



130 Austine Drive, Suite 300, Brattleboro, VT 05301-7040
802-257-7967

WOODLOT TIPS



Sam Schneski visits a black bear den.

SPRING 2017

Programs

Tuesday, July 25 at 5:30 p.m. — Tour of Timber Harvest on The Scott Farm, Where Cider House Rules was Filmed in Dummerston, Vt.

Join Consulting Forester Ian Martin and County Forester Bill Guenther, for a tour of a recent timber harvest on a portion of the historic 500+ acre Scott Farm (<http://scottfarmvermont.com/>) in Dummerston. The harvesting crew from Long View Forest Inc. in Westminster used a mechanical harvester and a forwarder, and hand-felled some of the larger trees. Most of the volume removed was large, over-mature white pines that yielded high volumes per acre. The job was one of the best that Bill has seen. During the tour, we will also discuss some white pine health problems that we have seen in recent years, including needle blights and *Caliciopsis* canker.

This tour is family friendly, and can be enjoyed by all ages. Scott Farm will allow people to bring well-behaved dogs on short leashes. The terrain is moderate, mostly on logging roads, though we will walk on some logging slash. Given our local tick populations, please be safe and use repellent. If you would like an alternative to DEET-based repellents, data reviewed by the Environmental Protection Agency indicate that products containing 20 percent picaridin (active ingredient) also are effective. As we can have warm weather in July, participants should bring water for hydration.

Parking is limited at the tour site, so we will carpool from the Dummerston Town Office (1523 Middle Road,) in Dummerston Center. Please arrive at the Town Office by 5:30 p.m. so that we can arrange the carpooling and use as few vehicles as possible. The tour site is just a few minutes' drive from the Town Office.

For more information, contact County Forester Bill Guenther at Bill.Guenther@vermont.gov or 802-257-7967 (ext. 305).

Friday, August 4, 3:30–5:00 p.m. — Tour of Doug Cox's Violin Shop

WRWA will visit the most skilled luthier (maker of stringed instruments) in New England. Local craftsman Doug Cox studied his craft in Mittenwald, Germany, at one of the oldest violin schools in the world. Doug will open his Brattleboro shop to us for a look at how these fine instruments, worth more than their weight in gold, are produced. This tour will offer a look into the maximum economic value added that our local woodlands can provide.

Due to space restrictions, attendance is limited to 18 participants, and all must be at least 16 years old. If you want to attend, please contact County Forester Bill Guenther by July 28 at Bill.Guenther@vermont.gov or 802-257-7967 (ext. 305). **Bill will provide all participants with the West Brattleboro carpool location, where participants will meet at 3:15 p.m.**

WRWA is offering this program first to members. After July 28, we will open up any available slots to the public. Please note that Doug's studio is not wheelchair accessible.

Save These Dates!

Saturday, September 9, 9 a.m.–3 p.m. — WRWA annual meeting and potluck cookout at Molly Stark State Park in Wilmington, Vt.

The Hogback Mountain Conservation Association has accepted WRWA's invitation to participate, as our meeting will be in HCMA's "backyard."

Thursday, October 5, (late afternoon - early evening) — Tour of Cersosimo Lumber Company Facility in Vernon, Vt.

Saturday, October 7, 2:00–3:30 p.m.) — Tour of a wildlife patch cut after three years of regrowth at Lee and Diana Todd's woodlot in Halifax, Vt.

Date change from November 4 to November 11 — Big Tree Tour

Led once again by County Forester Bill Guenther, the tour travels throughout Windham County to look at either champions or significant trees on the BIG Tree Registry. This is always an all-day, fun-filled trip. Details will be in the Summer issue of *Woodlot Tips*.

President's Column

By Martha (Marli) Rabinowitz

Forests of the Far, Far North: The Nome National Forest

As I write this, it is April 25 and I am in Nome, Alaska, beyond the eco zone of most trees and woody shrubs. I used to live out on an island near here, and the one woody plant that survived out there was a type of willow that grows prostrate,

flat along the ground like a vine, never poking up into the wind and biting cold.

Here in Nome there are some bush-sized willows and alders that survive out on the tundra and along the creek beds, and a few of the houses in town have willows and alders planted up against them

as a scraggly hedge. They are just now starting to open their extra large and very fuzzy catkins. From a distance the willows look to be covered with dust from the gravel streets, but a closer look shows that the dusty look is a result of dense fine hairs that lie flat along the branches and are the closest thing to fur I have seen on a plant. There are a few spruce planted in town, of unknown origin, and they look healthy, tucked in the lee of the houses; one was even as high as a two story house. I heard there were some shrubby cottonwoods too, but I didn't see them in town or on my one Jeep trip out of town, but nothing is leafed out yet and I am not an expert at twig ID at 30 miles per hour! Nothing I saw growing on the tundra was over four or five feet high.

Nome and its famous Golden Beaches face south to the Bering Sea. When I stand on the sea wall and look out, as far as I can see the wide ocean is covered in ice. But just about fifty yards out on the

expanse of whiteness, like a mirage, there is a determined looking group of a few dozen small spruce and fir trees. This is the "Nome National forest" and it appears every winter when local people haul discarded Christmas trees (that I suppose must originally arrive by freight plane), and plant them in the sea ice to stand until they drift away during spring breakup sometime in late May. In March during "Iditarod month" festivities, the tiny forest forms the location for the Eliot Staples Bering Sea Ice Golf Classic, a six-hole comedy of a fundraising event that also somehow takes place on the sea ice.

