"This institution is an equal opportunity provider."

Partners News

November/December 2020

We thank the UW Center for Cooperatives for their ongoing support

Protecting your wooded land for the future is essential to clean water, clean air, wildlife habitat, sustainable wood supply...all things that are necessary to society and health, and that are gone forever if the land is developed.

Contact Us

Partners in Forestry
Landowner Cooperative

6063 Baker Lake Road
Conover, WI 54519

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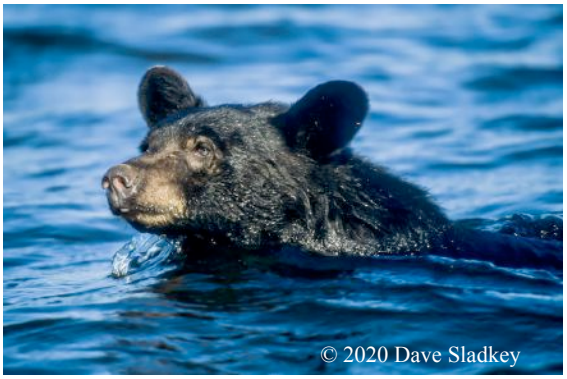
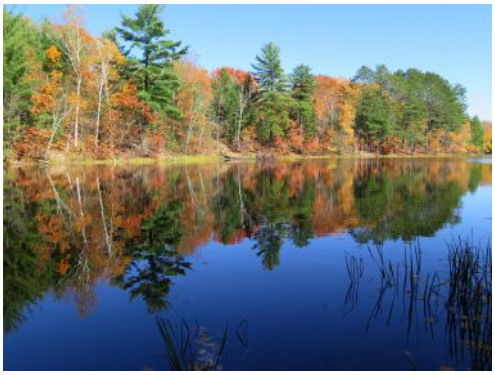
715-479-8528

PIF's Website:
www.partnersinforestry.com

Have you paid your PIF dues?



Dave Sladkey captured the black bear swimming in the Willow Flowage



Mike from Stilmill Farm took a fall color photo from a hike around Otter Lake in the Harrison Hills segment of the Lincoln County Forest

Inside this issue:

Updates on the Wildcat Falls Community Forest from Partners in Forestry (PIF) and Northwoods Alliance Inc. (NWA)

Following the closing of the Wildcat Falls Community Forest in late September, we wish to give you some updates.

With the able forestry knowledge of our own John Schwarzmann a very detailed timber management plan was written for the community forest and was submitted to and approved by MDNR. This plan will be incorporated into the Wildcat Falls Community Forest Management Plan. If any one wishes to receive electronic copies of the plan, please contact us.

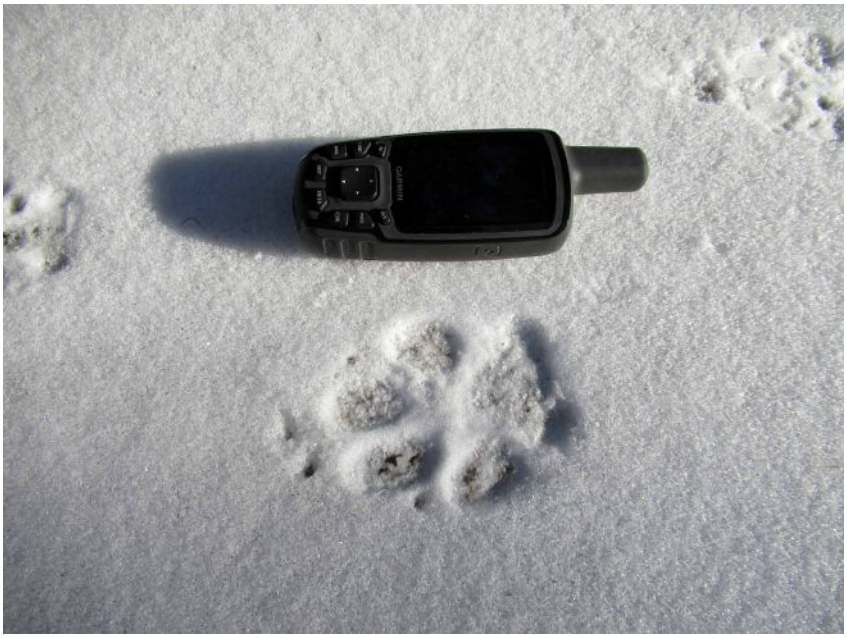
The forty acre parcel overlooking County Line Lake was surveyed and while the survey ribbons were fresh we painted and blazed the lines. You are most invited to take a hike on this parcel as well, as the large diameter hardwoods are a sight to see with the dense stocking on the parcel. This forty is a display of wildflowers in the spring as well.

An endowment was approved by the NWA board of directors, and was started by the end of November. Part of this endowment was a grant of $2500 from the Sustainable Forest and Wildlife Fund of the Community Foundation of the Upper Peninsula. We are happy to announce that the Community Foundation of the Upper Peninsula is holding the endowment to insure a sound and stable future for the Wildcat Falls Community Forest. If you are able, and especially if you have not yet contributed to this incredible project, we welcome any donations to this endowment. Donations can be made to Northwoods Alliance or to the Community Foundation of the Upper Peninsula with the subject Wildcat Falls.

PIF and NWA are very grateful to everyone who has contributed in any way to help make this great project a success, and we are excited to partner with the Community Foundation in assuring the future of the community forest.

Wildcat Falls is your Community Forest. Experience the splendor of the project, be respectful of others and of neighboring properties. If you have any questions or suggestions on the project please contact us.

We hope to have some signage on the property by spring. You can keep apprised of updates at www.northwoodalliance.org



Wolf print: While marking boundaries near County Line Lake on the community forest we followed a wolf track.
Photo: Rod Sharka

Yellow Birch is one of many large hardwoods overlooking County Line Lake on the community forest.
Photo: Rod Sharka

Family adventure
Three young explorers - Hunter, Maddie, Gracie and Odin (their pup) were all smiles exploring Wildcat Falls Community Forest

Thanking Our Partners

We offer our heartfelt thanks to:

The Sustainable Forestry and Wildlife Fund of the Community Foundation of the Upper Peninsula for their $2,500 grant to Northwoods Alliance assisting in the creation of the Wildcat Falls endowment.

The University of Wisconsin Center for Cooperatives for their vital and ongoing support.

To all who have contributed to the Northwoods Alliance land conservation initiative including an anonymous donation of $10,000 from the Upper Peninsula.

To all who have contributed with writing, organization or any way to the creation of the Northwoods Forest Conservation Handbook and Partners News.

To our own John Schwarzmann for his in-kind contribution of the Timber Management Plan for Wildcat Falls Community Forest, and all who helped preserve that public treasure.

Northwoods Forest Conservation: A Handbook

We were very excited to send out the **Northwoods Forest Conservation: A Handbook** to PIF members and supporters of Northwoods Alliance. If you know of anyone who can benefit from this book please let us know or steer them to us.

Partners in Forestry Cooperative (PIF) and Northwoods Alliance (NWA) are pleased to announce that their most recent project, with assistance from the UW Center for Cooperatives, is now off the printing press. We hope that this booklet will inspire woodland owners, regardless of the size of their forestlands, to further engage in conservation at this critical time. The **Northwoods Forest Conservation: A Handbook** shares reflections from Northwoods conservation practitioners and landowners, assembles tools and resources for forest conservation, and celebrates completed projects. The Handbook is 66 full-size pages, with numerous color photographs of Northwoods forests and landscapes throughout. There is no charge to request this book, but donations are welcome to help offset costs. To donate, visit https://www.northwoodalliance.org/donations or contact us at the phone or email addresses below. Want to be involved? We are eager to increase our team of dedicated conservationists working for a more sustainable Northwoods future. Contact us for questions, or to obtain a copy of the Handbook:
nwa@nnex.net partnersinforestry@gmail.com Phone: 715-479-8528

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*Following his contribution in the **Northwoods Forest Conservation: A Handbook**, Paul has more to share with Partners News.*

A Political Touchstone

by Paul Gilk

"Perhaps this is the issue that frightens the prophets. A people may be dying without being aware of it; a people may be able to survive, yet refuse to make use of their ability." Abraham J. Heschel, *The Prophets*, page xii

I grew up on a homestead farm in northern Wisconsin. This wasn't a hippie farm. Nor was it a back-to-the-land Helen and Scott Nearing vegetarian homestead. The farm on which I was raised was Depression-era subsistence, created out of logged-over glacial land burned by forest fire. No fields and no buildings when my father, at age 19, first considered buying forty acres of brush and rocks. (A girlfriend apparently figured into his land impulse; the relationship didn't work out; but, as Henry Thoreau said, a farmer is a man who goes down the road of life with forty acres of impulsive brush and rocks in his head.)

