forester.

Bill then gave a report on the forest products market. The price of veneer has dropped a bit; the price of oak and ash sawlogs has risen. Bill repeated that landowners should not liquidate the ash trees on their property, and reported that no emerald ash borers had been found in Vermont as of September 8. The price for white pine is high and steady; prices for beech, paper birch, aspen, hemlock, and red pine are down; and prices for other species are holding their own. The lumber tariff is on hold. Tim commented that now is a good time to sell timber because log yards are not as full as they would like to be and several species are experiencing high demand. With regard to the overall market for wood, Bill noted that the paper industry in Maine is using 4 million tons less wood than it did four years ago and that markets for poor-quality trees continues to decline, affecting the ability to perform good management.

Cersosimo Hosts Sawmill Tour

By Margaret MacDonald, Trustee

On October 5, Cersosimo Lumber hosted 29 WRWA members and other area residents for a tour of Cersosimo's softwood mill in Brattleboro.

Eric Parenti, Woodlands Manager of Cersosimo Lumber, together with colleagues Jeff Hardy and Tom Martin, welcomed us with water and snacks, and offered us earplugs (badly needed when observing the saws in action!) and safety glasses. Eric gave us a short overview of the company, which was incorporated 70 years ago. The Brattleboro white pine facility is one of Cersosimo's five mills; the basic layouts of all five mills are the same, but the Brattleboro pine mill processes more lumber than the others. The white pine mill processes 10.6 million board feet of wood from Windham County, of which about 7.2 million board feet is white pine and the rest hardwood. Altogether, the mills produce some 45 million board feet of lumber annually. Most of the white pine is shipped within the Northeast; not just New England, but also Quebec, which buys a large amount of lower grade pine. China buys much of the oak and ash. Eric commented that he does not like to see Vermont's raw log reserve of wood going to China, but that's the market. The pine market is good at this time, as is the market for oak and ash; the maples are fair. The beech market is gone.

We first passed by the outdoor stacking area, where sawn boards are set out to dry. Eric showed us the stickers, narrow strips of wood that are inserted manually between the layers of boards; the stickers have a special beveled or rippled texture to maximize the amount of air that gets to the surface of the lumber. Red oak and pine are also sprayed with water in the summer to minimize staining; the stain lowers the wood's value. Maple is sawn as quickly as possible

We then looked at some impressive logs, with the bark still on, representing one recent load of timber. A large log may produce 500 board feet of lumber; the smaller ones about 100 board feet. Cersosimo buys approximately half of its wood from loggers, and the rest from landowners and their foresters; the largest volume is received in January through March. A full-time scaler measures the diameter and length of each log, grades it, and marks each log with a number. The

logs are also x-rayed to detect any metal inside the wood, such as barbed wire, sugaring taps, and nails. Metal can badly damage the bandsaws, so any metal detected is removed before the logs are processed.

Given the hazard posed by the emerald ash borer (EAB), loggers cannot transport ash from quarantined states to Vermont, May through October. In response to a question about harvesting and selling ash, Consulting Forester George Weir said that as a consulting forester he must advise his clients to act in their best interests and manage risk. While foresters do not want landowners to liquidate their ash trees and thereby flood the market, they must practice risk management. Because EAB will probably reach Vermont (apparently it has not yet done so), George must inform his clients that selling the timber now may be their best option if they want to make at least some money. Eric added that Cersosimo can take in infected ash, but has to treat it separately from other wood. To destroy EAB larvae, the wood has to be heated to 140°F for 30 minutes at the wood core. Not all sawmills have this capability.

We then went inside to view the huge bandsaws at work, and admire the skill of the head sawyer, who manually adjusts the chute through which each piece of lumber passes to determine how it will be sawn and routed. The wood first goes through the double bandsaw and then is resawn by the single bandsaw. For resawing the thickness must be less than 16 inches. Brandon Bucossi showed us the computer screens in the office above the cutting floor, which display in real time how the log is being sawn.