I guess some people just do not feel at home without some kind of a forest near them, even if they have to make it themselves. I look forward to returning to Vermont and the many subtle colors of spring, and hearing the peepers and the birds. I think I will be appreciating the graceful, enclosing canopy of our tall trees even more than usual.

Sugarhouse Tour: The Bunker Farm

By Margaret MacDonald and Marli Rabinowitz

On Saturday, March 25, 19 adults, 3 children, and 1 dog attended the WRWA-sponsored 2017 tour of the Bunker Farm sugarhouse in Dummerston. Our host, Mike Euphrat, said the farm had collected very little sap on the previous days due to the cold weather so he did not fire up the evaporator on the day of our visit. But he spent more than two hours providing the group with interesting information about the farm, the syrup production methods used, and other details about sugaring and maple products.

Mike and his wife Jen, Jen's sister Helen, and Helen's husband Noah Hoskins bought the Bunker Farm property through the Vermont Land Trust four years ago and have brought the old 16-acre sugarbush back into production. The family set 1,200 taps on this land, and also collects sap

from a nearby leased property with 3,300 taps. Another leased property on Dusty Ridge also has potential as a sugarbush, and the farm also buys sap from Brett Castine.

The sugarhouse contained many 40-gallon drums of syrup, and there was a display of small sample jars, each of them taken from one of the drums. We also had an opportunity to sample the three grades of syrup the farm has produced this year. Overall, the farm was having a good sugaring season despite the frequent temperature shifts from cold to warm and back, which meant frequent stops and starts of sap flow. Snow cover and the amount of frost in the ground remained fairly consistent throughout the season. One reason for the farm's productivity is its location on the Waits River geological formation, which is especially high in calcium.



The Bunker Farm first tapped during the January thaw. In 2016—an exceptionally mild winter—the farm made 240 gallons of syrup in January (about 25 percent of the total crop); this year it was 180 gallons. Reinforcing Sam Schneski’s observations in the winter issue of *Woodlot Tips* (“Sugaring Season Around the Corner”), Mike explained that whether or not to boil in January is an individual decision. Such an early boil can sometimes produce 5–10 percent of the year’s total, but the lines will probably freeze up again and thaw, and tap holes may begin to close earlier than they would have if they waited to tap later in the season. Mike’s advice: If sugaring is your main source of income, it is probably worthwhile to tap early; otherwise maybe not.



Some sugarmakers predicted that last year’s drought might reduce the sugar content in this year’s sap. Mike used the term “Brix” to indicate the percentage of sugar in a batch of sap.¹ The farm always boils syrup at the same sugar content. By law in Vermont, the legal minimum to determine when sap has become syrup is 66.9° brix. It takes 43.5 gallons of sap to make 1 gallon of syrup. Higher use of reverse osmosis (RO) to increase the ratio of sugar to water in the sap decreases the time needed in the evaporator, and thus saves wood; the decision is up to the individual sugarmaker. After passing through the RO, the sap contains 10–11 percent sugar; the RO machine processes 600 gallons of sap per hour.

The Bunker Farm burns largely softwood, primarily pine and hemlock harvested on the property. Mike uses a standard de-foaming product in the evaporator; he noted that some used to use bacon, which must have tasted pretty good afterwards! The evaporator cools whenever one opens the door to add wood, or turns off the blower; Mike tries to

keep the smoke stack temperature between 600 and 800 degrees. He recently got a temperature monitor for the smoke stack and has found it very useful as it helps him determine when and how to fire the arch for ultimate efficiency.

Grades and flavor

Cooking time affects the syrup flavor. The farm draws off syrup from the evaporator when it is at 219 degrees; at that temperature the syrup won’t ferment or form crystals, and is food safe. To create granulated sugar, the syrup is brought to a pot or pan that is separate from the main evaporator and heated to 250 degrees. At higher temperatures one gets into candy making, which has a “fascinating” chemistry. The progression goes from relatively soft maple candy to hard candy, such as maple lollipops. Tavernier Chocolates uses the farm’s maple sugar nuggets in one of its small chocolate bars.

Mike then explained more about syrup grades and color. Sugar inversion by microbes leads to darker color and stronger flavor, and warmer temperatures stimulate this process. Therefore, lighter colored syrup comes from sap collected during cold snaps, while the darker samples come from sap collected during relatively warmer weather. In the past, when light (then known as “Fancy” grade) syrup was popular, some sugarmakers injected air into the boiler to make the color lighter, but the flavor remained the same. The Bunker Farm goes by the color to determine the syrup grade and makes no attempt to influence the color. Once the trees begin to leaf out in the spring, the sap acquires a “bud” flavor that most people consider somewhat medicinal; this tends to signal the end of the sugaring season. But the chef in one Boston restaurant liked this late syrup, and Bascom Maple Farms in Alstead, N.H., paid full price for it, so it couldn’t have been too bad.

The farm sells most of its syrup in bulk to Bascom, but also sells to restaurants, including some in Boston, and even ships some to the West Coast. Local customers can buy the farm’s maple products, meat products, and plants at the on-site farm store.

