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# WOODLOT TRIPS



## SUMMER 2019

### *Programs*

**Saturday, August 24 — Windham Regional Woodlands Association Annual Meeting – Public Welcome**  
**Registration Fee/lunch is \$8, payable at the site.**

The meeting this year will be held at Shatterack Forest, 450 acres which have been owned by the same family for four generations. The story of the family, their forest, and their connection to the wider Jamaica State Park/Glebe Mountain Preserve area will be the bulk of our program.

**Schedule — 8:30** Register for lunch, enjoy coffee and doughnuts with members old and new

**9:00** Introduction by Daniel Dubie, fourth generation of forest owners, and other family members. How has the family kept the forest intact for so long? What is its future? The function and value of the forest as habitat connectivity between Jamaica State Park and the Nature Conservancy land.

**9:45** Ecology and history of the adjacent 3,500 acre Glebe Mountain area by *Nature Conservancy Ecologist Jon Binhammer*

**10:45.** Overview of Shatterack forest management plan by *Hayden Lake* and description of afternoon walks

**11:00** Forest Health and legislative update by Sam Schneski, Windham County Forester

**11:30** WRWA Annual Meeting: Report of activities, budget report, election of new trustees, presentation of scholarship

*After the Annual Meeting portion of the schedule, lunch is always a highlight of the day with potluck side dishes and organic burgers grilled to perfection. **Please call ahead and let us know how many burgers/hotdogs/veggie burgers you would like. (802) 254-8325.***

**12:00** Potluck Lunch with choice of local organic beef burgers, hotdogs and veggie burgers, by *Grillmaster Sam Schneski*

**1:15 –3:00** Choice of walks:

1) Dan Dubie and Hayden Lake will lead an informative walk through a recent harvest and other features of the family land.

2) A family member will lead a more challenging walk through the land to a hilltop viewpoint.

After the walks you can stay parked and walk to beautiful Hamilton Falls on your own. Maps will be provided.

### **Background:**

The Homestead was bought in the 1920s and the family ran a boys' school there for 25 to 30 years, into the early 1950s. The next generation then bought 450 acres. It has been managed in various ways such as through herbicide experimentation and white pine management. The Vermont Land Trust has a conservation easement on the forest, and the property has more recently been entered in Current Use. Hayden Lake is the current forester, and the family decided to start cutting timber after a number of years of no active management. The homestead on the property is the oldest registered building in the town of Jamaica, dating to the 1770s. The forest incorporates some old cellar holes that were settled around that same time and borders an old cemetery. Hamilton Falls was part of this property and was sold to the State of Vermont, which incorporated it into a state park.

Ownership has become much more complicated over four generations; going from one, to three, to eight, and now to nine or more owners. Currently the management is done through a board and annual meetings. The family is in the planning process of changing the land from a corporation into a family trust. All these changes have effects on the family, the management process, and priorities for the land. Their experiences are a good chance to reflect on long term forest management in all its complexities.

Daniel Dubie, a fourth generation family member, will talk of highlights of the importance of this land as a connector between the Jamaica State Park and the Glebe Mountain Preserve, and then Jon Binhammer of the Nature Conservancy will talk about the geology and ecology of the high valley and ridges, TNC's conservation efforts in the area and the value of this ridge line in the eyes of the larger conservation picture.

- The reasons for TNC's interest in Glebe Mountain and nearby Turkey Mountain as conservation goals. (large, intact tracts of habitat, Black Bear conservation, bird habitat)
- TNC's larger conservation model that encompasses these core tracts of intact old forest surrounded by buffer properties that likely are working forests with management plans and harvests (The model that we see in Cobb Brook Valley)
- The story behind how Glebe Mountain parcel got to be 3,500 acres and how TNC got it while still an intact forest

**Directions** to 535 West Windham Road, West Townshend, Vermont:

**From Route 30:**

**Heading West:** Travel through Townshend past the Townshend Dam into West Townshend. Take a right turn up Windham Hill Road at the West Townshend Store and post office.

**Heading East:** Travel through Jamaica along the West River into West Townshend. Take a left turn up Windham Hill Road at the West Townshend Store and Post Office.

**All:**

- The road goes up a very steep hill.
- In 4.3 miles turn Left on Burbee's Pond Road soon after passing through the small village of South Windham.
- In just under a mile, turn Left at the pond onto West Windham Road.
- Continue 2.8 miles while bearing left at intersections, to a parking area and a short walk to the tent site.

**September 21, 5 p.m. — Member Ramble at the home of Steve Soszinski**

**1136 Guilford Center Road, Guilford.**

Enrolled in UVA, this property was somewhat neglected by the previous owner and Steve has been on an enthusiastic learning curve to manage the invasives and prepare to implement the forestry plan.

Steve writes: A gentle walk through 72 acres of forest, fields, and views of 3 acres of ponds and wetlands. Otters, muskrats, and many birds have been sighted there. We believe the property was a small dairy operation and had cows through the 80's. Evidence of the dairy farm shows throughout the forest, with old fence posts, barbed wire and stone walls. The forest is a mix of mostly mature softwood and deciduous woodlands with well-maintained trails we share with the VAST folks during the winter. Sadly, the powerline right of way has been a conduit for the invasive species that plague our area. We would be happy to have a stroll through the forest, and even show you around the barns on our property.