We then got a close view of the saw blades in the room where they are sharpened. The blades are changed every six hours; each blade can last up to a year and costs \$1,200. Sharpening takes about two hours, and the operators move the blades on and off the sharpening machine by hand; Brandon commented that it is amazing to see how easily and skillfully this is completed.

We next visited the pre-drying kiln, where oak boards spend about three weeks at 90°F to minimize loss of grade. Tom, who runs the sawmill's kilns, reminded us that wood is only stable when

dry. He explained that oak benefits from pre-drying, whereas pine goes directly to the drying kiln. The wood is treated in batches, so each batch is dried and moved at the same time. The humidity in the pre-dryer is approximately 90%, and the smell of tannin from the drying wood is very strong, so it was not the most comfortable environment for people! The wood may initially contain 60–70% moisture; pre-drying brings the moisture content of the boards down to about 30%. Afterwards, the boards spend two to three months in the drying kiln, which lowers the moisture content to about 7%.

Our guides then took us to the grading mill, where we saw the stacked boards, each of them marked on the end with its length, thickness, and grade. Then we passed the sawdust and chips that the mill burns to heat the boilers for the drying kiln.

Eric explained that the mill is a power cogeneration facility and sells the excess power to Green Mountain Power. We were able to look inside one of the boiler furnaces, where the temperature is some 1,300 degrees; the boiler produces about 180 pounds of steam.

The tour ended at 7:00 p.m., and it was almost dark as we made our way back to our cars. Eric commented that the many questions asked during the tour showed that the group was very well informed about issues related to forest management and the lumber industry.

Many thanks to Eric Parenti, Jeff Hardy, and Tom Martin for taking the time to show us around this fascinating operation, and thanks also to former trustee John Caveney, who originally arranged the tour.

Patch Cut Attracts Wildlife

by Margaret MacDonald, WRWA Trustee

Three years ago, former WRWA trustee Diana Todd and her husband Lee created a patch cut on six acres of their property, and invited WRWA members to watch the cut in progress. On October 5, we had a second opportunity to tour the property and see the changes after three growing seasons.

Before our group of 16 set out, Diana provided some background. When she and Lee bought the property in 1999, they saw many animal tracks and heard bird calls everywhere, and they put up grouse whenever they walked in the woods. By 2009 the grouse and almost all the animal tracks were gone. As they searched for the reason, they learned that Vermont has been losing early successional habitat (ESH), and with it populations of grouse, woodcock, and small mammals such as the New England cottontail, all of which need ESH as habitat. They decided to create the patch cut to develop ESH for wildlife, release the abundant wild apple trees on their property, and control invasive plants.

In 2013 the Todds applied for and received an Environmental Quality Incentives Program (EQIP) grant from the Natural Resources Conservation Service of the U.S. Department of Agriculture, which in theory would cover 60 percent of the cost of the work. However, as Diana explained, accepting the grant had stipulations. The government

specified the line of the cut and the types of trees to cut, as well as the number of snags and drumming logs for grouse to leave in the plot per acre. Lee and Diana were in essence the contractors but as the landowners, they ultimately had final say in the project. The amount of reimbursement depended on the extent to which the patch cut met the objectives and standards of the EQIP program. In the end, the Todds were happy with the clearing work.

As a first step, the Todds hired WRWA trustee Dan Healey of Long View Forest Contracting to take out the bittersweet, buckthorn, and multiflora rose invading the property. In 2014, Faun Koplovsky of Land & Mowing Solutions used a Fecon forest mulcher to perform the actual clearing work. (Diana noted that the term “Brontosaurus” is often applied generically to mean this type of forest mulcher, but is in fact a different brand.) The arm of the mulcher sheared off the tops of the trees and then chewed them into small bits. A few tops were left intact on the ground as cover for wildlife; the trunk and stumps were ground down in sections and left as coarse mulch. The Todds liked the idea of using a forest mulcher instead of just chain-sawing the trees and leaving them, because they wanted to be able to create paths through the young forest to monitor forest health and signs of wildlife. Cutting paths through felled trees is hard;

mowing paths through stump sprouts in a mulched opening is easy using their walk-behind field and brush mower. Diana had used GPS to mark the locations of the invasives removed in 2013, and she ensured that the paths go by them so that they can detect signs of returning invaders early. They are also somewhat concerned that the cut may have allowed new invasives into the area. For example, at one spot Diana pointed out wall lettuce, which they had never seen in the area before; it is classed as an invasive in the Pacific Northwest and on the watch list in New England.