Mike also stated that although all the farm’s products are strictly organic, the Bunker Farm does not yet have a “Certified Organic” credential. To obtain that certification the farm would have to use all stainless steel equipment in the sugaring

process, and this is expensive; the farm is moving in that direction but is not there yet. The application and approval processes are also somewhat cumbersome. In response to a question about cleaning equipment, Mike said that the bulk dealers rinse the drums before returning them to the farm. The farm flushes all the main lines at the end of the sugaring season, but not all the 5/16" lines.

Turning to how the farm collects sap, Mike introduced us to the concept of the "tapping band," basically the section of tree trunk that the sugarmaker can reach when standing on the ground. Within that band, Mike follows the rule of using one tap at a given level if the tree is 10–17 inches in diameter, and two if the diameter is greater than 18 inches; he never uses three. Each tap creates a scar three inches wide and a foot long, so to avoid damaging the tree the sugarmaker must place taps up one foot and over six inches from any earlier tap hole.

The farm runs high vacuum on all lines; keeping it running reduces the chance of sap buildup at the tap hole or in the lines and thus inhibits growth of bacteria. Damage to the tapping lines can occur because squirrels, coyotes, bears, and foxes may chew on the lines, and woodpeckers peck on them. Some manufacturers are now making squirrel guards for sugaring lines. Another persistent problem is vacuum leaks; one farm employee spends all season just checking vacuum leaks; unlike most people he loves it! Mike also mentioned the concept of sap ladders, which get sap to flow against gradient. Tracking and recording growing degree days—measured by the average high and low temperatures on a given day for a given tree species—is a way to track the progression of the season and when the beginning of the "off-flavor" will likely start in the sap, signaling the end of the season.

Looking toward the future, Mike noted that the trees are at peak production now, but to get the property in shape for future generations, they may have to cut some production trees to get more light for growing trees since the sweetness is related to the size of the tree canopy. He will follow the guidance of former WRWA trustee Hayden Lake, the farm's consulting forester.

To the sugarbush!

After the discussion in the sugarhouse, we were treated to samples of this year's syrup. Some of us

were inspired to wander to the farm store in the barn and buy jugs of our favorite grades to take home for more in-depth tasting. Another small and hardy group wearing the appropriate heavy shoes or boots headed out through the drizzle to view the 16-acre sugarbush. We walked up a slight slope and into the woods full of majestic old maples. (A question for your kids/grandkids: why is it almost always an uphill climb to the sugarbush?)

We passed by the remains of some big cherry trees that had been cut and sawn for a second family house on the farm, another good reason for maintaining a multi-species forest. There were many smaller maples coming in under the canopy of the older trees signaling good regeneration, which can often be a problem due to winter deer browse. Mike said the best way for him to keep deer from grazing new hardwood seedlings is to bring his dogs when he works in his lot. As long as they don't chase, their presence and scent is a good deterrent.

Some of the lines seemed to be set pretty high, the explanation being that the taps had been set by a 6-foot 7-inch tall guy standing on three feet of snow, which had since melted! Each tap leaves a long scar and it is good to space them out. A shorter person reaching too high overhead can cause the drill to go in at a slant, resulting in a less than perfect circle. When plugged with a tap it will allow vacuum leaks, reducing the potential increase in sap production sought with the use of vacuum systems.



Someone mentioned how much they loved drinking fresh sap as a child, and someone else said they use sap instead of tap water to make a really good pot of coffee. I look forward to trying that. Various enterprises have tried bottling sap, plain and carbonated, and it is starting to catch on as a

health fad. Perhaps because of the chill and damp, the conversation then turned, and the rest of our time was spent discussing how to make bourbon, rum, rye whiskey, and brandy flavored syrup. Too bad no one had a sample of that, but we did get some recipes. The idea is to buy a used barrel from a distillery, fill it with syrup, and soak for several months. A cheaper and faster way is to buy or make toasted (charred) white oak chips. Fill a pint jar with the chips, pour in the bourbon or other spirits and seal the jar for a week or so to soak up the tannins and other flavors. Perhaps you could even try apple wood chips.

Use small amounts of the resulting soaked wood chips in your favorite grade of syrup. Let that sit for a month or more then drain out and re-filter the syrup. (If you added the liquor liquid, it would become something with less than the required brix

of maple syrup, which would not legally be syrup anymore. This could also lead to fermenting or molding.) The proportions are up to you. A couple of local distilleries have reversed the idea and make maple-flavored whiskey instead of whiskey-flavored syrup. I don't think there is a single food or drink that Vermonters can't improve by adding a little maple syrup.

WRWA extends its warmest thanks to Mike for an entertaining and informative program, and its best wishes to the whole extended family at the Bunker Farm, not only for a successful sugaring season, but also for long term success in rebuilding and sustaining the property as a working farm and sugarbush. To find out more about the Bunker Farm and its products, you can visit the website: www.thebunkerfarm.com.

¹ According to Wikipedia, degrees Brix is the sugar content of an aqueous solution. One degree brix is 1 gram of sucrose in 100 grams of solution and represents the strength of the solution as percentage by mass.

Into the Woods with Our Children

By Marli Rabinowitz

Do you remember when you first knew you belonged in the forest? Have you ever had a hard time getting a child away from their screen time to share what you care about? How do we bring new generations to identify as outdoor people, living and working with our natural abundance?