**Directions from Exit 1:** South on Route 5. At the Guilford Country Store, turn Right onto Guilford Center Road. Continue 1.1 mile. The house is on the right soon after the Blueberry Haus on the left.

## ***2019 Game of Logging Chainsaw Training Information***

**Woman's Workshop Level 1: Sunday, September 29**

**Level 1: Saturday, October 5**

**Level 2: Sunday, October 6**

**Location: Putney School, 418 Houghton Brook Rd, Putney, Vermont**

**8am to 4pm**

**Sponsored by**

Windham Regional Woodlands Association and the  
Windham County Natural Resources Conservation District

**See Registration Form at end of Newsletter**

**What to Wear/Bring:**

Sturdy boots

Dress for the weather (layers recommended) — You will be outside all day.

Lunch and beverages

Hardhat with eye and ear protection — *all participants must bring a hardhat*. The instructor can provide eye and ear protection if participant does not have it.

Chaps — Our instructors have a limited supply of chaps available for use during training sessions. We recommend that you wait on purchasing new equipment until after the first day of training.

Chainsaws if you own one. Otherwise there will be saws provided by the instructor.

**Start Time:** Classes start promptly at **8:00 a.m.**

**Directions:**

Take Interstate 91 to Exit 4.

**From the South:** At Exit 4, turn LEFT at the stop sign to cross over the highway. Fork right to go north on Route 5 (Main Street).

**From the North:** At Exit 4, turn RIGHT to go north on Route 5 (Main Street)

Drive 1/2 a mile through the village of Putney and turn LEFT at the Putney General Store. One mile from the village, and just after passing Putney Central School, turn LEFT on West Hill Road. Drive one mile up West Hill past an orchard and past the delivery entrance for The Putney School. Turn left on Houghton Brook Rd, a steep paved road. 1/4 mile up the road, turn LEFT into the main entrance of The Putney School.

**Payment and Refund Policy:**

We require payment in full upon registration. You may cancel your registration up to two weeks prior to the workshop date and receive a full refund, less a \$25 administration fee.

Cancellations made less than two weeks prior to the workshop will not be eligible for refund, unless we have someone on a waiting list that can fill your space, in which case you will receive a full refund, less a \$25 administration fee.

In the event that we do not have enough registered participants to cover workshop costs, we will cancel the workshop. In the event of such a cancellation, we will issue a full refund to all registered participants.

*If you are interested in reading more about the Game of Logging Course, visit our instructors' website, [www.woodlandtraining.com](http://www.woodlandtraining.com).*

**See Registration Form at end of Newsletter**

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**Thursday, October 10, 6:30–8:30 p.m. — Having Hunters on Your Land**  
**Holton Hall, 130 Austine Drive, 4<sup>th</sup> Floor, Brattleboro, Vermont**

Hunting can be a great tool to help landowners who have too many deer munching their forest seedlings, landscape plants, and gardens. However, having hunters on your property can be intimidating, particularly if you are not familiar with hunting or have had problems with hunters in the past.

Come learn the benefits of a good relationship between landowners and hunters, how to make sure it is a partnership that works for both, and how to manage hunter access. You will get an introduction to what hunting is and is not; review laws and regulations and address concerns. Join other landowners and staff from Vermont Fish & Wildlife, Vermont Coverts and VLT for an evening discussion. We'll address many of the facts and myths about hunting and hunters.

*This event is co-sponsored by [Vermont Land Trust](#), [Vermont Coverts](#), [Vermont Fish & Wildlife](#), and [Vermont Dept. of Forest, Parks and Recreation](#).*

**Thursday, November 7<sup>th</sup>, 6:30–8:00 p.m. — Forest Ownership for Profit  
Holton Hall, 130 Austine Drive, 4<sup>th</sup> Floor, Brattleboro, Vermont**

Come join consulting forester and past WRWA president George Weir to talk about forest management and land ownership. With over 45 years of experience practicing forestry mainly in Windham County, and owning a fairly large chunk of productive forestland, George has learned some valuable lessons. George will discuss how forest ownership and stewardship can be profitable in the long run. He'll share with us how the importance of growth rates, markets, quality loggers, quality clients, good weather, tax considerations, and other lessons learned during his time in the woods need to come together to result in a healthy, productive, and potentially profitable landscape.

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## President's Message

*By Marli Rabinowitz*

It's August and many people appear to be on vacation, enjoying the fullness of summer. Meanwhile the WRWA program committee is working on some good programs, most suggested by members — thank you for your ideas. As always, we very much hope to see you at the Annual Meeting August 24, and at programs in the fall. There is always something to learn, and it's good to walk with other forest people.