Yes, there was a gravel road. Yes, there were workhorses—at least into the 1950s (I was born—yes, in a log house—in 1946)—and a one-room school and threshing crews, silo-filling rings, quilting bees, and an occasional barn raising. I'm just old enough (raised in the last margin of Depression-era agricultural

settlement) to have lived in a cultural space, thinned though it may have become from the quality of previous decades and centuries, that's now confined to the stubborn Amish, although the new breed of (mostly vegetable-growing) CSA farmers are starting to recreate rural culture in a wonderfully vital way.

My upbringing wasn't Norman Rockwell. Norman may have flattered us with his pandering *Saturday Evening Post* images of a virtue we never resembled; but, even so, there was a cultural underbelly of recognition in Rockwell's paintings of a culture that was dying, even as he memorialized it with unmerited sentimentality. The topic wasn't false; but the depiction was trivialized by romantic idealization.

What seems to be provoking this autobiographical self-indulgence is the rereading of Ernest Callenbach's 1976 novel *Ecotopia.* It's probably not great literature. It's not *Middlemarch* or *War and Peace*. If it has a literary ancestor it's probably William Morris's *News from Nowhere*, which was written (I think in the 1880s) as a rural culture rejoinder to Edward Bellamy's *Looking Backward*, with its world-as-factory sterile boredom.

I recommend Callenbach's novel. It's a (fictional) newspaperman's depiction of life in two and a half states—Washington, Oregon, and northern California—twenty years after these two and a half seceded from the U.S. The narrator is a hotshot New York striver reporter, oozing male strut and arrogance, who jumps at the chance to expose the fraud that calls itself Ecotopia. (At least that's the unfortunate name and political reputation the place is stuck with.) The depiction is sketched through the eyes and pen of newspaperman Will Weston. Much of the novel reads like the cynical writing of an overrated hack, which is Callenbach's intentional (and sly) literary method by which the skeptical reader is led through a six-week exploratory narrative.

But the point is Callenbach's envisioning of a society seriously working towards ecological coherence, even if the depictions occasionally come off a little Norman Rockwell. Callenbach seems to have given it a real shot at describing a political entity whose revolutionary objective was to achieve ecological libertarian democratic socialism—although the socialism is muted in favor of ecological, libertarian, and democratic. Some of the details may be a bit awkward and clumsy, but there's real heart in the endeavor. We should all read—or reread—*Ecotopia*. It speaks to our present ecological and political predicament in many ways and on many levels. It has the capacity to provide wholesome direction to our directionlessness.

Callenbach's *Ecotopia* is a portrait of a deep cultural impulse, a deep human need, that Lewis Mumford in *The Story of Utopias* calls eutopian, the longing for enlightened village life in an ecological economy and nonviolent libertarian polity. But, as Richard Tarnas demonstrates in *The Passion of the Western Mind*, the scientific Enlightenment basically shut down overarching understandings of history and had little or no patience for the revitalization of rural culture. Progress was the scientific mantra. Facts, nothing but facts. Rural culture revitalization was unsophisticated hogwash. Prophetic visions were for the deluded. That means we tend not to recognize a prophet when one emerges. (Or we kill them, like Malcomb or Martin, if they get too insistent.)

Earnest Callenbach is a prophet. The clumsy Will Weston is his mouthpiece who provides us with a vision of an ecological culture—an ecological libertarian democratic socialist *village* culture. That vision may not be fully 20/20 or 2021—we may refuse to make use of our ability to become aware of ecological dying—but its urgency and relevance are far more potent now than when Jimmy Carter put solar panels on the roof of the White House.

Ecotopia is worth a slow and thoughtful read, followed by confessional conversation. It's something of a political/ecological touchstone, a visionary maypole around which we may slowly and thoughtfully dance, before getting down to the hard-political work.

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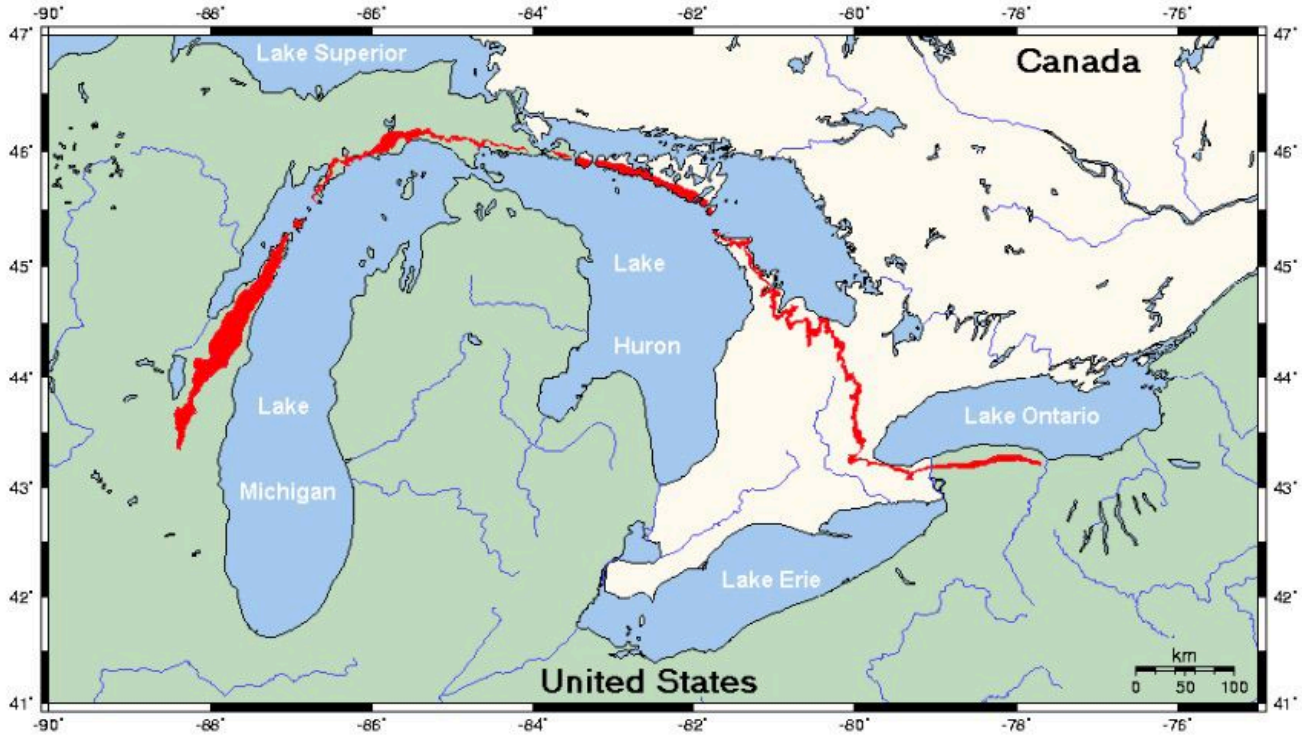
We are happy to continue to share wonderful spots to visit old growth, courtesy of John Bates and Our Living Ancestors. Doering Woods SNA will be featured in the next PIF Newsletter.

The Cliff-dwellers of Wisconsin – White Cedars, Ellison Bluff SNA

Ellison Bluff and Death's Door Bluff County Parks: Some of the bluffs have several terraces separated by vertical or overhanging cliffs of dolomite. On the terraces are many ancient cedars, which one can see in bird's eye view from a platform that projects out from the top of the bluff. It really is something to look down on the olive green spires of all those cedar trees. On the steep slopes and vertical slopes are bizarre little white cedar trees that look like octopus, snakes, dragons, etc. These little trees have been repeatedly broken and regrown over many centuries . . . Lee Frelich (speaking of the Niagara Escarpment)[13]

Until 1998 no one even knew that they [old-growth white cedars] *were there. Why? Because they didn't fit our mental model of "forest" and because they could not be used.* – Doug Larson



Niagara Escarpment Map

Great things often come in very small packages, an adage seldom more true than for the bonsai-like cedar forests growing on the exposed cliffs of the Niagara Escarpment. These vertical dolomite rock faces support what are arguably the oldest, perhaps most extensive, most intact, and least known old-growth forest ecosystems in eastern North America.