Lynn Levine posed these questions during a recent evening program at the Vermont Learning Collaborative, and provided some answers based on her years of experience as a forester and educator.

In a time when the world around us is more often seen on a screen than experienced directly, and friendships thrive with on-line messaging and Facebook posts, real time in the forest is more important than ever.

Lynn asked us to think back to special moments from our own experiences, to search for clues of how to engage the children in our lives. Memories we then shared included time with family members: helping with sap buckets and sugaring, all that it takes to warm the family with firewood, and tales of hunting and fishing. Others spoke of the joy of unstructured play time, getting dirty and wading in streams, searching for caves and buried

treasure, building forts and even sitting quietly, watching and listening.

Lynn told us her own story: of a camping trip, in which a man told her a certain tree was named Sassafras. That was a moment of revelation for her. "I didn't know that trees had names" she said, but that moment of simple mentorship started her towards a life as a forester and educator of everyone from kindergarteners to clients.

On the serious side, it is crucial to be really vigilant about tick prevention. Use repellent every time, tuck in pant legs and shirt tails, teach kids to check frequently, even with a magnifying glass, and put clothes in the dryer for 10 minutes when you get home. You can even use a one-piece rain suit with toddlers. Fear of ticks and their many diseases is keeping some people home these days. With kids, other basic rules and safety limits need to be clear. You can throw sticks but not at a person. Tie your hair back near a fire. Keep track of the group. Be strict with safety and then the fun will arise naturally.

Educators find endless resources for art, writing, math, and observational skills outdoors. Tracking,

camping skills, hiking to summits, crafts, are great to share. Inviting parents along is a good idea too, since many of them may also need encouragement to shut off their phones. Lectures on natural history may give a feeling of work or school; focus more on allowing spontaneous observation and interaction. The most important goal is to foster enjoyment, curiosity, and connection with family and friends. Detailed facts can be filled in later after a framework of appreciation and belonging is solid. Technology can be your friend with cam-

eras, bird song apps, maps, and other tools. And don't forget to have fun yourself!

Cosponsors for this event were WRWA, the Vermont Learning Collaborative, Bonnyvale Environmental Education Center, Southeastern Vermont Audubon Society, Dummerston Conservation Commission, Putney Mountain Association, and Windmill Hill Pinnacle Association. It was good to work together and we hope to do this more in the future. Special thanks to WRWA trustee Arthur Westing for organizing this event.

A Hair-raising Experience

By Bill Guenther, Windham County Forester

Below is a story I wrote 27 years ago about the most intense wildlife experience I had in all of my 64 years. I do not recall ever having submitted it to our newsletter, and at the end I have added some 2017 information.

Back in 1990 I headed west for vacation with a goal of climbing some mountains and doing a study of Pacific Northwest old growth forests. In short, it was to be a busman's holiday.

Glacier National Park was on the "must visit" list with its spectacular scenery and an incredible western red cedar old growth forest. My plan was to get up well before the sun, drive around to the back of Lake McDonald, and hike into this primeval forest and watch the day appear. For a night owl, I thought I was doing well to enter the woods by about 6 a.m. I had parked my rental car at the end of a narrow dirt road and hiked about a quarter mile down a trail along the lake and walked about 20 feet into the woods and sat down on a huge fallen log to await the dawning glory of this day. In the moonlight, the towering red cedar giants were awe-inspiring. I had never been in a forest where I felt so, so small.

After doing some quiet introspective thinking for 10 minutes or so, this very eerie, creepy feeling came over me that even though I was miles from anywhere, I was NOT alone. Turning and looking I saw nothing, but the feeling persisted. It was time to investigate, so I got down from the massive downed cedar log and walked back out to the trail. About 75 feet away a silhouette appeared in the earliest rays of dawn. At first I thought that it was probably just a dog that had gotten loose from its owners at one of the camps several miles back. But then I realized

that this animal had a tail over *three* feet long! My brain was swirling and I kept peering into the semi-darkness and the synapses connected that I was now staring down a full-grown mountain lion, while I was alone in shorts and a t-shirt with no one for miles around. This huge, graceful and terrifying predator of man gave me a wry almost-smile with a look that I was to be its breakfast. I thought, "No this can't be, I'm on vacation and just wanted to look at a spectacular old forest," as denial tried to take over. I blinked but the menacing image was still before me. My heart began to race as terror coursed through me.

I could feel my pulse in my temples as fear began to take over. The huge feline immediately sensed my terror and increasingly looked like he felt that he was a notch higher on the food chain than I! We were just frozen in space, man and beast intently looking at each other, neither moving a muscle. After several minutes of staring this frighteningly beautiful creature down, I realized that my survival would probably depend on changing my scent from prey to predator. I first tried to wrack my brain for anything Dr. Fuller said at UVM in Wildlife Biology 174 that could help me with how to handle this life-threatening situation. To my dismay, the only thing I could drum up was that the last cougar (these animals are called this as well as catamount, panther, and mountain lion) was shot in Vermont in Barnard in the 1880s. This tidbit did nothing to help my position.