Speaking of forest people, here's a thought that's a little bit silly, a little bit mythic, and a little bit for real:

I used to think that forest health could be left to natural succession, but now I realize that there has been so much human activity and intervention that *more* human attention is sorely needed to restore and maintain healthy trees and system-wide diversity. Climate change and other forces make this need more urgent. Ever more people are needed to work in, study deeply, and plan for the forests to enhance both the ecosystem and the economy. People who spend so much time with trees that they start to become a little bit tree-like themselves. What I'm thinking is we need more Ents....

An Ent is a mythical creature invented by JRR Tolkien. The name comes from an Anglo-Saxon word meaning Giant. They are "shepherds of the forest," protecting it from Dwarves and others, and "just as shepherds come to resemble sheep, Ents come to resemble their trees." Ents are long lived; as flexible as a sapling when young but rigid when older. They can speak, but slowly. They move more and more slowly as they age and become more rooted to a particular place, and ever more contemplative, silent and treelike. Each Ent has an affinity for a certain tree species and comes to resemble its characteristics. Quickbeam, for example, guarded rowan (mountain ash) trees and bore some resemblance to them: "tall and slender, smooth-skinned, with ruddy lips and grey-green hair." Some Ents, such as the one named Treebeard, were like beech-trees or oaks.

Here is a description of Treebeard from the book *The Two Towers*:

"[A] large Man-like, almost Troll-like figure, at least fourteen foot high, very sturdy, with a tall head, and hardly any neck. Whether it was clad in stuff like green and grey bark, or whether that was

its hide, was difficult to say. At any rate the arms, at a short distance from the trunk, were not wrinkled, but covered with a brown smooth skin. The large feet had seven toes each. The lower part of the long face was covered with a sweeping grey beard, bushy, almost twiggy at the roots, thin and mossy at the ends. But at the moment the hobbits noted little but the eyes. These deep eyes were now surveying them, slow and solemn, but very penetrating.”

They are neutral in Tolkien’s battles until their forests are threatened and then they join the side of All That is Good and Right With The World and work to defeat the Forces Of Destruction And Greed. Ahh, nice fantasy.

Does Treebeard sound familiar? I believe that I have met Ents in Vermont, although they were less than fourteen feet tall. We are blessed here with many wise forest guardians, deeply rooted people who have spent a life amongst trees and have taken on their best characteristics. I hope to meet more Ents in the future, especially young ones. Be sure to encourage friends and relatives to join us on our walks and talks, as a start. Some kids I know think it is cute to say: “Be alert. The world needs more lerts.” But when I’m walking through the forest, I often mutter: “be anent, the world needs more Ents.”

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## **Vermont Forest Health Mid-Summer 2019**

*Vermont Department of Forests, Parks and Recreation, Forest health Program  
Summarized and Highlighted by Sam Schneski, Windham County Forester*

The late spring and early summer proved to be very wet in many areas of the state. Thanks to the wet spring, foliage diseases were appearing. You may have noticed sycamores that were thin crowned due to Sycamore Anthracnose. Besides sycamore, Maple Anthracnose showed up as well. The symptoms are likely to get worse over the summer as spring infected leaves turn brown. Keep in mind weather impacts, as well as stresses from disease and insects, can take a while to show up in foliage.

We have received many reports of white pine needle damage (WPND) from around the state again this year. Symptoms developed later than other years and did not become noticeable until mid-June. WPND is a regional problem that has been widespread since 2005. Severity is linked to the amount of humidity when spores were produced the previous year. This is between May and August, generally peaking during shoot elongation in June. As a result of this year’s weather, we expect similar symptoms to be present in 2020. Research has shown that needle damage slows increment growth, but we are not aware of tree mortality outside of areas where additional stresses are contributing to decline. While several fungi have been associated with white pine needle damage, a “most important” causal agent has not been determined. It is also unknown whether the current episode

represents a novel problem or if it is similar to previously recorded white pine needle blights.

Emerald Ash Borer (EAB) infestation discoveries continue. On June 4<sup>th</sup> it was confirmed in Bristol, the first confirmed sighting in Addison County. The suspected infestation was on a street tree and reported by a consulting forester. On July 2<sup>nd</sup>, the presence of EAB was confirmed in Derby Line, the first confirmed sighting in Orleans County. An email from a Derby Line resident prompted a visit and confirmation. The infested tree is about six feet from the international border, with a few branches hanging over into Canada. Detections continue elsewhere in the region including the town of Croydon in New Hampshire’s Sullivan County, just over 10 miles from Vermont’s bordering Windsor County.

The flight season is June 1<sup>st</sup> to September 30<sup>th</sup>. This is the time EAB are emerging from host ash trees and infested untreated ash wood products such as ash firewood. See Vermont’s “Slow the Spread” recommendations at <https://vtinvasives.org/land/emerald-ash-borer-vermont/slow-spread-of-eab> for information on additional precautions to reduce risk of moving EAB at this time of year. One benefit of slowing the spread of EAB is to allow research more time to help us understand this insect. An example is a



recently published paper by scientists at Michigan State looking at ash condition in southeast Michigan. While noting the “catastrophic” ash mortality, the authors found many white ash that were still alive even though they had been attacked by EAB.

