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Partners News

March/April 2020

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Contact Us

Partners in Forestry
Landowner Cooperative

6063 Baker Lake Road
Conover, WI 54519

partnersinforestry@gmail.com

715-479-8528

PIF's Website:
www.partnersinforestry.com

Have you paid your PIF dues?

Welcome New Member(s)

John Michael Frangiskakis

Inside this issue:

CONGRATULATIONS TO ROD SHARKA

Note from Joe: *under the category of how in the heck did I forget this, or did turning 70 last year shift my mind more than I recognized. Last year I wrote the following story, submitted it to local paper and PIF website, but foolishly neglected to submit it to Margo. So, better late than never, we have the feature on Rod's award last summer. Rod has truly been a tremendous asset to PIF in may ways, and once again I say "Thank you Rod, for all the good you continue to do".*

Rod Sharka wins Statewide Invader Crusader Award

May 25, 2019

Each year, the Wisconsin Invasive Species Council honors Wisconsin citizens and organizations for their significant contribution to prevent, control or eradicate invasive species that harm Wisconsin's lands, waters and wetlands. This year Partners in Forestry Coop (PIF) board member, Rod Sharka, has been selected as winner in the Volunteer Individual category! Rod was honored at a celebration on June 5 at Olbrich Gardens in Madison.

Rod was nominated by Vilas County Conservation Specialist Quita Sheehan with support from Partners in Forestry and The Nature Conservancy. "Rod has been a tireless advocate for conservation by helping land owners control invasive plants, and a big asset to maintaining the quality of our forest lands", said PIF director Joe Hovel. Well known around Land O Lakes for his giving spirit, Rod is the Volunteer Land Manager at the Tenderfoot Reserve.

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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.

PIF is giving comments on the Vilas County Forest planning to Al Murray. Below is a short summary of our comments.

We would like to offer our suggestions in the current planning, based on our networking with members, some being foresters, botanists, wildlife managers and public land advocates.

Oak: We feel there should be no net loss of oak forests with at least 10 percent or more in age classes 1-20, 21-40, 41-60, 61-80, 80-100, 101-120. Diligently follow all oak wilt guidelines to protect not only the public oak resource but neighboring oak stands as well.

Pine: We advocate for the separation of all natural pine stands and plantation pines into different management emphasis. We do not believe they should be managed as the same. While plantation stands can be rotated as to site productivity, we feel the native stands deserve to be managed to their full potential. Natural pine stands should again have a no net loss of acreage and longer rotations schedules. Please envision the fact that overstory super canopy white pines not only contribute tremendously to aesthetics, but also harbor over 40 species of song birds.

Infrastructure: Adequate funding for culverts, roads, bridges is very important, especially with the huge rain events seen in recent years. Road work should also recognize aesthetics as these roads give residents and visitors access to the forest.

Aspen: Separate aspen, establishing a difference between trembling and big-toothed cover types when big-toothed has a basal area of 50 or more. Big-toothed can be managed at longer rotations for bolts to achieve higher value. Consider moving low site index aspen (55 or less) into more productive timber types.

The Land: Aggressively use both purchases and land exchanges to increase blocking and reduce line work thus benefiting management productivity. The Plan should identify areas where real estate work makes the most sense and is practical.

County Board oversight: We would like Forest Committee members, and County Board members proposing or voting on County Forest issues to fully divulge any conflicts of interest. We believe the management basis on the forest should be on sound silviculture and not only on the ideology of the board members.

Biodiversity: We hope you will join us in recognizing the forest as living communities. In summary, a no net loss of oak and natural pine stands with longer rotations in those forests will achieve some protection of biodiversity. We do not want to see an increase in plantations or monoculture forestry and parallel to achieving that is with the no net loss concept. The challenge is how to meaningfully increase biodiversity in the existing low diversity areas. We advocate for more retention of live trees and snags in those areas since they are already very low.

PIF Committee involved in this comment includes John Schwarzmann, Ron Eckstein, Rod Sharka, Mark Hovel and Joe Hovel.