Finally my brain went into survival mode and I started doing some deep breathing and tried ever so hard to change my vibes to one of predator and continued by puffing out my chest and trying to make myself look larger. The cat sensed this change and stared at me inquisitively. He was still frozen in the same place and the stare-down continued. Besides trying to mentally overpower the panther I also ran through my head some martial arts training I had many years ago in the service and was convinced that I would have to snap its neck in probably less than 30 seconds if it pounced on me. If attacked, I pondered my EMT training as to how to care for myself if I should be gravely wounded and survive an attack.

Now I was finally feeling that I had the upper hand as confidence flowed through me. The catamount, however, was still staring me down. I considered trying to go into the woods and do an end run around the cat to get back to the car, but with the thick forest I did not want to leave open the potential for an attack from behind in the jungle like forest. The next plan I hatched was that I would make myself look as big as possible, and then slowly advance toward the cougar in hopes that it would scamper off into the depths of this medieval like forest. Mustering up all my courage and now feeling like I was ten feet tall, I snorted, tried to look mean, and took two slow and very deliberate heavy steps towards this menacing creature. The mountain lion never took his eyes off me and had a puzzled look for a brief moment as if he had witnessed something he had not expected. He lowered his head. Then the cat took two very deliberate steps right towards me, then stopped and held his ground with the stare down continuing. This latest move knocked the wind out of my sails and I started losing my cool, as the cat once again had breakfast eyes.

The cat's eyes were again menacing as he looked at me like I was backed into a corner. Breathing once again became rapid as the terror rose to new levels. My rational side tried to override the emotional with the message that my scent had to go back to predator from prey. With extreme concentration, I went from sheer terror down to just extreme fear.

It became obvious that I would be unsuccessful in getting the cat off the trail, and it was now light enough that I could see my car about 300 yards away at the end of the trail. So close, yet so, so far away! With biofeedback, my respiration started to slow into a steadier rhythm.

Even though the woods off of the trail were thick and jungle-like, it became apparent that I would need to get back to the car by circling around the cougar. It seemed that he just wanted to get past me and head down the trail.

Slowly, I backed off the trail into the woods, never taking my eyes off the big cat. My greatest concern was that he might attack in the thick woods where flight would be all but impossible. I couldn't even find a decent stick to use as a weapon. The bushwhacking was a challenge as I found myself climbing over huge, downed cedar trees. I soon was out of sight of the trail but kept looking over my shoulder worried about an attack from behind. My progress was slow and I navigated just by instinct as I tried to make a big circle around the cat with the hope of getting back to the safety of the car.

Finally, after about 20 minutes, I broke out of the cathedral-like forest onto the small cul-de-sac where my vehicle was parked. As I reached for the door handle, I turned slightly to the right and the sight before me made me jump a few feet straight up into the air. Sitting on his haunches, just fifteen feet from the back of the car, was the panther! He must have circled back around me and moved so silently that I had no idea he had followed me. Self-preservation said to jump right into the car as I vaguely remembered that they can leap nearly 20 feet straight through the air when pouncing on prey. I was now staring right into those intense eyes and was within the range of mortality.

At this point, something very strange happened. The human dimensions of space and time suddenly became suspended. All of my terrifying feelings of the last half hour were going through a major metamorphosis—man and beast together, no longer above and below each other on the food chain but approaching equal levels. This strange feeling enveloped me and I realized that I now had nothing to fear from this gorgeous creature, and he had nothing to fear from me! I shut the car door and in a mesmerized state walked to the back of the car and leaned against the trunk focusing on the cat, now no more than 15 feet away. If the graceful cougar had wanted my life to cease, it would have been over in moments. But my fear evaporated as we started to communicate with each other, but not in the English language. The feelings coursing through me were a paradox of peace, serenity, and exhilaration all wrapped into one emotion. We focused our attention entirely on one another, blocking out our respective

worlds, and in an unspoken language engaged in a telepathic dialogue.

In the next ten minutes, we shared our lives and histories with each other. The feeling of being suspended somewhere else continued. We each grew in those moments of our sharing.

Without warning, a signal was passed to us that it was now time to return back to our own kind. We looked deeply into each others' eyes and a shudder ran through me with fleeting feelings of the reality of what I was experiencing as it started to register on my conscious mind. When it was time to go, the cat turned to give me a last look, and without a sound drifted off into the dense old growth forest.

Postscript: This really did happen! After I regained my composure I immediately drove to the nearest ranger station and reported this event. I learned some interesting things. First, Glacier National Park's mule deer population went through a major irruption (large upward spike in population), which in turn caused the cougar numbers to correspondingly rise as their favorite prey was now more abundant. With territories of male cats starting to overlap, behavior gets more aggressive and unpredictable.

I was told that given my circumstances and being alone that I was *very lucky* to be speaking to the rangers. Two weeks before, a young boy in the early morning hours was on a beach at the park. A male cougar came right down on the beach and without any provocation attacked the boy, seriously injuring him. Had it not been for a passerby who broke up the attack, it could have led to a fatality.

On the same trail I hiked in on, a Park ranger's wife was out taking a walk with her children and they were stalked by a mountain lion. The fact that there were more than two of them could have stopped a possible attack. When it comes to cougar or grizzly bear attacks on humans, the probability tends to go down exponentially as the number of people in the group goes up.