The smaller white ash size classes had more survivors. It’s safe to say that EAB has earned its reputation as a tree-killer, and that attacks on the boles of surviving trees will likely affect timber quality. But while we wait for additional science-based information, this research suggests that maintaining ash as a component of our forests is a goal we may be able to realize.

Since all of Vermont is now within the federal EAB quarantine boundary, the USDA is no longer deploying purple traps in Vermont. To fill in the gap, volunteers have put out about sixty traps in locations throughout the state. Most are participating in an effort coordinated by UVM Extension and will be checking traps for EAB adult beetles twice during the summer.

To date, Emerald ash borer has been confirmed in Addison, Bennington, Caledonia, Grand Isle, Orange, Orleans, and Washington Counties. The Vermont find closest to Windham County during the summer of 2018 was in Stamford. To date, no affected trees have been found there, just the two beetles with one on each trap. Assuming this infestation does not do anything too surprising, surveys will be repeated each fall/winter for a couple of years until it is found in Stamford or a nearby town. Then the search area will be expanded to contain the towns next to any newly infested area.

As if the EAB news isn’t enough, be on the lookout for Oak Wilt. Oak wilt is caused by the fungus *Bretziella fagacearum* (formerly *Ceratocystis fagacearum*). The origin of this fungus is unclear, but it has caused oak mortality in scattered locations throughout the central US and many eastern states. Oak wilt has not been detected in New England but has been found in several locations in New York. It is another non-native that moves on firewood, which is how it likely got to the closest known location in Glenville, NY, near Schenectady and about 50 miles from Vermont.

Efforts are being made to eradicate the disease in this area. Eradication is realistic only if the disease is detected early, which is why we’re asking people to look out for symptoms. Oak wilt is closely related to Dutch elm disease and affects trees in a similar manner. As the fungus invades the xylem, water transport is affected, which causes leaves to wilt and drop prematurely. Water stress and foliage loss lead to rapid mortality. Also like Dutch elm disease, oak wilt spreads from tree to tree through root grafts, resulting in expanding infection centers. Sap beetles spread the disease to new locations. They are attracted to oak wilt spore mats produced on red oaks that have died. If these beetles visit fresh wounds on healthy oaks, spores on their bodies can cause infection.

Fortunately, these native insect vectors are less efficient than the host-specific bark beetles responsible for spreading Dutch elm disease. Trees are infected in the spring or summer. By late July, some wilting leaves may discolor (gray-green to red-brown) starting from leaf margins; both discolored and green leaves may drop from the tree. Because leaves are fully expanded when symptoms develop, there is minimal leaf distortion. Symptoms may start on a single branch, progress from the outermost branches downward, or involve the whole tree at once. By the next growing season, trees in the red oak group will likely be dead.

Spread within a stand occurs in pockets. Symptoms on a tree are sudden but spread within a pocket is slow. It’s more likely where wounding risk is high: edges, disturbed stands, landscape trees. Oak wilt spread within a pocket occurs slowly through root grafts. Sap beetles transport the disease short distances to new locations. Although we do not currently suspect oak wilt in Vermont, it is never too early to be vigilant.

If you have seen a tree with symptoms that match oak wilt, please visit <https://www.vtinvasives.org/get-involved/report/reporting-a-tree-disease> to report your observation. For more information: <https://www.vtinvasives.org/invasive/oak-wilt>.

## Logger Safety and Workers Comp Program

*By: Sam Lincoln, Deputy Commissioner  
Department of Forests, Parks & Recreation*

FPR is pleased to announce the launch of the Vermont Logger Safety and Workers' Compensation Insurance Program. After a diverse group studied the successful strategies that have been employed in other states and countries to sustainably reduce injuries, claims and ultimately insurance costs, we found common themes, and we've modified them to best address the needs of Vermont's forest economy in our own comprehensive program. Modernized safety training will reduce injuries and claims, and through a certification process, it will connect those employers that enroll and become "safety certified" to reduce cost workers' compensation insurance.

Another significant issue this program addresses is workers' compensation insurance avoidance. As recently as 2016, only 18 non-mechanized loggers and 52 mechanized loggers held workers' compensation insurance policies in the state. Guidance documents and companion checklists have been developed to assist forestland owners, foresters, loggers and purchasers of standing timber in determining who is properly insured, or exempt, from workers' compensation insurance on logging operations. We have recorded a webinar that explains the program and walks through the checklists and online resources that have been developed. (See the link below to register or find additional information.)

We must be "all in" to make this program successful and address this long standing issue. All in can mean utilizing the checklists during contract signing, supporting a culture of safety by implementing and enforcing a requirement for personal protection equipment (PPE) on logging operations, wearing appropriate PPE yourself when visiting logging operations, and supporting loggers that complete and maintain safety training standards. The forest economy is in the midst of a workforce shortage and we can't ask parents to consider and support, among the many safer occupations that are an option, their sons and daughters choosing a career in forest management with the risk of being employed by someone who hadn't properly insured them in the event of a severe injury. This program will make the legally required insurance more affordable and can play a role in growing employment in the logging sector with a properly trained and insured workforce.