The paths are easy to mow with the Todds' DR field/brush mower; Diana also uses the machine to mow under the apple trees and check growth of other trees that might interfere with them. Releasing the apple trees has claimed one casualty; one tree fell over under its own weight of fruit when the surrounding trees that had supported it were removed.

The cut has already achieved its main purpose. Over the past three years, cherry, aspen, ash, poplar and maple have come back and are acting as magnets to wildlife. Much to their satisfaction, Diana and Lee have again seen many animal tracks and hear the calls of grouse and woodcock. Diana pointed out that the stump sprouts, especially of ash, had been heavily browsed by deer (and possibly moose) returning to the property.

The Todds have marked 15 locations in the ESH area where they periodically take panorama camera shots to record the changes in the forest. In 15–20 years, the regrowth will reach a point where the trees should be cut again.

We thank Diana and Lee for a very interesting and enjoyable tour, and especially for their commitment to preserving forest habitat for Vermont's wildlife.

Our Majestic Fall Foliage? — What Happened This Year?

By Bill Guenther, Windham County forester

Part I: What went wrong?

The fall splendor that normally erupts into Nature's most spectacular brilliance just was not up to par this year. While Vermont is recognized as having some of the world's most awesome fall foliage with the turn of the leaves, we had a number of things working against us.

First, let's look at a primer on how this rainbow of colors normally comes about. When the deciduous trees wake up in the spring they unfurl their young leaves that can have some variety in their initial color. But as the summer continues, they turn a rich green from the dominant pigment in the leaves called chlorophyll. There are other pigments in the leaves, but they are subordinate to chlorophyll.

During the summer, the leaves are busy making food, but they are running on nature's clock. As the days start to greatly shorten in the late summer, an alarm clock goes off to tell the leaf that it is getting close to its winter slumber time. With fewer hours of sunlight and cooling temperatures, less chlorophyll is made, and this pigment becomes less and less dominant, moving out of the leaf. The lesser pigments, carotene (which produces orange

color) and xanthophyll (which produces yellow color), that were already present in the leaf, now start to show their colors.

At this point, I would like to dispel one of the great myths surrounding our foliage season. I still hear folks use the phrase that it is "Jack Frost" (frost events) that brings out our pretty fall coloration. That is a myth, and in fact, a hard frost will actually harm the potential for brilliant fall colors.

The most important element for "knock-your-socks-off foliage" is the right weather conditions, which will produce a pigment called anthocyanin. It is this substance that gives us the brilliance in the oranges, the fiery reds, and the purplish hues on white ash. To get the most active anthocyanins, we need weather where the nights go down into the upper 30s to mid-40s and days that go into the upper 50s to no hotter than the low 60s. Brilliant sunshine that gives us those cobalt blue sky fall days is the other key element in good anthocyanin formation.

So now let's take a look at what went wrong this year. First off, a number of biotic and abiotic challenges to our sugar maples rendered many of them

unable to produce good color. The key culprit was the crazy weather we had in September, especially on the 25th to the 27th. On those three days, the National Weather Service (NWS) recorded temperatures that were **22 degrees above the normal mean temperatures** for those dates. This is a huge deviation from the norm. The typically cold town of St. Johnsbury in the Northeast Kingdom recorded three straight days at 90 degrees or above. The nights during this time also did not cool off much, some evenings only dropping into the mid 60s. So, this situation alone set up a near Perfect Storm for the lack of anthocyanin production. (As a side note: as I write this in early November, I *still* have not had a real frost up at my place in Newfane!)