On Ellison Bluff in Door County, 200-year-old white cedars just over one inch in diameter grow horizontally from the precipices. One tree, as wide as an average index finger and 18" tall, was found to be 250 years old. Slightly larger trees, no larger in diameter than a 50-cent piece, were determined to be over 300 years old. A


Cliff face with white cedars in Peninsula State Park

507-year-old white cedar was discovered on Sven's Bluff at Peninsula State Park in 2005, and another white cedar at Fish Creek south of the park proved to be 616 years old. Some of these trees cling to vertical cliff faces while others grow on terraces separated by overhanging walls of limestone.

Much older trees than those found to date may also live on these bluffs, but very limited sampling has been done in Wisconsin. There's every reason to believe there are much older trees because of the extensive random sampling that was begun in 1998 on the Niagara Escarpment in southern Ontario, Canada. There, researchers engaged in the "Niagara Escarpment Ancient Tree Atlas Project," surveyed numerous cliff areas and found 73 trees older than 500 years in age, 22 trees over 700 years, and the oldest, a 1060 year-old white cedar at Lion's Head on the Bruce Peninsula that germinated in 952 A.D., which was thought at first to be the oldest tree in Canada east of British Columbia. At Lion's Head they found other ancient trees dating back to 1251 A.D. and 1254 A.D. respectively. At the Mount Nemo Conservation Area in the Halton Region and within the city limits of Burlington, they found three trees over 800 years in age, one of which germinated in 1134.
That was just the beginning. Later research discovered two cedar trees at Lion's Head that sprouted from seed in 688 AD, beginning life shortly after the death of Mohammed and before Genghis Khan and the Viking colonization of North America.

And while that's remarkable, the researchers then found a dead white cedar on Flowerpot Island on the northern end of the Bruce Peninsula that had lived for 1,890 years. They also have found pieces of wood at the base of the cliffs that started to grow about three thousand or four thousand years ago – woody debris that germinated before Tutankhamen was on the throne in Egypt.


Ellison Bluff white cedars

In Wisconsin, the western edge of the Niagara Escarpment curves in a semi-circular ridge northeast from Horicon Marsh toward the eastern edge of Lake Winnebago and up the western shore of the Door Peninsula, under Lake Michigan (popping up now and again as islands), through Michigan's Garden and Stonington peninsulas and Drummond Island, then arcs around Lake Huron, goes south through Ontario and ends at Niagara Falls, a length of 650 miles. Most of the rim is buried, but in places sheer cliffs protrude as high as 200 feet. And growing on these cliffs at about an average of one inch of height every 15 years are the gnarled, twisted, and stunted white cedars. Some older cedars have been calculated to be growing at less than one millimeter per year, making them the slowest growing trees on earth. One researcher commented that in the most extreme cases, they appear to be growing at only one cell width per year, prompting the researcher to remark, "If they grew any slower, they'd be dead." These cedars dance in a very

delicate balance of life – the oldest simply can't grow any faster or they risk losing their foothold on the brittle cliffs to the heavy tug of gravity.

To add to the intrigue, the Canadian researchers also found the world's oldest red cedar tree on a privately owned bluff north of Greenleaf in Brown County. At an estimated 1200 years old, this red cedar is the only known tree in Wisconsin documented as older than 1000 years, and is approximately twice as old as the next oldest known red cedar in the world found in the Ozarks.

The jury is still out as to whether the white cedar trees on the Wisconsin segments of the Escarpment are as old as those in Canada. The limited sampling that has been done leaves much yet to be known. However, their findings confirmed that the cedar forests of the Niagara Escarpment cliff face are of great significance. Hopefully, a research team will take up the mantle and do the thorough work necessary to determine just how old these living legacies might be.

Ellison Bluff SNA
Location and Directions: Within Ellison Bay County Park, Door County. T32N-R28E, Section 16 .
From the intersection of Highway 42 and Garrett Bay Road in Ellison Bay, go southwest on 42 for 1.9 miles, then west on Porcupine Bay Road for 0.7 mile, then north on Ellison Bluff Park Road for 0.7 mile and then head west about 0.2 mile to an observation deck and parking lot. A wooden walkway deck leads safely to the edge of sheer, 100-foot dolomite bluffs, and a small fenced-in walkway actually extends out over the bluff. Unmarked hiking trails provide access to the interior of the natural area, but not to the cliff-face.

Size: 170 acres

Forest Type: Dry Cliff – white cedar on the cliff faces – and northern hardwoods on the uplands above the escarpment.

Age of the oldest-known trees: 300+ years for the white cedar at a minimum.

Status: Owned by Door County (Ellison Bluff County Park) and established as a State Natural Area in 2002.

Ellison Bluff rises 200 feet above the Bay's shore. The cliffs are punctuated with ledges and fractures that support a talus slope forest of white cedar . Jutting from the escarpment, 200-year-old white cedars just over one inch in diameter grow horizontally from the precipices. One tree, as wide as an average index finger and 18" tall, was found to be 250 years old. Slightly larger trees, no larger in diameter than a 50-cent piece, were determined to be over 300-years-old.

Both Ellison Bluff and Door Bluff Headland's County Parks contain a mile or so of high bluffs with terraces separated by overhanging walls of dolomite. On the terraces are many large ancient cedars, while on the steep/vertical slopes tiny white cedar trees hang on for dear life. Lee Frelich, director of the University of Minnesota Center for Forest Ecology, writes, "If we ever find a 2000-year-old white cedar in the U.S., this is where it will be. A specimen that lived to be 1653 years old in Canada was on the Bruce Peninsula, which is part of the same coral reef formation as the Door Peninsula."

Photos: John Bates

A Bit of Humor

"If you think you're too small to make a difference, try sleeping with a mosquito in your tent." (author unknown)

A reply from a UP trout fisherman when asked why he acts like fishing is a matter of life and death - "it is much more important than that"

Taking PIF advice seriously

By Bill & Joan Green

Over the years we've taken to heart one of PIF's mantras – attempt to prevent fragmentation of property in the northwoods. Over 30 years ago we purchased 40 acres on the south shore of Myrtle Lake directly across the lake from our house. This 40 is bounded on the south by a beaver pond and on the east by Vilas County forest. It had previously been bound by a 10-year first right of refusal to a group of high-powered guys from Eagle River. These fellas intended to subdivide it creating several lakefront properties on our serene little lake. They may also have had plans to put a couple lots facing the pond. We don't know.

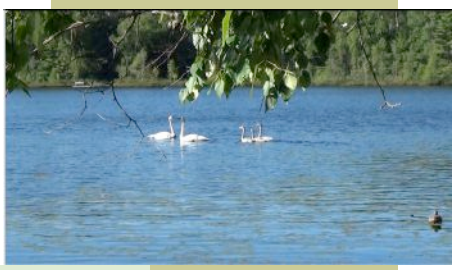
However, the owner of the land, who is a well known-logger, good friend, and also attends our church, gave us a call the very day the 10-year option expired and offered the land to us. Needless to say, we snapped it up and have kept the parcel in tact. We did a select cut many years ago and created recreational trails throughout. We eventually did erect a pole barn to house our boats, snowmobiles, etc. Since the purchase, we've had several lucrative offers to purchase it. No contemplation required!

A few years later we got a call from a neighbor presenting a "deal you can't refuse". Turns out he offered us his 40 acres abutting our first 40. Said he could use the extra $ and none of his kids were interested in the land. It had been previously logged and was in pretty rough condition, but over the years we've cleaned up the woods enough to create some lovely trails, and the land is recovering nicely. Only problem here is that the logger totally eradicated the cedars. Currently our local beavers are working on thinning the popples.

Fast forward to 2020. The 7-1/2 acre parcel bordering our residence property became available for sale this summer. We had previously entered into a verbal agreement with the four gals who inherited this property that we'd have the first right of refusal. However, the title to the land was tied up since it hadn't been updated for two generations and had stood neglected for 4 years. Unfortunately, one of the gals decided to list it with a realtor. The worst happened when a developer from out of town made an offer on the property and planned to create at least 6 parcels which would share lake access. Too much of this going on in the neighborhood these days. Fortunately, the girls were sentimental about the property and sold it to us. Currently a good portion of the woods is horizontal and never having been logged much of the standing timber is past prime. We've contacted a logger who hand harvests to see what can be done in an effort to restore the land to a healthier state.