**Landowners and Foresters – Please inform the loggers that you work with to be sure they are aware of the program and encourage them to learn more.**

Here is the link to the webinar:

<https://www.youtube.com/watch?v=ZaeUMKCG21k&feature=youtu.be>

### **Local Conservation Priorities Survey–Your Opinion Counts!**

Please take a few moments to help guide conservation priorities for the Windham County Natural Resources Conservation District (WENRCD).

Your responses to this survey will direct conservation efforts from the WENRCD on Windham County farms, forests and waterways in the next year. Your feedback will also provide guidance on the local level for programming from the Natural Resources Conservation Service (NRCS)

Contact Margot Ghia at NRCS [ghia.wcnred@gmail.com](mailto:ghia.wcnred@gmail.com) to participate in this survey.

**Thank you for taking a moment to help guide conservation in Windham County!**

## May 19th Essential Oils Workshop

*By Joanna Snelling*

"Making Essential Oils and Hydrosols from Local Plants" was the workshop title with SantaLena and Tom Groves from Heart Grown Wild. As it turned out, the dozen or so participants were treated to a

much wider ranging discussion during our nearly five hours together as SantaLena and Tom took us through the processes they use in their "organics plant-based alchemy" to create their assortment of



skin care products designed to evoke the experience of being in nature. The overall theme of the presentation focused on their desire to model a paradigm of sustainability and transparency in a burgeoning new industry where the demand for “essential oils” could threaten the natural supply.

The Heart Grown Wild website characterizes their approach as “Weaving Science with Intuition,” and the workshop was a delightful example of this. Discussion included scientific botanical properties of plants and important safety procedures, as well as more intuitive aspects such as connecting with plant energies and the effect of phases of the moon. The presentation was organized around tiers of interaction with plant essences from least processed to most highly concentrated.

The simplest way to absorb the healing power of nature is, of course, a walk in the woods where we simply breathe in things like terpenes given off by the conifers and other plants. When we rub a bit of spruce or balsam and inhale the lovely fragrance we are also gleaning a bit of the basis for the essential oil made of the plant.

To bring some of the essence of outside indoors, the second “tier” is to create flower essences by placing flower petals on top of water in a vessel, preferably something beautiful to look at. The idea is to gently extract the energy out of the petals into the water. In this process, the energy of the sun and the moon may come into play and some people like to put crystals in the vessel as well. The petals are left for at least 4 to 8 hours. The resulting flower water can be used for such things as a facial steam where the steam will have the botanical quality of the flowers used.

Plant powders are a more concentrated form of preserving plants for use in skin care. Plant material is dried and ground using a coffee grinder. Depending on the type of plant, the powder can be left a bit grainy to create an exfoliating product. This is superior to the microbeads added to many commercial exfoliants which are being found as waste on the ocean floor. SantaLena used the white sage powder she passed around as an example of a plant that is currently being over harvested so she is particularly careful about her sources.

One of the most versatile ways to preserve plant essences is through infusion. Various plant materials can be infused in oils, witch hazel, alcohol, or

even honey. The infused oils are not the same as distilled essential oils. Once again, Tom and SantaLena emphasized the importance of careful sourcing of both the infusing and plant materials. Jojoba oil is their most common infusing oil but some sources are adulterated with other oils, which make an inferior product. They also are devoted to careful, sustainable harvesting of plant material. Wild harvesting has become a big trend, and there is always the danger that this will lead to over harvesting and harvesting of endangered plant species. Since Tom works with Longview Forestry as their invasive plant specialist, he has been able to partner with them to obtain needles and resins from trees harvested as part of sustainable forest management. Tom and SantaLena hope to promote this as a possible additional revenue source for landowners.

Before we arrived, Tom and SantaLena had assembled their still and filled it with spruce obtained from a recent Longview cutting. The distilling process, which ultimately yields essential oil and hydrosol takes many hours so we watched the “alchemy” throughout the day. As steam rose up through the spruce, the terpenes were released. The steam then went through a cold condenser, which precipitated out a mixture of essential oil and hydrosol. The oil formed a thin film on top. The final yield estimate was about one quart of hydrosol and 10 drops of essential oil. It was quite amazing to see the amount of plant product needed to produce such a small amount of essential oil. Heart Grown Wild mostly uses the hydrosols while keeping the essential oils to blend in other products. They are concerned that the “essential oils craze” is leading to problems of both overharvesting and safety issues in the use of this highly concentrated product.

After hearing and discussing so much information, we took a brief, head-clearing walk in the nearby woods where Tom guided us in using Newcomb’s Flower Guide to identify what we saw.

In the days following the workshop, I did a little experimenting with some of my own plants, making infusions and an attempt at a stovetop hydrosol. The results were mixed, but it certainly gave me even more of an appreciation for all the work, time, energy, and thoughtfulness that goes into this process, as well as for the huge amount of source plant material required. Then I went for a walk in the woods and took some long deep breaths.