By sheer dumb luck, the rangers said I had done everything right! Holding my ground, making myself look as large as possible, *not* running, challenging and never taking my eyes off the animal contributed to my survival.

It was the most intense experience in my lifetime, but I'm not sure that I'd want to repeat it!

2017 comments: Do catamounts exist in Vermont? This is a question that often arises and many folks strongly feel that they are here. My best professional opinion is that there may be an occasional cougar that ventures south into Vermont from many miles away, or there is always a chance of an exotic pet that escaped or was released. I do *not*, however, feel that there is a breeding population that regularly resides here. There is not sufficient conclusive evidence such as scat, road kills, or sightings by trained natural resource professionals. However, the range of these beautiful animals seems to be expanding.

It is both a frightening and interesting feeling to be in their habitat, when as a human, you are no longer at the top of the food chain!

Windhamwoodlands.org

The new Windham Regional Woodlands Association website just went "live"! We have wanted to make a stronger and more useful site, and with the help of Lillian Willis and Meg McCarthy, it is now online. Let us know what you think of it.

You can look it up through this address: <http://windhamwoodlands.org/> It has information on programs and directions to get to them. You can browse recent newsletters, join WRWA or

renew your membership, donate to our scholarship and program funds, and more. If you know a young person who might qualify for our scholarships, the criteria and application form are right there.

Of course Carol Morrison will continue to stay in touch with all our members through email and paper mail. Send your feedback about the website to her at windhamwoodlands@gmail.com.

A New Path for Input on Private Land Issues for Vermont's Department of Forests, Parks and Recreation

By Keith Thompson, Forests, Parks & Recreation Private Lands Manager
(Slightly annotated by Bill Guenther, Windham County Forester)

Vermont's Current Use program (also called Use Value Appraisal [UVA]) plays an important role in maintaining working forests by supporting good forest management and reducing the cost of owning forestland through equitable taxation. In doing so, it also helps to keep our water clean, maintain and develop important wildlife habitat, and jobs—**it helps sustain the forests that so many Vermont jobs depend on**—from the forest products industry to tourism. It doesn't achieve all of this just by making forestland ownership more affordable, or just by holding landowners accountable for good management, though it does these things. The program also achieves this by supporting individual connections between landowners and foresters, wildlife biologists, loggers and others. These relationships in turn influence and make possible the management of 15,000 forestland parcels encompassing nearly 2,000,000 acres of enrolled land.

To support Current Use and other Department efforts related to private forestland, FPR Commissioner Michael Snyder established the Private Lands Advisory Committee to provide recommendations on how to best support privately owned forests and their owners in Vermont. This committee is made up of consulting foresters and private landowners, supported by staff from Forests, Parks and Recreation (FPR), and the Departments of Fish & Wildlife (F&W) and Property Valuation and Review (PVR).

So where did this committee come from? Since the creation of the Current Use program in the early 1980s, the staff of the Forestry Division have worked tirelessly to administer and adapt the forestland elements of this program, recognizing the evolution of logging and forestry professions, better considerations of ecological processes, and new realities faced by private landowners. Through the hard work of many, including the county foresters, consulting foresters, the Tax department and a supportive Legislature, the program has become one of the most successful programs of its kind in the country.

However, the success of the program is not without its challenges. Continued growth of enrollment outpaces growth in staffing, and the administrative burden associated with it increasingly erodes the time available for county foresters to do some of their most important work—helping landowners in the woods. The challenges associated with this are well described in a 2016 report to the legislature titled “Report on County Forester Staffing and UVA Delivery.”

In 2015, Commissioner Snyder and Forestry Division staff held listening sessions with consulting foresters in Rutland, Barre and St. Johnsbury to solicit input on issues related to forest management on private lands. It was a valuable opportunity to get feedback from a group of folks affected by the work of FPR, but it was clear that these sessions weren't enough to move towards solutions.

As a result, in 2016, a working group made up of 11 consulting foresters met several times to identify issues of concern and develop a set of recommendations for the Commissioner of FPR on how to improve administration and outcomes of Current Use. Ultimately, nearly 50 recommendations were developed and submitted to the Commissioner to modernize and streamline the program. The recommendations cover many elements of Current Use from administrative to outreach and education elements. For example, recommendation 4B1 suggests *[creating] a policy and process to allow forest management plans and maps to be submitted electronically*, while recommendation 3B1 suggests that *FPR Establish a program to welcome landowners to the [Current Use] program*.

The recommendations were thoughtfully developed by the consulting foresters as they considered the realities faced by landowners, consulting foresters and FPR's county foresters. With few exceptions, the recommendations were received very well by Commissioner Snyder and the Director of Forests, Steve Sinclair. These recommendations seek to address difficulties and take advantage of opportunities to improve Current Use and its

benefit to landowners. But it has been recognized by the foresters and Department staff that the completion of this set of recommendations is only the beginning of what FPR and the private sector see as a worthwhile long term collaboration.

As a first step to establish a consistent and formal opportunity for input from foresters and landowners, the Commissioner implemented the first recommendation: 1A1 *Convene an Advisory Committee to take advantage of the expertise of consulting foresters and landowners in developing and reviewing [Current Use] standards and policies.* The first meeting of this committee was held on May 2, 2017. The group consists of 11 voting members—8 consulting foresters and 3 landowners who are enrolled in UVA. It was felt it would be helpful to have two county foresters involved in a non-voting status as well as non-voting represen-

tation from the Fish & Wildlife Department and the Current Use Office. WRWA Ex-officio Trustee Windham County Forester Bill Guenther and Jared Nunery, Orleans County Forester, will be representing their group.