Lots of folks think we're berserk purchasing more land at our ripe old age (80 and 81), but we're too old to accept this development. It's pretty nice just the way it is and it shall remain so. Originally, we had considered putting all this property in a land trust until a responsible neighbor who is also part of PIF, begged us to discuss it with him. We're planning to work something out with him since he promises nothing will be changed. He also likes all of it just the way it is and will be a good steward.

PIF note: Let us share your experiences on the land!



All photos: Bill Green

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Two stories in our continuing series on forest ethics. We appreciate the affiliation with the author and the Northern Logger.

INTIMACY AS A MORAL IMPERATIVE

By Marianne Patinelli-Dubay

Logging is an extractive industry. Yet the survival of the profession, the regeneration of the landscape and the ongoing need for this kind of labor means paying attention to how what remains will thrive in the absence of what is hauled away. It is about how a new, young forest will prosper in the midst of what was left for it to grow up alongside. This somewhat obvious aspect of the job highlights the relationships that are embedded in the more transactional aspects of the profession. It illustrates the importance of how we stand in the field of what we care about, and how that standing influences who we are and how we behave. All of which has some to do with logging and much to do with life.

I am writing today in the bright attic of an old farmhouse, my home on a few hundred acres of field and forest in the gently sloping region of New York's northern Champlain Valley. In the angle of sun through high south-facing windows, cedar and wicker chests keep neatly tucked quilts and down that I have been given and have held over the past three decades of my journey home. A long-tailed pair of WWII-era snowshoes marked Wallingford, Vt. lean against finely built wooden crates painted with the names of Westport and Wadhams dairies that are filled with my mother's porcelain and my mother in law's ceramic bowls as carefully as they once were with the eggs and glass bottles that they were made to convey.

The whole house reads this way, not as mere artifacts or antiques collected for the sake of affecting the feel of a gone world, but of objects handed down through the particular histories and stories that gather over the course of a life like a hoop or a wheel or a season. This oak desk, that bent wood rocker, an oil painting of a young man standing on winter ground with his back turned is familiar nearly thirty years later by the characteristic slope of his shoulders. The contour of a landscape, the shape of a life, the countless ordinary ways that we form and are formed in the living. In considering someone's life we often think of who they were and how they got on, what they did and the success or failure of the endeavor. Underlying all of this though is the where, the geography in which life plays itself out.

"Look now, he's drawn the old Whipple Farm." That's what I remember most about buying this place. A process that took several months across the kitchen table from a family who had worked to keep this farm and forest together and were unsure if we understood that part of owning land includes a commitment to its history and to living alongside it in a dedicated way. My husband understood and he was determined that this old place would become our old place. He found original maps, studied the contours and set about trying to imagine how the original boundary would have been drawn based on landscape features, neighboring farms and how the land needed to be used. And so while he studied horizons, I learned the house and its yellow disposition; that Robert Frost and Breadloaf Mountains are in the view off the porch and that I might need to worry at some point whether the sugar maples out front would crowd each other out.

Sometime before we moved in Brian asked me what the rooms were like upstairs and I described their little angles. I asked how far the North Field extends, whether the barns are adequate and about the timber harvest schedule. He had never seen the whole house and I had only gone as far as the nearest fence-line. More than illustrative of who he and I are, this small exchange reminds me that one of us doesn't always see the whole of a thing. What we do see, we must set about to learn well until what we understand about *it* becomes part of who we are, so that *we* can become part of it. In this exchange the shaping is twofold; the way a shoulder rounds thirty years on or how a long gait closes in deference to the slower pace of a neighbor or a child. In other words, we develop in relationship to the curvature and the boundaries of a life spent alongside each other in a place, traveling its limits and its lines.

Wendell Berry reminds me of this when he writes "it is possible to live in and attentively study the same small place decade after decade, and find that it ceaselessly evades and exceeds comprehension. There is nothing that it can be reduced to, because "it" is always and not predictably, changing. It is never the same two days running, and the better one pays attention the more aware one becomes of the differences. Living and working in the place day by day, one is continuously revising one's knowledge of it, continuously being surprised by it and in error about it. And even if the

place stayed the same, one would be getting older and growing in memory and experience, and would need for that reason alone to work from revision to revision" (Berry 2000, p. 139).

This is a statement about belonging and what it means to continually rededicate ourselves to the world right in front of us and to decide on a moral orientation towards cherishing and flourishing. Dedication to a life in a place, accepting of change and holding to the lush future of the land as one's highest task is the most ordinary and the most often overlooked virtues. As in logging, so too in life.

Berry, Wendell. *Life is a Miracle: An Essay Against Modern Superstition.* Counterpoint Press, 2000.

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WEED YOUR FOREST

By Marianne Patinelli-Dubay

I recently caught up with Mr. Chuck Ames of SDR Logging in Sebec, ME. Chuck is the Northeast Delegate of the American Loggers Council, a national organization "dedicated to representing the rights and interests of independent loggers and log truck contractors." The Council was formed in the state of Maine some twenty years ago. Now with 37 member-states, the group has been able to get some industry representation in Washington, DC in order to raise its profile and its voice in legislative matters. I asked Chuck to talk with me about some of that legislation, what more regulatory fairness might mean financially for loggers and how it all impacts the industry-wide shortage of qualified labor.

Mr. Ames was already in the field and on the job in central Maine when we spoke early this morning. Our conversation took several turns with machinery and crews running in the background but we began on the subject of legislation and fairness. Chuck emphasized the importance of fostering greater public understanding about the relationship between responsible forest management, the concept of harvest and the logging industry. This topic was particularly interesting to me in light of my recent column titled "No Farms, No Food. No Forests, No …" wherein I noted that agriculture is written into the language of farming, but management is not written into the common language of forests which makes advocating for good management seem in conflict with the purpose and the existence of forests. I thought perhaps as an industry, loggers and foresters should consider how to bind our cultural imagination of forests together with the practical necessity of good management.

It turns out that Mr. Ames and his colleagues have begun this work by successfully persuading the legislature to agree that a wood harvester is in effect, a gardener. "We're weeding the forest if you want to think of it like that. If you don't manage it, it doesn't grow. So in effect, we're farmers of the trees. You let your forest grow unchecked and pretty soon you've got nothing or you've got a fire." Chuck explained that this shift from thinking about logging as purely extractive to thinking about it as sustainable land management, is more than rhetorical; it is also about federal funding and tax relief. "Through the CARES act, the USDA has given fishermen, farmers, maple syrup producers, and Christmas tree growers billions of dollars in tax relief and subsidies. As a result of our lobby, the USDA now recognizes loggers as eligible to receive some of that grant money and fair treatment consistent with farmers and fishermen." That treatment consists of exemption from an off-road fuel tax for example, that saves the industry thousands of dollars a year. All of which might encourage the next generation of loggers to join the fold, thereby alleviating the ever-present labor shortage.

To that end I was impressed to learn about a partnership formed between three Maine Community Colleges and the Professional Logging Contractors of Maine to do just that. Through this innovative program students receive hands-on training and mentoring from faculty alongside regional professionals, who donate their time in the interest of the future of the profession. Students practice in equipment donated by Caterpillar, John Deere, Davco and others. This program, the first of its kind in the Northeast, graduated ten students on Friday, October 9. Maine's Master Logger program is the next step for professionals to receive advanced training. "We have over 100 master loggers in the state and we try to go a step above and to be right on the ball." This dedication extends to best practices and the logger's

Code of Practice as well, which the American Logging Council highlights on one full page of their website. I wondered how often Chuck refers to the Code or takes it into account and I was heartened by his reply. He said, "Every day we try to do the proper thing. We abide by the Code as well as the rules and regulations on our local, state and national levels."

But the work doesn't stop there as Chuck and others continue to craft their message for the public that forest management is crop management in order to level the playing field with other natural resource professions when it comes to funding, subsidies and perhaps most important of all, recognition. Recognition, representation and accurate messaging matters beyond the legislature too. Chuck believes "loggers have a job to do just like a doctor or any other professional, but what we do isn't always something people understand. The fact is the forest needs to be managed but people don't really know what it means to harvest a forest, so we need to work on the public message. When I'm talking to a landowner whose thinking of having their woodland cut, I tell them it's like when you go out and weed so your crops will grow better. If you don't do that, you have overgrowth that prevents rather than promotes new growth. People seem to understand that."