## Identifying Ferns with Lynn Levine

*By Marli Rabinowitz, WRWA president*

On a warm evening in July, a dozen or so people gathered at local forester and author Lynn Levine's house and learned how to use her new book to identify the ferns that we step through on every forest excursion.

More than just fuzzy undergrowth, ferns give clues to the state of the forest. Lynn explained that ferns are one of the most ancient forms of life on the planet; 350 million years ago they grew as large as woody trees do now. They have vascular systems (specialized tissue that conducts water and nutrients) and unlike the soft little mosses, have lignin to stiffen their fronds so they could rise high in the air. But they have poor root systems, and that limited them. Their collapsed bodies piled up and millions of years later constitute most of the carbon-based plant matter in coal. The Age of Ferns is also called the Carboniferous.

After this, many ferns went extinct but around 200 million years ago, new species can start to be found in the fossil record, including Interrupted Fern, Cinnamon Fern, and Royal Fern, which are just as we know them today. They survived four major extinction events.

Each frond of a fern arises from the soil with a central stalk and soft green leaflets of varying shape. Lynn's book offers a simple and effective way to identify ferns based on the style of the leaflets on each frond, and also by habitat. She divides them into once cut, twice cut, and thrice cut categories (akin to leaflets and sub-leaflets on a flowering plant). There are also categories for "unique" forms (e.g. maidenhair) and for "three part" fronds. The twice-cut category is separated into vase-shaped or dispersed growth forms. From this simple key, you proceed, for each result, to a page with four or five species to choose from. You can then identify the exact species based on the spore bearing leaves, the habitat descriptions and the illustrations. Each fern is beautifully drawn by Briony Morrow-Cribbs. The drawings are more than lovely; they accurately show the identifying features of each species.

We wandered through the woods near Lynn's house and took closer looks at ferns. There were species that we might not have noticed until we were guided to stop and look more closely. Lynn helped us go from book to fern and back again, checking for frond style, how the spores were arranged on the leaflets, entire fronds, or otherwise. We checked whether the fronds grew from a single spot, "vase like," or whether fronds popped up separately along underground roots. This way we could narrow down to the one page where similar looking ferns are grouped. Then Lynn would ask if it was a moist area or dry, in heavy shade or dappled sunlight, or point out other clues.

Learning to recognize ferns can help you to understand the various habitats and the condition of your forest. Crested wood fern and sensitive fern prefer wet soils. If you see them growing, it is not a good place for a road or other such activity. Maidenhair fern and spleenwort need calcium rich, high pH soil. That soil will grow good maple trees but not such good softwoods. Deer don't like hay scented fern, so often you will see lush carpets of it where the deer have browsed out the hardwood seedlings. This indicates too many deer for good regeneration.



After our stroll we gathered on Lynn and Cliff's porch, ate fruit and delicious potluck desserts, and had time to talk more about ferns and other sightings from recent outings people had taken. A real treat was that one person brought her dissecting microscope, which has two eyepieces and thus a very three-dimensional view. She placed leaflets with spores under the lenses and the hot light began to dry the spore "containers." They slowly writhed and unfurled just like microscopic fiddleheads while popping out spores. Everyone had a turn to look and say WOW! Lynn explained the amazing reproductive cycles of ferns, unlike any other. There is always more to learn and our eyes were opened to another level of awareness of forest life.

Identifying Ferns the Easy Way: A Pocket Guide to Common Ferns of the Northeast,  
by Lynn Levine, Illustrations by Briony Morrow Cribbs. Heartwood Press 2019.  
See a full review by Arthur Westing in the Spring 2019 issue of *Woodlot Tips*.

## ***WRWA's July Visit to Allard Lumber Co. in Brattleboro***

*By Bob Zimmerman, Trustee and Local Landowner*

The WRWA visit was hosted by Cliff and Trevor Allard, owners; Mark Rivers, public relations ; and Dan Woods, forester. The company was started in 1974 and has grown significantly since — something many sawmills cannot say. Allard also conducts a substantial outreach program to local schools, industries, and organizations like ours.

The tour began at the entrance to the warehouse, a large building recently purchased by Allard to store the kiln dried lumber before delivery to the customer. The warehouse is 60,000 square feet and allows the full output to be stored under cover, which makes for a better product and happier customers. Allard's offices also are at the warehouse.

Allard distributes kiln-dried hardwood lumber in the U.S. and worldwide. Most of its sales are overseas — 25 percent to China. Trade tensions with China have cut into the business substantially. Allard specializes in very high end wood boards, but also sells wood products locally, which allows them to market lower quality wood.

Every piece of wood that enters the yard is tracked through the whole process: debarking, sawing, drying, sorting and warehousing. Each piece can be traced back to the logging site; any questions about grading, etc., can be answered. This capability has been in place for 10–12 years and is unusual in the industry.

Many of the boards were painted blue at the ends. After some discussion we learned this is for looks, not function. (I would like my boards, if I were the buyer, without paint added.)

Allard handles all northeastern species: red oak, hard maple, soft maple, ash, cherry, basswood, beech and hickory. Most of these were visible in the warehouse, complete with very informative labels containing length, grade and species. They have yards in New York, New Hampshire, and of course Vermont.