This group is in its infancy and while the responsibility and authority to establish and adopt forest management and plan standards for the UVA program still resides with the Commissioner, the process by which this happens, we think, will be improved through the input of this Private Lands Advisory Committee. Developing an effective and coordinated means for direct and collaborative dialogue will only serve to enhance the UVA program and other elements of the important public-private relationship that enables Vermont's forests to thrive as a critical environmental and economic resource.

Face to Face with a Vermont Black Bear

By Sam Schneski, Windham and Windsor County Forester

Working for the state of Vermont's Department of Forests, Parks and Recreation has been a great experience for me. After being at it for close to 11 years now I am still impressed and thankful for my supervisors' willingness to let me try new and different things such as interacting with staff in other departments. The folks I have the most contact with are the Fish and Wildlife Department. We team up occasionally with landowner visits, presentations, and collaborate on various grants that address forest conditions for prime habitat.

Recently I got an invite too good to pass up. I was asked if I would be interested in visiting a collared bear at her den. A requirement of the Deerfield Wind Project Act 250 permit is that a long-term study be conducted to assess the impacts of these towers on bears in the area consisting of prime bear habitat. Vermont Fish and Wildlife biologists and staff, including Jackie Comeau, Forrest Hammond, and Ryan Smith locate 8–12 bears every year that have been radio collared. Jackie Comeau's name may ring a bell to WRWA members because she spoke about Vermont's black bears at last year's annual meeting.

When the collared bears are located, they are hibernating. In Vermont, black bears typically den from late November until early April. They remain in one location until food becomes available again

in the spring. This gives the research crew a good opportunity to check on each bear. The biologists fully sedate the bear and then get the animal out of its den to take some valuable data. The main goal is to make sure the GPS collar is still working and still fits appropriately. They are also able to collect information about the bear's condition such as weight along with reproduction data from sows. This data coupled with GPS data allows them to look at the health of the individual animal as well as movement trends and habitat use during different times of year.

Sometimes the female bears have cubs. The day we visited the den there were three main Fish and Wildlife staff and another five volunteers. The plan was that the biologists would use their GPS tracking signal to go ahead of the group to find and sedate the bear and then come back to the group and give us the signal to come along when she was thoroughly sedated. They came back to the group but did not give us the go-ahead because they found the bear nestled at the bottom of a hollow maple tree about 16 to 18 inches in diameter. She had two nursing cubs and it would have been too difficult to safely get her and the cubs out for data collection and collar replacement. We moved on.

Luckily, they had one more bear to visit. Following the same procedure, we waited for the go-

ahead. This time we were waved ahead. This bear was named Missy and she was denning in the bottom of a tipped over tree's root ball. The den looked like it would barely be big enough for a medium to large sized domestic dog but apparently it worked for her. Another thing I found interesting was that the tipped-up root ball was about five feet into an open wetland. I would have thought more cover would have been needed and/or preferred. She had no cubs but looked to be in okay health. She was relatively small at around 130 pounds but healthy looking overall. Immediately after sedation Jackie brought a little oxygen tank out of her pack and put some air tubes in

Missy's nose. Administering oxygen is believed to minimize the stress level of the animal.

I learned a lot of things about bears and bear habitat. I also got to see firsthand the amount of respect and professionalism the Fish and Wildlife staff have for the bears in this study. I'm still surprised at how small and not cozy an area can be for a bear to find suitable for hibernation. Most adult humans can hold their arm out and from shoulder to end of fingers would be at least 16 to 18 inches long. Now think of that as the diameter of a hollow tree that an adult bear could fit in and then deliver and nurse cubs!

Harvest with Snowshoe Hare Habitat in Mind

By Marli Rabinowitz

On a beautiful day in February, State Forester Tim Morton led a group of WRWA members and friends on a tour of an active harvest at Molly Stark State park, right off Route 9, in Marlboro.

Tim laid out in detail the years of planning that go into the few weeks of work. The planning includes looking toward the future of the forest for the next fifty or more years, as well as anticipating immediate effects. It is a complicated process on private property, but Tim also works with other agencies and the general public, who all weigh in before the cut starts.

An inventory and resource assessment of the park was done in 2009. Plans evolved to include wildlife, aesthetics, trail access and development, water quality, and financial return. There were public hearings to see if adjustments to the plan would be suggested. Many people supportive of good hare and forest management were also focused on the work on Sweet Pond in Guilford and have weighed in on those plans as well.

The whole park is 60 acres and this plan has two smaller important regions: a sloped area with mature softwood, and a basin on the backside of the hill with mixed hardwoods and a stream. Like much of Windham County, this forest has grown on abandoned, cleared agricultural land. And like much of the county it has grown for 100 or so years and is at or past "peak financial worth." Some of the spruce is actually starting to rot and fall over. It would have been best to cut a few

years ago; the long planning process as well as poor weather caused delay, but it will still be a good harvest.