Please send your questions and comments to Marianne Patinelli-Dubay at mpatinelli@esf.edu, by mail to SUNY-ESF's Newcomb Campus, 6312 State Route 28N, Newcomb, NY 12852

Resources:

American Loggers Council: www.amloggers.com

Northern Maine Community College and Professional Logging Contractors of Maine: www.nmcc.edu

Master Logger Certification: www.masterloggercertification.com

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We are excited to present this story by a PIF stalwart and author in the Handbook in Partners News. Sharing experiences which make our woodlands more important to your family is a goal of this cooperative. Let us hear from you about your endeavors in your woods.

Growing Mushrooms for Fun and Profit!

One forest landowner's rags to riches (?) story

By Geary Searfoss

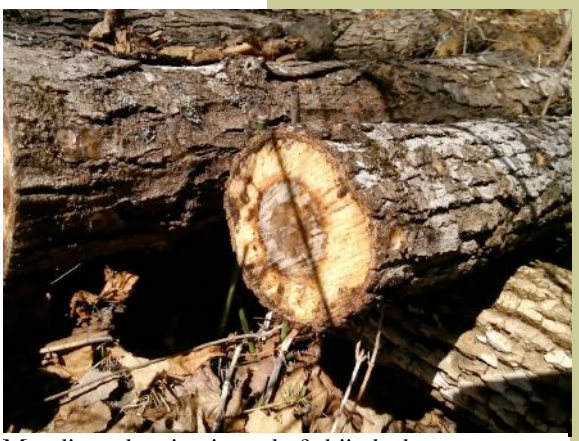
I've long promised I would write an article about growing mushrooms once I got a good handle on how to grow mushrooms. I figured after my second year of growing commercially I should be pretty well situated to do just that. And now, after two years of growing commercially, I still wonder if that's the case as I know I still have a lot to learn. Given that, I am willing to share my story and what I've learned so far for those who may want to give it a try themselves.

Those classes make it all look so easy. You just take some mushroom mycelium; inoculate a substrate; put it in a nice warm, dark, humid place; wait a little bit and then harvest boatloads of mushrooms.

It was probably about twenty years ago that I first came home with a wet roll of toilet paper that had been liberally packed with some sawdust spawn in a plastic bag. I loosely closed the bag and put it on a shelf in a warm closet, waited the requisite number of days and then misted each day while I checked for pinning. Pinning is the term for the first sign that you are getting mushrooms, it's kind of like a seed breaking the soil surface. And I did get enough mushrooms to enjoy a meal or two. And then I got mold.

About ten years ago I went to another class. Came out all enthusiastic, went to my property and cut some trees, drilled holes in the logs, inserted dowels that were crawling with mycelium, placed the logs in a shady, moist location, and waited for the mushrooms to do their thing. And waited. And waited. This was a total bust. I got

absolutely nothing. But, I figured, they must have fruited when I wasn't here and the chipmunks got them all. Eternal optimist.


Mycelium showing in end of shiitake log

So after my wife and I moved to our property, we tried again. We both went to the class this time as she is a much better listener and note taker than I. We inoculated some totems of oyster mushrooms and a few logs of shiitake. Lo and behold, we did get a flush of oyster mushrooms that fall as well as the following spring. Later in that next summer we got our first shiitakes. A business idea was born!

Emboldened by our meager success to date, we needed to figure out what to do with all the mushrooms we were going to grow. Through her work, my wife got to know a CSA (Community Supported Agriculture) farmer. People buy a share in a CSA at the beginning of the season and then they get a box of veggies and produce each week throughout the growing season. This CSA farmer was excited about the possibility of including shiitake mushrooms in his CSA boxes. So, when I had enough to meet his volume needs for a test run, I gave him a call. Everything went great until he distributed the boxes. It seems like a lot of people who got his boxes weren't at all into mushrooms. So much for that market.

We continued to add logs to our mushroom log inventory so in the summer of 2019 I thought it was time to again test the market but in a different fashion. I signed up for a booth space at a local farmers market that gets a lot of summer visitors from the Twin Cities and other urban areas. I didn't have a lot of mushrooms – maybe five to ten pounds a week – and some weeks I didn't have any, but I thought it would give me a good indication whether or not this was a product people might want. I found out it was as I was always sold out within 45 minutes. I figured I could probably sell up to fifteen pounds of mushrooms each day I was at the market. As I became more known this last summer and my mushroom production increased, I actually once sold thirty pounds in one day!

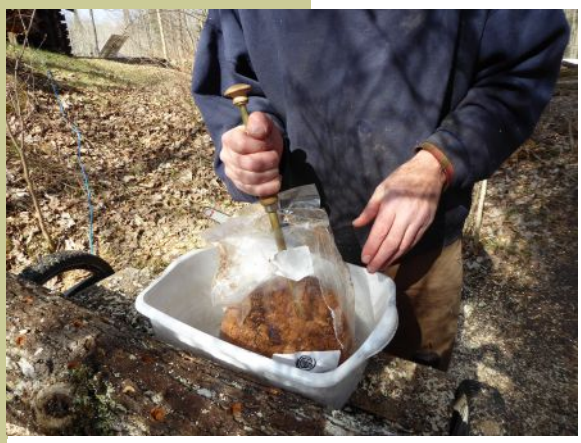

Fruiting Shiitake

Before your eyes glaze over with all the money you can make growing mushrooms, I should tell you about all the work that goes into growing them. The cost of entry is quite low – all you need is some wood, a drill and a drill bit, an inoculation tool that'll set you back about $60, some mycelium, and a camp stove to heat wax – and you're in business. After that it's all labor, and more labor, and more labor after that. Growing mushrooms is very labor intensive and they seem to demand almost constant attention when they are fruiting.

I grow multiple types of mushrooms and each has a somewhat different process. In the interest of saving space I will focus on shiitake mushrooms as that is the one that seems to garner the most interest.

Most of what I'm about to tell you I've learned from reading and trial and error. There is very little opportunity to mentor with someone who has experience. I did join a shiitake growers association once but all they did was cash my check. I didn't get a welcome note, I didn't get one newsletter, and they had no meetings or field trips or any other educational event. I might as well have flushed my $50 down the toilet. I didn't renew for a second year.

My season starts in late February, while the trees are still dormant, when I choose and cut trees that I'll be inoculating. Typically, that



Loading inoculating tool

Inoculating a log

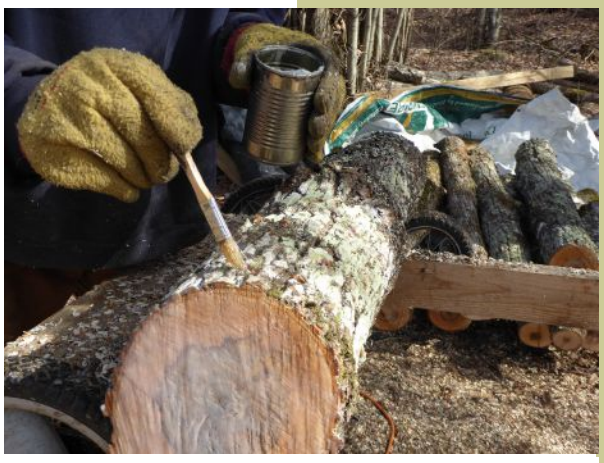
time of year we have snow up to the point where my legs come together, and I'm not a short person! I first snowshoe around and flag the trees I'm going to cut and follow that with a scoop shovel so I can cut the tree reasonably close to ground level. Then I trudge through the snow with my chainsaw and cut the trees down and top them. Then I need to skid them out. Now I don't have any equipment that can go through snow like that and even if I did, the soils are softening up that time of year so I wouldn't want to use it for fear of creating ruts. I do have a portable winch and so I use that. The problem is that it doesn't work well in deep snow like that either. I have to carry a piece of plywood to place the winch on so it doesn't sink in the snow. The skidding cone and tree tend to dive under the snow crust creating a highly compact plug of snow that the winch cannot power through. So I have to wait until some of the snow melts. But I have to get it done before patches of ground begin to appear because the last thing I want is to get mud on my logs – it's murder on my high speed drill bit. I also don't want to rub the bark off or damage the bark in any way. It's very important that the bark be intact if you want to get mushrooms from all your effort. So, add that all up and I get about two days where I can skid logs using the winch. After that, I buck the trees into the lengths I want, about three to four feet long depending on their diameter, and carry them, one by one, out of the woods on my shoulder.