A short discussion ensued about the EAB (emerald ash borer) problem. Cliff Allard is of the opinion that your ash should be cut ASAP if you want to get the value out of your trees. EAB is coming, but is not in Windham County, yet! There was

some discussion about what the state is recommending to landowners.

Next up was the tilt hoist where lumber comes after spending some months in the kiln. Each board is hoisted to the grader and sorted by length and grade. About 650,000 board feet of lumber is processed a month. This amounts to 5-10 loads a day coming and going.

Next we took a short drive down the road to the original site of the company where the logs are actually processed. We were shown the debarker and the metal detector; the saw blade can be seriously harmed by a spike, spout, barbed wire fragment, or any one of a number of forgotten hidden objects inside a tree. All logs are tagged and traced to the warehouse.

There is a large separate room where saw blades are kept sharp and repaired, a full-time position for a skilled employee. Saw blades come in two kinds: single edge or double edged. Several of each are in use at different stages of the logs' journey through the mill.

The log is scanned and calculations (human and computer) are made to decide the best way to make the first cut. This determines what will eventually happen to the log. Boards are cut at a rate of 10–12 boards per minute. Low grade logs may be cut to become railroad ties or cants to become bolted together as mats used by loggers in the woods for temporary bridges. Some scraps even become surveyor stakes to be sold locally. Every bit of product is extracted from the logs to be used somewhere.

Next is the edger which trims the boards and sends them to the sling sorter where sorting occurs by species, length and grade. A job for a skilled worker for sure, even when aided by some high tech equipment.

As noted above nothing will go to waste. Trim-mings are chipped and sawdust is accumulated. This "waste" may go out for sale, but much of it is used onsite to make steam and electricity. A 75-year-old steam generator is used to produce steam at some 250 lbs. pressure. Much of that steam will

be used as a source of heat for the kilns. I counted a dozen kilns. Wood will stay in the kilns for up to several months, depending on species and how it was cut, until the moisture is about eight percent. Low-pressure steam is used to power a

turbine that produces electricity for use in the mill and is also sold back to the electric company.

This was a very informative two-and-a-half-hour demonstration of an important local industry that we should all be pleased to have near our forests.

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*Sheldon and Betsy Beebe and their family from Bellows Falls have been long time members and supporters of this organization. It seems appropriate to print a remembrance of their son Justin, who died August 13, 2016, while fighting the Strawberry Fire in the Great Basin National Park in Nevada as a Lolo Hotshot.*

### ***Remembering Justin Beebe — a tribute by his mother, Betsy Beebe***



Justin Beebe was born on February 1, 1990, as an only son to Sheldon and Betsy Beebe. He joined his older sister Jessica after six years to round out the family. He was a 2009 graduate of Bellows Falls Union High School and attended a post-graduate year at Vermont Academy in Saxtons River.

Justin epitomized a modern “Mountain Man” from Vermont, which he liked to call himself. His life consisted of hunting, fishing (especially fly fishing), camping, hiking and harvesting from the fertile Vermont landscape. He loved eating the results of his hunting adventures and made the best meatballs from bear, deer and moose combinations.

Fly fishing became a true passion especially after moving to Montana. Often after 14 days fighting forest fires with the Hotshots, he spent his two days off exploring the beauty of the Montana rivers fly-fishing.

Justin grew up in Westminster, Vt., where he became a hometown hero as an athlete. Baseball, snowboarding, hockey and soccer were his favorite sports. Through his time playing sports, he remained humble and a true team player, setting an example for his team members and encouraging them. Many team members remember him as an inspiration to “follow your heart and be the best you can be”.

He found a job working in an orchard in Saxtons River, where he learned to prune apple trees and blueberry bushes. The job fueled an interest in grafting trees and bee keeping. Logging and cutting firewood filled in his extra time. Because he loved being outdoors and enjoyed hard physical labor, these jobs suited him for a while. Late winter and early spring became a time to make maple syrup at camp in Westminster West. His Dad, Justin, and friends looking to experience sugaring, spent time together. Justin and his Dad shared plans and dreams about the sugaring operation and how to handle the 100+ acres at the top of the mountain.

During his time at the orchard, he worked on certifications for fighting fires. He spent 14 to 21 days working for the USFS one summer on a Wildland fire Crew from New England working fires in Montana. He caught the bug to become a Wildland fire fighter. Over the next three years, Justin continued to get more certifications needed to qualify as a Hotshot. Hotshots are an elite, 20-person crew that are the most highly trained group specializing in the most serious forest fires in the nation.

Justin and his girlfriend took a road trip starting in Bend, Oregon, and ending in Helena, Montana, stopping at various Hotshot offices to talk about a job. This journey took them to the Lolo Hotshots and the Assistant Supervisor, Shawn Faiella. Shawn described the interview as follows: "That morning a young man walked into my office. His name was Justin Beebe and he wanted to be a Lolo Hotshot. So for about 30 minutes or so we talk about what it's like to be a Hotshot. I ask him questions about his experience, where he's been, what he's done, what he stands for. So, he tells me. I talk about being a Hotshot, what its like. Sixteen-hour days on a shift, 14 days in a row, coming home for two, being away from family, then going back out again, and doing that over the course of the summer. I talk about the dangers of the job. What it's like, the physicality and such. And we have a good conversation. Justin tells me about his experience and he's got good fire experience. He's worked with chain saws. He tells me about his life growing up playing sports. He's an avid hockey and baseball and soccer player. And he really likes team environments and kind of thrives in that setting.