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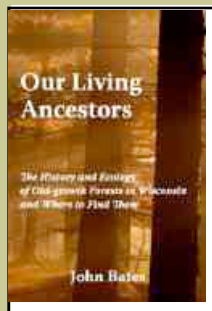


Our Living Ancestors: The History and Ecology of Old-Growth Forests in Wisconsin (and Where to Find Them)

By John Bates, softcover, 336 pages, over 200 maps, photos, graphics, $27.95 retail.

Note: John is offering the book at a discounted cost of $20.00 to PIF members, just mention that you are a PIF member and saw the ad in the PIF newsletter. $5.00 of this special offer will go the Northwood Alliance, Inc

Discounted books may be purchased directly from John at manitowish@centuryTel.net or 715-476-2828. Snail mail may be sent to John Bates, 4245 N. Hwy 47, Mercer, WI 54547.

It is always a good time to get out in the woods. Experiencing a stand of old growth trees makes it more special. In light of the social distancing we are all practicing these days, we thought we could give you a suggestion or two on great places to visit. Thanks to the help of ***Our Living Ancestors****, and author John Bates we have a suggested site for you to visit. A topo map for your visit is available by request, or visit www.partnersinforestry.com*

Jung Hemlock-Beech Forest State Natural Area

John Bates, Author of *Our Living Ancestors*

Location and Directions: Shawano County. T27N-R14E, Section 23 E½NW¼. From the intersection of County Highways A and G in Gresham, go south on A about 2 miles, then south on County U for 1 mile, then east on Winkle Road for 0.3 miles to a tiny parking area south of the road well-marked with a SNA sign. No marked trails lead into the site, but an old trail can be found and followed for a little way.

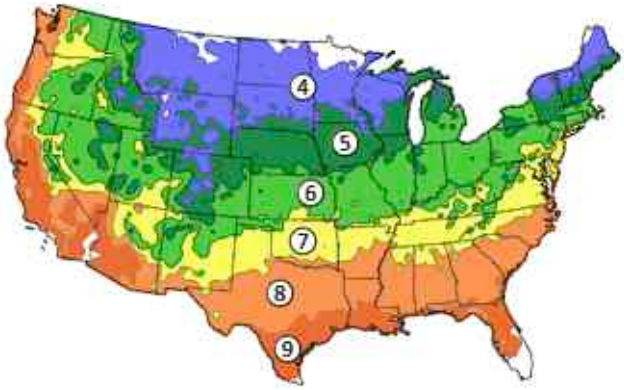

Jung beech tree with heart rot

Size: 80 acres with 63 acres of old-growth
Forest Type: Northern mesic forest – hemlock-hardwoods with beech
Age of the oldest-known trees: 230 years
Status: Jung Hemlock-Beech Forest is owned by the DNR and was designated a State Natural Area in 1976. Jung Hemlock-Beech Forest is a rare remnant of the once extensive northern hemlock-hardwood forest that covered millions of acres in northeastern Wisconsin. The forest contains old-growth hemlock, American beech, and sugar maple, with some yellow birch and some large (36" dbh), but scattered white pine – most of the pines were almost certainly high-graded out long ago. Beech is near the western limit of its range here, but is common throughout the stand and reproducing well. However, many of the larger beech appear to be on their last legs. Hemlock is also reproducing to a minor extent, but better in comparison to most sites where young hemlocks are rare due to browsing deer. A recent blowdown snapped off or uprooted quite a few larger trees.

The *site is bordered entirely by agricultural fields*, and depending on the season and time of day, the sound of tractors is a constant. The lack of a forest buffer to lessen the probability of windthrow is a major concern. Characteristic understory species including beech-drops, a root parasite of beech trees. Common nesting birds include the wood thrush, whose beautiful song resonates all the more richly in the large trees.

American Beech is not a widespread tree in Wisconsin or the upper peninsula, mainly inhabiting the eastern portions. If you are inclined to visit the Jung site, here are some beech facts from the Arbor Day Foundation to help understand the species.

The stately **American beech** holds a special place in many hearts and minds. The wide-spreading canopy provides great shade in the summer and beautiful bronze coloring in the fall. It is a versatile tree, often used in parks, golf courses, acreages, and the forestry industry. The American beech is not a tree you plant for fast growth and quick shade — this slow grower is planted for future generations to enjoy. And what a lovely legacy for you to leave. The American beech can be expected to grow in Hardiness Zones 4–9.