Since you go to all that effort to get the mushroom logs out of the woods, you want to make sure each log you carry is a log you will actually use. Mushrooms grow only in the sapwood so if you have a log that is mostly heartwood, inoculating it will be a waste of time and spawn. Also, you want to avoid logs that already contain rot fungi. Since that fungi is well established, the fungi you introduce has little, if any chance, to grow. When you add those two requirements together you might end up with the idea that you should only cut trees with great growth rates (mostly sapwood) and no defects. That would just be the best trees and wouldn't meet my desire to use the mushroom operation as a conduit to conduct timber stand improvement in my woods and remove the poorer quality stems. No problem. I've found that even the worst tree generally has one or two four-foot sections that meet the criteria. The remainder is either left in the woods or removed at a later date for firewood.

Once the logs are out of the woods, I begin the process of inoculating. Holes are drilled in a diamond shape pattern with the holes about six inches apart in the rows and the rows about two inches apart. Then I use my inoculating tool, which is designed for use with sawdust spawn, to insert the spawn into the holes. The inoculating tool is a simple device with a cavity about the size of a thimble on the business end. I fill that cavity by plunging the tool into the bag of spawn and then place it over a hole. With the palm of my other hand I slap the plunger on the top of the tool and that forces the spawn into the hole. Repeat. Repeat. Repeat. The holes containing the spawn are then capped with hot wax to hold moisture in the spawn and log. I will also wax the ends and any other cut that I made on the log.

I've found that wax will not adhere to the log if the temperature is lower than 37 or 38F. It will also not stick if the bark is wet or covered with ice. Having to go back and re-wax a bunch of logs you thought you were done with is not exactly a chore which is relished.

Then the logs go down to the log yard which is a shady area that is usually quite humid. The logs are placed as close to the ground as possible without touching the soil. I use some of the reject logs as runners for that purpose.


Waxing Log after inoculation

And then you wait. The mycelium needs to fully colonize the log before it will fruit and provide mushrooms. Here in northern Wisconsin even the fastest growing varieties will not begin to bear fruit until mid or late July of the following year. Yes, the following year. That's about fifteen or sixteen months. Other varieties take even longer and won't start fruiting for two years. Unless you have an indoor growing facility where you can shorten the incubation period by controlling the temperature and humidity, it takes a long time to effectively increase your production.

Most varieties of shiitake can be forced to fruit which is great when you are trying to grow for a set market. Other mushrooms I grow just fruit when they decide it's time. Though we know that weather events may stimulate fruiting that doesn't always happen so you can't count on it. Other times, they just seem to fruit for no apparent reason. As some types of mushrooms mature quickly, you need to check daily so you don't miss them. Overmature mushrooms don't sell very well and they also have a very limited shelf life. I do not like to hold mushrooms more than three or four days at most before selling. Even at that they need to be stored carefully at a very cool, but not freezing, temperature to retain their marketability. My main market is on Mondays so if I get mushrooms on Tuesday, Wednesday or Thursday I need to find someplace else to market them.

As I mentioned, most shiitake varieties can be stimulated to fruit (forced) by soaking them in water that is at least 20F cooler than the average air temperature for 12 to 24 hours. This works quite well as long as you don't overdo it. You want to give the logs six to seven weeks to rest in between forced fruitings. Here's where a lot of work comes in. You need to take the logs from the resting rack and place them in the water. The next day you need to remove them from the water and put them in a fruiting placement so it'll be easy to harvest the mushrooms and so they have enough space for the mushroom caps to expand to their full potential. Once they are done fruiting you need to place them back on the resting rack. In between you need to check them often. You want to harvest them while the caps are still curved down. If you allow them to flatten out you will have an inferior product. I also like to keep mine uncovered so they get full benefit of the natural light which makes them high in vitamin D and allows the caps to develop their full ornamentation. On the other hand, once the mushrooms reach a certain size, about half way to maturity, you don't want them to get wet. They soak up moisture like a sponge and, again, you will end up with an inferior product. So, if rain is in the forecast, I will keep an eye on the sky and cover them if needed. They also need to be checked for pests. Slugs like mushrooms as do mice and other rodents. You don't want that to get out of hand.


Mushroom yard

A quick word on the size of logs. It's tempting to inoculate larger logs but constantly moving those ten-inch diameter logs gets old in a hurry if, like me, you are moving them by hand.

When forcing under average summer conditions, the logs need to be soaked about ten days prior to the day you want to take the mushrooms to market. If the weather is warmer, the mushrooms will mature quicker so you need to adjust that down by a couple days. If the weather is cooler it will take them longer to mature so you want to add a couple days. Obviously, this means one needs to pay particular attention to the extended weather forecast. If the mushrooms come too early or come too late, you have missed the market.

The most popular wood to grow shiitake on is oak. I have very little oak so I use hard maple and ironwood which some studies have shown produce just as well, or very close to, oak. For oyster mushrooms I use soft hardwoods such as basswood and aspen. I go back into the woods for the tops of the cut trees which I chip and use as a substrate for winecap mushrooms.

Back to the financial end. Since I only grow mushrooms outside, my season runs from about mid-May until mid-October. Most farmers markets run from the first of June until the end of September, about four months. A couple weeks this last summer I managed to surpass $300 in sales on one market day. If I can increase my production so that $300 is an average market day then we're still only looking at gross revenue for the season of $4,800 ($300 x 16) if I go to just one market. Perhaps I could sell more if I had higher production but the last thing I want is to bring unsold mushrooms home. That happened twice this year. Perhaps the market will grow as I become more well known. Perhaps I could raise my prices. Or perhaps I could go to a second market.

Keep in mind, though, that a market day is a full day. By the time you get everything loaded and ready to go, drive to the market location, set up your canopy and display, sell during market hours, tear down and repack your vehicle, drive back home, unload and clean things up, you're not going to get much else done. So, if I expand to two markets, that only gives me five other days to work the mushroom yard and do other things I need to get done. If I go to three markets, I only then have four other days to work the mushroom yard. As I'm retired, it's kind of nice to take a day off occasionally as well.

Against that $4,800 of gross revenue are the expenses of operation. All markets charge a booth fee. You also have transportation expenses to get to the market. You certainly don't want to overlook insurance coverage not only for liability to cover damages for events such as a gust of wind blowing your canopy into the side of someone's car but to cover the possibility that someone charges your product made them sick. You also need to purchase spawn, market supplies such as bags and labels, and pest control. I also pay an annual fee to 'Something Special From Wisconsin' to give me the right to use their logo. And then I have to purchase stickers of their logo to place on my market bags.

Bottom line. Growing mushrooms isn't going to make me rich. I am hoping, however, that it can give me a little retirement income as I become more knowledgeable and more efficient at growing. I also really enjoy interacting with my customers at market as they are always happy and friendly because they want to be there. I've also developed some fun relationships with some of the other vendors. And during slow periods in a market day, my guitar is always within arm's reach.

Photos: submitted by Geary Searfoss

PoHu Oysters

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In this issue of Partners News we reach out into the world of some special critters who make our northern forests home.

Sapsuckers and Other Insults

Paul Hetzler

As far as I can tell, icebreaker exercises are meant to help those awkward obligatory group events like staff development days or office team retreats feel even less comfortable. I recall one workplace training where we had to inform the group what animal best represented our personality. I was going to say "squirrel" but got distracted looking at something out the window, and forgot. In retrospect I should have chosen the yellow-bellied sapsucker (*Sphyrapicus varius*), since I spent much of that same event straightening business cards and brochures at the conference center. This will make sense (I hope) in a moment.

Some may raise an eyebrow when they learn that "yellow-bellied sapsucker" is not just an epithet hurled by children across school playgrounds. Indeed it is a woodpecker whose nesting grounds encompass parts of the Great Lakes and New England states, as well as a broad swath of southern Canada. The real surprise is that this creature displays a behavior I would call compulsive.

To be clear, Obsessive-Compulsive Disorder is a challenge for some folks, myself included, so I'm not equating it to the sapsucker's habits. But when I see the way this bird pecks perfectly straight rows of uniform-sized, evenly spaced shallow holes called sap wells, it reminds me a lot of squaring-off stacks of stationery. Unfortunately, this bird's obsession sometimes injures or kills trees.

For all the harm it can cause, the yellow-bellied sapsucker is rather small, weighing a mere two ounces. On average it measures about eight inches long, with a wingspan around fourteen inches. It resembles two of our resident native woodpeckers, the downy and hairy, and is a bit larger than the downy, and a tad smaller than hairy.