"He talks about his home. He's from Vermont. And he talks about this little 100+acre parcel of

land that they call camp. And every winter on that parcel of land, he and his family tap 1,000 maple trees and make syrup. The conversation is going well. He looks the part. He's got a nice beard. He's got a good handshake. He looks me in the eyes, and I feel pretty good about him. After about 30 minutes or so, we're sitting there. I'm sitting there, he's sitting there. I'm kinda done and he's not. He's got something else to share, and out of his pocket he pulls a little can of maple syrup. He sets it on my desk and he basically says, 'Hey Shawn here's the deal. I've been talking to Hotshot crews. Not all of them want to say what we do and such, but for those who take the time to talk to me, I've been giving them this can of maple syrup.' And in that moment, things changed. He showed me that he was generous, and authentic and he had character. And I took that to heart 'cause to me that's the most, or one of the most, important characteristics of being a good firefighter. So, three months later I hired him."

Justin died doing what he loved. That was always his wish. He has left a legacy to those who loved and knew him to "follow your dreams." If you want to honor his memory, take a walk in the woods, listen to the "Simple Man," and be open to others.

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***Appreciation for recently retired Windham County Forester Bill Guenther's leadership of his annual WRWA Spring Somerset trip to see old growth Yellow Birches.***

Bill,

The walk to see the old birches was my first excursion with the Windham Woodlands group, so my first chance to meet some of my new neighbors...native Vermonters and transplants like myself. It was also my first time on snowshoes in public, so I was glad to know that I could keep up with the others and not fall on my face! I really enjoyed being out in the woods with you and the others, and look forward to another opportunity. On your advice, I took two days of chainsaw training through the Game of Logging and that was a great experience, too.

Best wishes, B.Young

Dear Bill

All I can say is that snowshoeing into that grove of Yellow Birch was a soulful experience, not just because of the majesty of each pristine tree but also because of your reverence and deep understanding of that special place. You are able to see and explain things that I would otherwise not see or comprehend. I look forward to going there with you again.

Thank you. Andy B.

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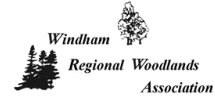




## 2019 Fall Game of Logging Chainsaw Training

Course Registration Form

(Please be sure to sign and date the form below, indicating that you have read and accept the cancellation policy)



### Course Dates

**Woman's Workshop, GOL Level 1:** Sunday, September 29

**GOL Workshop Level I:** Saturday, October 5

**GOL Workshop Level II:** Sunday, October 6

**All classes begin promptly at 8:00am and go to 4:00pm**

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_, State \_\_\_\_\_ Zip \_\_\_\_\_  
Phone (h) \_\_\_\_\_  
(w) \_\_\_\_\_  
(cell) \_\_\_\_\_  
E-mail \_\_\_\_\_

Which Class(es) will you be attending? Woman's Level 1 \_\_\_\_ Level I \_\_\_\_ Level II \_\_\_\_

**Please Note: Preference will given to registrants attending both levels**

Do you own a chainsaw? ☐ Yes ☐ No

Registration Fee: \$185 per workshop

I plan to attend and enclose payment for \$ \_\_\_\_\_

Please make checks out to the *Windham County NRCD*

Please see the accompanying page for information about cancellations and refunds.

☐ I have read and accept the cancellation and refund policies detailed on the accompanying information page.

Participant Signature \_\_\_\_\_

Date \_\_\_\_\_

Send Registration form and payment to:

Margo Ghia

Windham County Natural Resource Conservation District

28 Vernon Street, Suite 332

Brattleboro, VT 05301

**Windham Regional Woodlands Association**  
130 Austine Drive, Suite 300  
Brattleboro, VT 05301-7040

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***Upcoming Programs***  
***(See inside for details)***

**Saturday, August 24<sup>th</sup> — WRWA 2019 Annual Meeting — West Townshend, Vermont**

The WRWA Annual Meeting will be hosted in the high remote valley of Cobb Brook at the base of Glebe Mountain on the border of Jamaica and Windham, Vermont. Details and directions inside.

**September 21, 5 p.m. — Member Ramble at the home of Steve Soszinski, Guilford.**

**Sunday, September 29, 8 a.m. – 4 p.m. — Women's Workshop, Game of Logging Level I**

**Saturday, October 5 and Sunday, October 6, 8 a.m. – 4 p.m. — GOL Levels I and II**

**Thursday, October 10, 6:30–8:30 p.m. — Having Hunters on Your Land**

**Thursday, November 7<sup>th</sup>, 6:30–8:00 p.m. — Forest Ownership for Profit**

***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.