Tree Type This tree is considered both a shade tree and an ornamental tree. It features a spreading canopy capable of blocking sunlight and adds visual interest and beauty to landscaping.

Mature Size The American beech grows to a height of 50–70' and a spread of around 40' at maturity.

Growth Rate This tree grows at a slow to medium rate, with height increases of anywhere from less than 12" to 24" per year.

Sun Preference Full sun is the ideal condition for this tree, meaning it should get at least six hours of direct, unfiltered sunlight each day.

Soil Preference The American beech grows in acidic, loamy, moist, sandy, silty loam, well-drained and clay soils. It is very drought sensitive.

Attributes Develops a dense canopy. Provides golden bronze fall color. Features simple leaves that are 3–6" long with sharp, incurved teeth on the margins. Yields edible, hard, brown beechnuts that are ½–1" in diameter. Compensates for its slow grown with longevity. Retains its smooth bark as it ages. Needs plenty of space. Grows in an oval shape.

Wildlife Value Beechnuts are eaten by birds and mammals, serving as an important food for chipmunks and squirrels.

History/Lore A sturdy, densely canopied tree, the American Beech was a sign of fertile soil to early settlers and was quickly removed so the plow could take over and farming for food could commence. In hilly locations, it was the home for migrating Passenger Pigeons who were so numerous that they broke off the limbs of the trees from the sheer weight of their numbers when they perched on them. There was a Beech tree on the old stage road between Blountville and Jonesborough, Tennessee that had an inscription carved into the trunk that read "D. Boone Cilled A Bar On Tree In Year 1760." The tree fell in 1916 and had a girth of 28-1/2 feet. The Forest Service estimated the tree's age to be 365 years, making it fully two centuries old before Daniel Boone inscribed on it.

AND if you are anxious for more outdoor exploration: The state has temporarily waived all state park and trail admission fees to get folks outdoors during this crisis.
https://mail.google.com/mail/u/0/#trash/FMfcgxwHMZGdSHpSCgtmcVfzwsbCZflc

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A Great Tree It is!

by Cheryl Pytlarz

"WOW! I bet it's over 300 years old!" says Rod Sharka, a well versed conservationist of the Land O Lakes, WI area. "There are those who claim that yellow birch can be arrested for loitering."

The yellow birch featured in this article is located in the Ottawa National Forest in the Upper Peninsula of Michigan, several hundred yards from the eastern boundary of the Sylvania Wilderness. It has survived 3 major logging events, 1906, 1920 and 1943. If it is over 300 years old that would place its emergence at or before 1720.

It's a big yellow birch as they go, having a 50 inch diameter at breast high (DBH). According to John Schwarzmann, it takes most yellow birch trees about 50 years to reach the canopy and be about 6 inches DBH. Thereafter, the dominant and codominant trees grow about 13 to 14 inches per century. To go from 6 inches to 50 inches could take 3.14 centuries. "My best guess is you were looking at a 350 to 375 year old tree!!!!," Mr. Schwarzmann celebrates. He is currently the Northern Forest Supervisor for the State of Wisconsin Board of Commissioners of Public Lands along with being involved in many forestry groups for over 30 years.

Research done by John Bates, a local plant specialist, suggests that at the very far end of the spectrum, according to the WI Silvicultural Guide, yellow birch can surpass 350 yrs. old, but average age at time of death is 195 years and 23" DBH. "Typically, yellow birch trees grow to 70-100 feet tall and 24-30 inches dbh. Maximums measured within its range are 114 feet tall and 60 inches dbh. In unmanaged forests, most growth (height and diameter) is completed by 120-150 years of age." https://dnr.wi.gov/topic/ForestManagement/documents/24315/40.pdf

Yellow Birch or Betula alleghaniensis. The largest and longest living birch, is an esteemed native species that has an incredible fall display of bright yellow and gold leaves. A valuable tree and classified as one of the largest hardwoods in northeastern North America. Grows potentially in over 50% of the USA and well into Canada, in zones 3-7, is a favorite of the northern hardwood forests.