In addition to the very odd September, we also need to go back to 2016 when all of Vermont sustained at least some level of drought, with some parts of the state even at the third level of 5 that NWS uses. Last year's dry conditions likely set the stage for some other odd things to happen this year. Drought will often lead to an abundant seed crop the following year. This was certainly true with our State Tree, the sugar maple. When a tree puts a disproportionate amount of its energy into producing reproductive material (seeds), then the result is usually a decrease in available resources that reduces the vegetative level, leading to both reduced numbers and size of leaves. This gave us many maples that had some very thin crowns, further reducing the potential for a stellar foliage season.

To sum up, we can blame the weather for being the major culprit in the lack of vibrant brilliant color, with that especially odd stretch of very strange weather in late September.

Part 2: Maple Maladies

During the summer and fall, I also received a number of calls with concerns about how the maples looked. This year produced numerous stressors for our beloved sugar maple trees.

The spring started out extremely wet, which broke the drought, but also gave us over 18 inches of rain in May, June, and July. Tree roots need oxygen to support their process of respiration and with that much rainfall, the ground was pretty much at saturation, robbing the roots of their dose of O₂.

This situation led to chlorosis, or a yellowing of the leaves due to poor root aeration. This was a stressor, but also tended to clear up once the monsoons abated in mid-summer.

Also this spring, we saw increased numbers of pear thrips. These tiny insects live 90 percent of the year in the ground, and when the soil starts to warm up in April, they emerge from the ground and fly to an emerging sugar maple bud and can cause extensive damage to the leaf before it unfurls. The result of the thrips feeding on the buds closely resembles frost; the leaves are left tattered and can be compromised so that they produce less food for the tree.

We also observed an insect called the maple leaf cutter. The larvae feed on the leaves of maple and sometimes birch, cutting circular portions out of leaves and connecting them to form a portable case in which the insect overwinters. The leaves look like they got hit with a shotgun blast. This damage also reduces the amount of leaf area.

The excessively wet spring set conditions for two major foliar fungus diseases: *Phyllosticta* leafspot and maple anthracnose. Once these diseases compromise the leaves, they often will brown up and fall prematurely, especially given the hot, dry weather at the end of the summer. When I drove up my dirt road one morning in early September, there was a solid carpet of maple leaves covering all of the gravel for about 50 yards, which is not a typical sight at that time of year. By the time our usual prime foliage week of Columbus Day got here, a number of maple trees had already lost a good portion of their leaves.

I trust that this article has given you at least some insight into the challenges that our State Tree faced this year. I do not want to give the impression that things are all gloom and doom for our beloved sugar maples. The key point to remember is that trees are incredibly resilient organisms and cycles of events happen that provide both negative and positive impacts. This year we just happened to have a large number of negatives. But who knows: maybe next year we'll see a turnaround and have very few stressors. We'll just have to wait and see, but we must remember that Mother Nature still rules!

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Upcoming Programs
(See inside for details)

Saturday, February 24, 2018 at 10 a.m.	Winter Tree Identification and Potluck, Ballou Mtn., Halifax
Saturday, March 24 at 1:00 p.m.	Sugarhouse Tour at Dave Matt's sugarhouse in Marlboro
Thursday, March 29	<i>WRWA Members Only Field Trip</i> Somerset Old Growth Forest Tour

Mission of Windham Regional Woodlands Association

WRWA is a non-profit association of woodland owners and managers, members of the wood products industry, and other interested parties in the Windham County Region who advocate both sustainable management practices and the enjoyment of forests and their ecosystems. In support of these ends, WRWA offers educational opportunities for all age groups. Areas of interest include: biodiversity; clean air and water; cultural and historic resources; fair and equitable taxation of woodland; forest products; recreation; scenic beauty; and wildlife habitat. We recognize that these concepts are continually evolving and therefore will strive to consider the most current thinking and values regarding them.