When we parked at the entrance we could see several piles of logs, the feller buncher hard at work up the hill, and the forwarder waiting to lead us up the slope. The hillside was transforming from a dense cover of tall trees to what appeared to be a nearly open field. We were introduced to Trevor and Logan from Longview Forest Inc. who were operating the machinery.

Tall red spruce were being removed. A deep snow cover protected the small spruce and balsam fir that were the understory. The balsam grows well in the deep shade of the mature spruce, and the balsam is ready to take over in its wake if the cut area is wide enough (around 400 feet) to provide strong sunlight. The harvest had been delayed a year since there was such poor snow and the ground was not frozen in winter of 2015-16 and the saplings need a deep cover to protect them through the harvest. This gave them an additional year to grow, and so they were a little taller and less supple than would have been ideal as they pass through the harvest commotion. They will put on a growth spurt before the snow even melts and the hill this summer should be covered with small trees.

The feller is a large moveable machine with a cab. A long jointed neck supports a "dangle head" that can cut and de-limb a tree in a few seconds, and

cut the logs to length. The long neck of the feller can reach trees in a wide radius and reach over the understory vegetation, and so has the least impact possible. It is heavy enough to push down the snow at the base of the tree and so leave only a short stump. The tree limbs are left to lie on the snow and create a layer of debris that protects the seedlings and the soil from the weight of the machine as it moves around. The operator has a cue card that tells him what current buying operations are looking for. Trevor stopped work to talk with us and explained that he sees the log and can grade it in seconds for species, diameter, rot (the sawdust will be red), and other factors, so he sorts them into piles for the forwarder to pick up and take down to the landing.

The logs are cut by the feller into 12- to 16-foot logs, and transported by the forwarder. Instead of skidding out the whole 80- to 120-foot trees and cutting them on the landing, the landing area can be small and the logs placed straight into organized piles already sorted by destination. Tim spoke highly of Trevor and Logan and Longview Forest. The quality of the contractor makes a big difference in the result both ecologically and in financial terms. The contractor is also responsible for any unreasonable damage as well as having to pay for their own gravel. Tim estimated enough soft wood for 10 houses (lumber and plywood) will come out of this (about 18 thousand board feet per small house), as well as 200 thousand board feet for pulp and pallets. The hardwood will also supply lumber and firewood.

Tim said it is easy to grow good trees for harvest, but to provide wildlife habitat is more complicated. When planning this cut he consulted with Fish and Wildlife staff. First, they considered the many species that live in this habitat type and were present. Deer already have plenty of habitat. Bear need such a large habitat that this one little piece had not much to offer. Snowshoe hare were chosen as the focus of the harvest strategy since they have been in decline statewide but are present on this parcel, and a smaller acreage like this could make a big difference for them. They need cover, which the dense softwood regeneration will provide; browse, which the hardwood patch with young woody vegetation will provide; and at least

16 feet-wide uninterrupted travel corridors with sufficient cover to protect from predators, so the cut is designed to leave these corridors in between harvest areas. The harvest and regrowth areas also can't come too close to waterways or block recreation trails, or too heavily alter the view from the trails. This is another way in which the contractor is important, that they are willing and able to take all these considerations into practice as they are also dealing with heavy, expensive machinery, steep slopes, and other dangers.

We then walked up and over the hill. On the backside is a basin, with hardwoods and some historic features—a stone wall, old sugar house foundation, even an old stone dam further up that we did not see this trip. Of course these are important not to damage. There were aspen (popple), which are great for a habitat patch cut since they resprout quickly and thickly and their leaves and twigs are great browse. The hares love them, and when a little taller they make good nesting trees and good cover. Selective cutting in an area such as this is tricky since opening to sunlight can provide invasives a boost. It is important to remove as many as possible before cutting and to return every couple of years and remove them while they are still small. There is a stream at the bottom of the basin and they did not cut too near it or to various seeps.

Planning a harvest in this area is a tree-by-tree decision process, since there is a variety of species: maple, oak, ash, beech, yellow birch, and more. Some trees had damage from storms through the years, some were good to leave, some were in difficult to reach areas. Ash trees are in decline from drought, ice damage, and a variety of weakening diseases, even without EAB infestation, so many of those will be salvaged now.

We will return to Molly Stark for our annual meeting September 9. We will take another tour and see the immediate results of this cut. We will also schedule a program in 7–10 years to see the changes, and of course it is a state park, so you can hike the trails any time and look for snowshoe hare and other animals enjoying the fresh browse. We hope to see you at the annual meeting. Meanwhile, have a great summer.

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

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Upcoming Programs
(See inside for details)

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| Tuesday, July 25 at 5:30 p.m. | Tour of Timber Harvest on The Scott Farm, Where Cider House Rules was Filmed in Dummerston, Vt. |
| Friday, August 4, 3:30–5:00 p.m. | Tour of Doug Cox’s Violin Shop |
| Saturday, September 9, 9 a.m. | WRWA annual meeting and potluck cookout at Molly Stark State Park in Wilmington, Vt. |
| Thursday, October 5, late in the day | Tour of Cersosimo Lumber Company Facility in Vernon, Vt. |
| Saturday, October 7, 2:00 | Tour of a wildlife patch cut after three years of regrowth at Lee and Diana Todd’s woodlot in Halifax, Vt. |

Note date change from November 4 to November 11
Big Tree 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.