The largest concentrations of yellow birch are found in Quebec, Ontario, New Brunswick, Maine, upper Michigan and New York. About 50 percent of the growing stock volume of yellow birch is in Quebec. Here in the northwoods they are often living in the same forest stand as hemlocks because they both like moist feet. Yellow birch is an economically important source of lumber. The wood is heavy, strong, and close-grained. It is used for furniture, cabinetry, charcoal, pulp, interior finish, veneer, tool handles, boxes, woodenware and interior doors.

Information in this article for which is not sited comes from Partners in Foresty. Thank you.

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Future Articles

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

If you have questions that you would like to see addressed in the newsletter, suggestions for, or have articles for, future newsletters, please contact us at partnersinforestry@gmail.com or by mail:

Partners In Forestry
6063 Baker Lake Rd
Conover, WI 54519

One person's plague is another person's honey. Or fence post -- whatever.

NOT PLAGUED BY LOCUSTS

Paul Hetzler, ISA Certified Arborist

Sometimes I wonder if the Biblical plagues of ancient Egypt have lingered in one form or another. Blooms of toxic algae, which occasionally turn water a blood-red color, are on the increase. Gnats and lice have been supplanted by deer ticks, which I'd argue are even worse, and there is no shortage of hail in season. Frog outbreaks may not have occurred since Pharaoh's time, but poisonous cane toads imported to Australia are now running amok there, decimating all manner of native animals. And currently, swarms of locusts are causing great hardship in Somalia, Ethiopia, and Kenya.

Here in the Northeast, we are blessedly free of the kind of swarm-feeding grasshoppers that continue to cause suffering in Africa. Nonetheless, locusts have become such a problem that in 2014 the New York State Department of Environmental Conservation (NYSDEC) declared the locust a Regulated Invasive Species, meaning it "cannot be knowingly introduced into a free-living state." In other words, locusts are only legal in an environment from which they can't escape.

As usual this is a deceptive opening, for which I sincerely do not apologize. In our neck of the woods, the locusts which concern the NYSDEC and other conservation groups are black locusts (*Robinia pseudoacacia*), trees having origins in the Central-Eastern US.

A member of the pea family, the black locust matures at 60-80 feet tall, and makes its own nitrogen supply by "fixing" atmospheric nitrogen via symbiotic soil bacteria on root nodules. This free fertilizer gives locusts an advantage on nutrient-poor sites. Additionally, they are experts at self-cloning through root suckers or sprouts, much like poplars do. Especially in poor soil, this can lead to near-monoculture locust groves. Locust gives itself yet another black eye by having sharp thorns able to slash clothing and skin.

By definition, an invasive species is from another ecosystem (typically overseas), is able to thrive and replace native competitors, and causes significant economic, ecological, or human-health effects. Examples like the emerald ash borer, Asian longhorned beetle, Japanese knotweed, and swallow-wort clearly fit that bill, causing billions in damage, but devoid of redeeming qualities.

I think it's wrong to paint all invasives with the same brush. For one thing, given that there are more than 400 invasive species in NY State alone, the bristles would wear out long before you could finish the job. It is curious that black locust, which by some accounts was spread from its native range 500 or more years ago, has only been dubbed invasive in the past decade or so. On prairies, and grassland bird habitats generally, it can indeed be a problem. However, there are many other locales where it is clearly beneficial, economically as well as ecologically.

Dr. Robert P. Barrett of Michigan State University, who has been researching black locust trees since 1978, writes that "…due to flavonoids in the heartwood, [black locust wood] can endure for over 100 years in the soil." Move over, redwood, which only lasts for 30 years. Rot-resistance is what makes the demand for locust fence posts far exceed the supply at this time.

This quality is the reason black locust was imported to Europe in the early 1600s. Over time, European foresters have done a superior job of selecting traits such as straight, uniform trunks, and today the best sources for good locust stock are said to be found in Hungary. European farmers quickly realized locust leaves were a valuable source of protein for ruminant livestock, and to this day it is used as such in Europe as well as in many Asian countries to which black locust was imported.

Writing for the Cornell Small Farms Program, Extension Specialist Steve Gabriel notes that beekeepers value the black locust. Its flowers are an important source of nectar for bees, and the resultant honey, sometimes called acacia honey, is much sought-after. Gabriel also writes that black locust is used as a "nurse crop" for walnut orchards because it puts nitrogen into the soil, and is not affected by the toxin released from walnut roots.