Ironically, the yellow-belly is only yellow – and a very pale hue at that – at the center of its abdomen; otherwise its front is mottled (or barred) dark brown and white. It sports a black bib, and has a white stripe down its side, with black above. Of course as anyone who has seen the cartoon character Woody Woodpecker knows, it has a red head. Well, the males do, but females always have at least a red crown.

Sapsuckers feed on many trees: pine, hemlock, maple, and poplar are all on their menu, but they're especially fond of thin-barked species like birch, mountain-ash and alder. Apple trees also seem quite attractive to them.

Although this bird's existence may not hinge on having a laser-straight, regimented drilling pattern, sapsuckers don't make sap wells for fun. The name suggests they have a means of vacuuming out tree sap but really, sapsuckers return to feed on sugar-rich dried (or concentrated) sap which collects in the wells it made earlier. In addition, they snap up insects which are attracted to the fresh wounds. Fruits and nuts round out their diet.

Much of the time, sapsuckers aren't a problem for trees, as they frequently shop around, pecking a short line or two into one, maybe hammering out a paragraph on another trunk or branch. But occasionally the sapsucker will finish a row around the entire circumference of a particular tree, and then drop down a fraction of an inch (truthfully I don't know what units they use) to begin the next, and on and on.

This ring-around-the-rosy performance chips out most of the cambium layer in that particular row of sap wells, disrupting the vascular system. It's akin to girdling perhaps 70 or 80 percent of the trunk in that narrow band. Obviously this stresses the tree, and may eventually kill it. Why sapsuckers peck mercilessly on certain trees yet barely touch others of the same kind is not fully known, but I've noticed that very often it is a tree already struggling with

stress – which includes any tree surrounded by lawn – that gets the bulk of their attention.

My current (untested) hypothesis has to do with the way trees protect themselves from things intent on eating them. A vigorous, vital tree is able to produce noxious compounds at feeding sites in an effort to repel insects, and presumably anything else dining upon it. A tree in a weakened state, however, cannot mount such a defense and is thus "tastier." We know that in general, insect pests go for stressed and dying trees first. I'm going out on a limb to suggest this is why sapsuckers peck the life out of a landscape tree while ignoring the same species in a nearby wooded setting.

Sadly, the yellow-bellied sapsucker is considered a species of "high climate vulnerability." The Audubon Society projects that if current warming trends continue, it could lose up to 88% of its current range. The breadth of its nesting habitat will shrink considerably in the south, without being able to expand nearly as much to the north. So let's be nice to sapsuckers even if they do cause a problem for one of your trees. If that's the case, wrap the section of trunk under "attack" with burlap, or aluminum window screen. And then make sure it's getting enough water, and that nobody drives on, or adds soil to, its root zone (twice the branch length). A little bird is telling you the poor tree is stressed-out.

Paul Hetzler is an ISA-Certified Arborist and a member of ISA-Ontario, the Canadian Institute of Forestry, and the Society of American Foresters. His Obsessive-Compulsive issue is now under control, but he's still working on his Attention-Deficit

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Paul Hetzler teaches yet another lesson on Piliated Woodpeckers and tree decay. See December 2019 for more on the magnificent piliated.

MISCREANTS AS MESSENGERS

Paul Hetzler

If you get bad news about one of your trees, kindly don't blame the messenger. Even if – especially if – they vandalize that very tree. It could save a lot of trouble, and possibly your life, to heed their memo.

Although it's captivating to watch a big prehistoric-looking woodpecker chisel away at a rotten snag in the forest, the same performance loses its charm when it jack-hammers a hole in your perfectly good tree. The thing is, no matter how healthy that tree may appear, it is definitely not sound, and may in fact be dangerous. Your "vandal" is alerting you to this truth by installing windows in the tree trunk.

Native to the eastern United States, southeastern Canada and a belt of Canadian boreal forest stretching to the Pacific coast, the pileated woodpecker (*Dryocopus pileatus*) is easy to recognize. Its prominent red crest is an attention-getter, but its size sets it apart as well. Assuming the ivory-billed woodpecker is extinct, our pileated is the largest in North America, at 40-49 cm long, with a 66-75 cm wingspan. Its body is mostly black, with a strip of white down the throat. Males and females are both red-crested, but the male has an

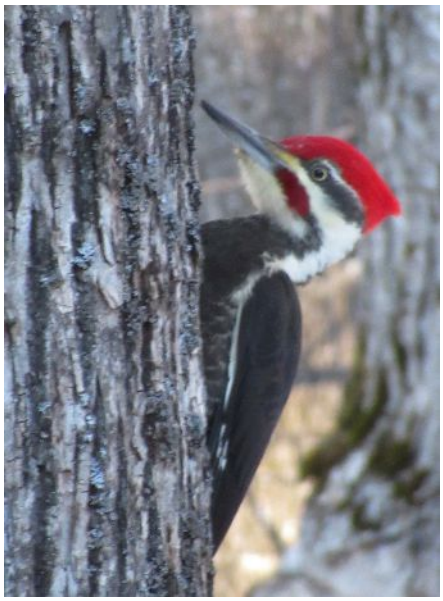

Photo: Rod Sharka

additional red stripe on the sides of its head. Patches of white are also visible as it flies in its distinctive undulating pattern.

Pileated woodpeckers excavate large cavities in dead trees in which to nest – so large that the tree sometimes collapses at the nest site. They also “mine” dead trees for larvae and pupae of wood-boring beetles. But these birds have a special appetite for carpenter ants living in the decayed heartwood of live trees, which is what sometimes irks when it seems that they’re attacking a healthy tree in our woodlot, sugar bush, or backyard. As unsettling as it is to see wood chips raining down from your tree, that is the least of its problems.

It’s tough work for woodpeckers to chop holes in wood using only their lips, so there’s always a compelling reason, such as a tasty carpenter-ant core ensconced within that hard wooden shell. It’s sort of the bird equivalent of a lollipop with a chewy center. Once we realize these professional hackers only break into a live tree if its trunk is packed with ants, it’s logical to think we should kill those critters. The trouble is, that won’t help – ants aren’t the issue either.

In spite of their name, carpenter ants are unable to saw, router, drill, or otherwise excavate solid wood. Turns out these guys only have the chops for damp, rotted wood. They’re so named (I’m pretty sure) because when they appear at home it means you need a carpenter, as opposed to an exterminator, to replace that crumbling sill plate, joist, or other hidden piece of decayed lumber. In houses, rot may be due to faulty window flashing or leaking roofs. Heartwood rot in trees, however, begins with an injury.

Ice storms, lightning strikes, porcupines and other natural injuries are unavoidable, but we cause loads of unnecessary harm. Root damage is a frequent but lesser-known conduit for decay to enter, which is why it’s essential that land managers keep heavy equipment out of the woods in wet conditions. Flush-cut pruning is another type of careless and avoidable injury that can lead to internal decay.

As Peter Smallidge and others have written over the years, trees wall-off (compartmentalize) wounds, making barriers to exclude decay organisms. A fascinating and superbly illustrated USFS bulletin by Dr. Alex Shigo, who extensively studied this “treemunity” process, can be found at: https://www.nrs.fs.fed.us/pubs/misc/ne_aib405.pdf

Whether or not a tree successfully compartmentalizes decay after an injury depends on its species and vitality, as well as the wound size. Bur oak, sugar maple, and honeylocust are among the species which compartmentalize robustly, while poplar, birch, and willow appear to have missed the memo on how it’s done. Obviously, poor soil, drought, defoliation and root damage curb a tree’s ability to self-protect. But even the defenses of a top-notch (so to speak) tree can be overwhelmed by a large wound.

When a tree’s defensive walls are breached, heart rot often ensues. It’s a slight misnomer, as trees without heartwood (birch, beech, basswood) get it too. Also, depending on the fungal agent, sapwood can sometimes be fair game. In general terms, heart rot affects the non-living center section of trees, while the outer layers of water-conductive sapwood are exempt (if a tree is subject to a further large injury, sapwood can be jeopardized as well).

Broadly speaking there are two kinds of heart rot, white and brown. Brown rot, which decays cellulose only, is sometimes called dry-rot because that’s how it looks by the time we see it, long after it’s done its dirty work. While it’s active, though, it has ample moisture. It’s associated more with conifers, and you may recognize its blocky, brown, crumbly signature inside a windthrown tree. Eighty percent of wood-rot fungi are in the white-rot club, a thorough bunch able to eat lignin, the resilient “rebar” of wood, as well as carbohydrates. White rots are more common on hardwoods.

Over time, the biomass of these organisms will increase to the point that they send out fruiting bodies, spore-bearing conks that we've undoubtedly seen in the woods. *Fomitopsis pinicola* is a brown-rot fungus which produces a shiny red-belted conk, while *phellinus tremulae*, a white-rot, results in the hoof-shaped conk sometimes found on poplars.

Pileated woodpeckers aren't after your tree; they're pursuing ant colonies. In turn, ants don't ruin your tree, but signal the presence of advanced decay within. Using insecticide on the ants will put all sorts of wildlife at risk, and is unlikely to eradicate the colony. Most importantly, it will do nothing to slow the inexorable march of internal decay.

Years ago I helped extricate a massive white pine from the attic of a house. It had snapped at about 30 feet and crushed the roof, harpooning good-size branches into the bedrooms below. It failed because of decay which had begun at an old wound and advanced. The ants present were but a symptom; if only a woodpecker had alerted the homeowner to the situation, disaster might have been averted.

If you see woodpeckers "vandalizing" your tree, be aware that decay lurks inside. You may want an arborist to evaluate it for mechanical integrity and overall health. Heartwood decay doesn't always mean a tree is doomed, but if it's destined to fall, best that it happens in a controlled fashion.

Regionally, around 40 bird species depend in some way on tree cavities. Primary excavators like flickers, woodpeckers, and chickadees significantly reduce forest-pest populations during winter as they feed on insect larvae, pupae, and adults. Feeding sites and abandoned nest cavities are used by tree swallows, wrens, kestrels, owls, and many other resident and migratory birds.

Because snags are critical to such species, it's highly beneficial to leave dead forest trees standing when possible. Lower trunks of residential trees can be left when safety concerns allow. Not only does this provide key habitat, you may get a chance to observe bird species you otherwise wouldn't see.

Paul Hetzler is an ISA-Certified Arborist. He avoids trees and lollipops that have soft centers.

Have you checked out PIF's website? www.partnersinforestry.com

The website is for members to expose your business, service or tree farm, share thoughts, ideas, articles, photos, and links. This is your COOP, we need your input as much or more than your dues.

FUTURE ARTICLES

We always enjoy member feed back. Let us hear from you!

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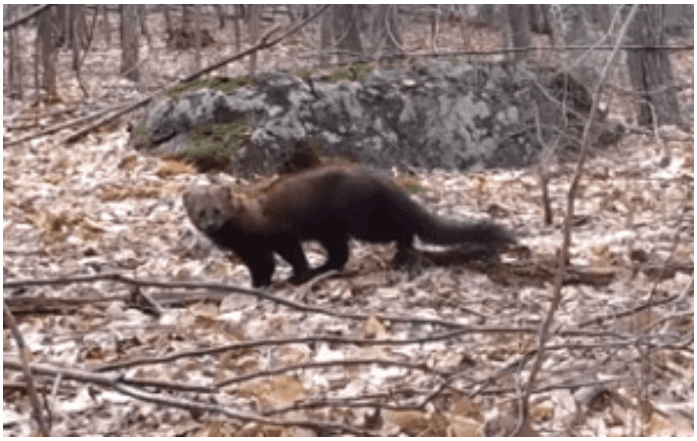
The fisher cat: Doesn't fish, isn't a cat

By Bill Rhodes



What's in a name? In the case of the Fisher Cat, *Pekania pennanti,* a low-slung, cat-sized fur-bearing omnivore found throughout the dense pine forests of the North, apparently not much.

The Fisher Cat is not a cat, but rather a member of the weasel family, and they do not fish, although there are records of them eating dead fish found on the side of ponds or lakes.

How did they come by the name, then?

'Fisher' is thought to be derived from early European settlers likening the animal to the European polecat, called a 'fitche'. As for 'cat', the fisher is about the size of a large domestic cat, with a dark brown to black, close-cropped glossy fur coat and a long bushy tail. It will hold its tail upright when it runs, perhaps making it resemble a cat to some. Although they don't climb trees often, they can climb quite well, using their sharp, retractable claws, which are also similar to a cat's.

The male and female fisher have comparable appearances and overall coloration, but the male is much larger, varying from 35 to 47 inches in length and ranging between eight and thirteen pounds. The female is generally between 30 and 37 inches in length and weighs from four to six pounds. Their dense, soft fur make them very popular and profitable targets for trappers. Their coats vary in color from dark chocolate brown to a deep black in winter, lightening considerably in the summer, making winter the prime season for trapping. The thickness of the fur coat also varies with the season, with the winter coat being the densest, and therefore most sought after.

The attractiveness and value of fisher pelts for the fur trade contributed to a decline in the fisher's range and numbers, which, together with the felling of pine forests for farming and then the subsequent expansion of housing, sped the fisher's decline. However, thanks to a gradual shift of human populations from rural farmland to cities and suburbs in the late 1800s into the 1900s, second and third growth forests began to fill in once-tilled farmland, maturing over the years. Together with the imposition of carefully monitored trapping seasons and limits, the fisher has now reoccupied its original range and numbers continue to grow.

Although the fisher is an omnivore, it is primarily a carnivore, and a very effective hunter. Being a solitary animal, it is limited as to the size of its prey, targeting smaller mammals, such as rabbits, squirrels, snowshoe hares and birds. While willing to dine on carrion, such as deer carcasses, and also fruits, berries, mushrooms and other plants, it is ultimately a proficient predator. In fact, it is one of the very few animals that will target the porcupine, whose long, ominous needle-like quills are generally enough to ward off even the most ferocious would be attackers.

Stories are told that the fisher attacks and kills porcupines by first flipping them onto their backs to reach their soft, quill-less bellies, but that seems to rarely be the case; rather, the fisher repeatedly attacks the unprotected face of the porcupine, biting it over and over, until it is simply too injured to continue to resist. There are also documented cases of the fisher attacking both bobcat and lynx but given the size disparity (bobcat and lynx being larger), that it not common. In fact, the bobcat and lynx are among the animals that will prey upon the fisher. Like the bobcat and lynx, the fisher is crepuscular – it is most active and hunts its prey during twilight and dawn.

The fisher prefers older pine forests, where it can find denning areas more readily, using hollowed out sections in stumps, fallen logs and tree trunks. It is a very capable climber, with hind paws that are able to turn almost 180 degrees. This unusual feature enables the fisher to climb down a tree headfirst – one of the few large mammals that can. It has five toes on each foot, all with an unsheathed retractable claw, and each paw has large pads with hairs between them, giving them traction on slippery surfaces and the ability to walk easily on snowpack.

Mating occurs in March or April, and the males and females go their separate ways immediately after. In a very unusual process, the newly created fertilized egg, called a blastocyst, is not implanted into the pregnant fisher's womb until almost ten months later in February of the following year. It is this uncommon and long reproductive cycle that made it difficult to farm fishers for their fur as is done with mink and ermine, other members of the weasel family.

Gestation begins when the blastocyst is implanted, and lasts about fifty days, after which litters of between one and five (and rarely six) baby fishers, called kits, are born. The female fisher uses hollowed out trees or other protected areas for their dens, and the kits are born completely defenseless, with their eyes and ears sealed shut. They nurse for up to ten weeks, after which they switch to solid food. At this point they begin to grow restless, and the mother will push them out of the den after five months. By the end of a year, they disperse, establishing their own territories in which they lead their solitary lives. In the summer, when food is more plentiful, the territories tend to be smaller, about three square miles, and in the winter, they expand to about five. The territories of males and females tend to overlap, encouraging the meeting of the two sexes during mating season.

The fisher lives about seven to ten years in the wild. While interesting and unusual to see, they will readily attack poultry and there is some evidence that they will occasionally target small pets. Backyard birdfeeders, while attracting birds, squirrels and chipmunks, also attract fishers, looking to dine on those visitors, particularly the squirrels. Leaving cat or dogfood outside may attract them as well. For those fortunate enough to live near or next to old growth pine forests, spotting the 'fisher cat' may be an increasingly common occurrence, but be cautious, as the fisher is neither a cat nor a fish eater, but is a beautiful, stealthy predator.

- In some areas the fisher is called a 'pekan' which is its Algonquin name.
- The fisher is only found in North America with an estimated 100,000 individuals living across its range.
- The fisher prefers to live in old growth forest with a dense canopy; it will not occupy forests with less than 50% canopy cover

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