Another point is that black locust is ideal for reclaiming gravel pits, strip mines and other tough environments. In the conclusion of his 1990 paper "Black Locust: A Multi-purpose Tree Species for Temperate Climates," Dr. Barrett says "As one of the most adaptable and rapid-growing trees available for temperate climates, it will always be valued for erosion control and reforestation on difficult sites. Vast new forests of rapid-growing species may be needed to slow the accumulation of CO_2 in our atmosphere."

Not only does black locust grow quickly on impoverished sites, its wood has the highest heat value per volume of any tree in the Northeast. Wood-BTU charts seldom agree, probably due to variations in growing conditions from place to place which affect wood quality, but black locust is often rated at between 28 million and 29.7 million BTUs per cord. This puts it on par with, or slightly better than, hickory. Trials conducted by the Southern Forest Biomass Working Group found that of any tree species tested, black locust was the cheapest to grow and yielded the greatest heat value, with about 200 million BTUs per acre after five years.

Commercially, black locust is in high demand for mine timbers, railroad ties, boat-building, and for many applications where rot-resistance is important. According to wood-database.com, "Black Locust is a very hard and strong wood, competing with Hickory (*Carya* genus) as the strongest and stiffest domestic timber, but with more stability and rot resistance." The International Union for the Conservation of Nature considers it one of the most sustainable and ecologically-friendly sources of timber, and The National Wildlife Foundation says it is host to 57 species of butterflies and moths. All good reasons to strike locust from the list of plagues.

An ISA-Certified Arborist since 1996, ***Paul Hetzler*** *wanted to be a bear when he grew up, but failed the audition. Having gotten over much of his self-pity concerning that unfortunate event, he now writes essays about nature. His book* "Shady Characters: Plant Vampires, Caterpillar Soup, Leprechaun Trees and Other Hilarities of the Natural World," *is available on amazon.*

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My Experience with Black Locust in Central Wisconsin

by Joe Koehler

As a property owner trying to manage oak in Central Wisconsin I have found that black locust is truly one of the most difficult and expensive invasive species I have ever dealt with. Twenty years ago, there was virtually none in this area; and what little was no one paid much attention to. I became aware of it about ten years ago when a neighbor contacted me and pointed out a black locust stand near his house and asked if I could get rid of it.

My initial instinct was to sharpen my saws and start cutting. However, prior to starting I had a conversation with a forester friend of mine and after mentioning to him what I was about to do, he proceeded to give me a ten-minute education on what not to do in order to control this species. The most important thing was to NOT randomly cut it down without proper treatment. Ultimately, I walked away from that job because I had no interest in using chemicals on someone else's property. Instead I focused on learning more about the species and finding out how prevalent it had become in this area.

What I found was it was on every property surrounding our 120 acres and virtually everywhere I looked driving around this area. With it being that wide spread, it was likely it was already on our property but just not in plain

sight. I also found that cutting it without stump treatment worked in propagating new growth. For every tree that was cut, ten or more popped up with a vengeance. In the the same time I was learning about this, I found another neighbor who had been working with another forester to control it on his 40 acres approximately a mile away from us.

A clump of black locust takes hold in a central Wisconsin oak stand. Photo courtesy of Joe Koehler.

Because this neighbor was a very avid deer hunter and had seen how damaging black locust can be once it gets a strong foothold, he chose a very aggressive approach by cutting and using a basal spray treatment of Garlon4. Even using this method, black locust is so aggressive it requires a lot of due diligence in continuing the basal treatment in new growth each year. To date he has spent approximately $2000.00 over the past ten years in chemical cost not counting the many hours of cutting and spaying. As of last summer, it appears he has it pretty well under control but it is discouraging to stand on the property line and see what looks like a solid wall of black locust on his neighbor's property just itching to cross that line as soon as he turns his back.

Because most people in this area cannot afford to take this approach it's a safe assumption this will be an ongoing battle. I have another neighbor who takes a different approach and actually considers it a blessing to have it on his property. He cuts as many as he can when they reach six inch diameters, and sells them for fence posts. It also makes excellent firewood if you don't mind dealing with the thorns. If you don't have a stand of other trees you are trying to protect, this approach can be beneficial as you don't have to plant anything nor fertilize or water this crop. It just keeps growing and all you have to do is wait for it to become a field of new fence posts.

I eventually found it growing in a number of places on our property and decided to take yet a deferent approach, mainly because I prefer not to use chemicals and looking at a stand of dead locust trees didn't appeal to me. I borrowed a tree puller for my skid steer and did my best pulling out what I could find and just let them air dry and die a slow death lying next to my oaks. My forester didn't think my approach would work because some of the roots tend to break and he felt any remnant would then regrow into a new tree. I found the trees need to be at least an inch in diameter and preferably less than six inches to get a good pull when uprooting them. I am fortunate to have sandy soil so I've been capable of pulling some as big as eight inches in diameter. My experience after using this method for the past few years is that I can achieve about a ninety percent kill. What little I have seen come back, I keep an eye on and when it's big enough I will pull it. I have since bought my own tree puller and feel it will pay for itself in the long run.

I wish I had some advice for other property owners on how to control this without the expense that it entails but at this point there doesn't seem to be a cheap easy fix. If you choose to use chemicals to control it, work with a trusted forester from the DNR to stay on top of the best practices in stopping the spread before it takes hold. Wherever I have seen this species left uncontrolled it appears to become the dominant species. I will admit my approach may not be the best but it so far is working for me and hopefully something will be developed down the road that might be easier and more affordable.

Joe Koehler is a central Wisconsin woodland owner and a PIF and NWA board member.

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Paul Hetzler talks spring healthy eating, and weeding!

Nettles: Good to Eat, and for Keeping a Safe Distance

Paul Hetzler

One of my favorite plants is either highly versatile, or very confused. On the one hand, professional herbivores like rabbits and deer refuse to even touch it, but many people, myself included, will gladly eat it every day it is available. While contacting it is painful, it has been proven to relieve certain chronic pain. It is steeped in over a thousand years of folklore, at one point imbued with the power to cleanse away sin, yet medical science recognizes it as a legitimate remedy for many disorders. Some gardeners consider it a bothersome weed, but others actually cultivate it.

The stinging nettle, *Urtica dioica,* is native to Europe, Asia, and northern Africa but has been widespread throughout North America from northern Mexico to northern Canada for centuries. Experts disagree as to the number of nettle species and subspecies worldwide. To confuse matters, many of these cross with one another to form hybrids. Although a few species do not sting, if it's nettle and it gives you a rash, it's fair to call it stinging nettle.

Nettles sprout little hypodermic needles on stems, leaves, and even their flowers. Called trichomes, these glass-like silica-based needles inject a mixture of irritating chemicals upon contact. The cocktail varies by species, but usually includes histamine, 5-HTP, serotonin, formic acid and acetylcholine.

So why would one place this well-armed adversary in their mouth? Well, when nettles are cooked, the stinging hairs are destroyed. Furthermore, nettles are the tastiest cooked green, wild or domestic, that I have ever had. It tastes like chicken. Kidding. It tastes a lot like spinach, except sweeter. Nettles can be boiled, steamed, or stir-fried. They are great by themselves or in soups, omelets, pesto, casseroles, or pretty much any savory dish you can come up with.

One of the things I really like about nettles is that they are some of the first green things to get going after the snow melts. I should mention that only the tops of young plants are harvested to eat. The good thing is that the more you pick, the more young tops grow back. Eventually they will get too tall and tough, but frequent picking can stretch nettle season well into June.

On a dry-weight basis, nettles are higher in protein (about 15%) than almost any other leafy green vegetable. They are a good source of iron, potassium, calcium, and Vitamins A and C, and have a healthy ratio of Omega-3/ Omega-6 fatty acids. Because drying also neutralizes nettles' sting, they have been used as fodder for domestic animals. Today nettles are commonly fed to laying hens to improve their productivity.

The University of Maryland Medical Center reports that nettles help relieve symptoms, such as difficulty urinating, of Benign Prostatic Hyperplasia (BPH) in men. In terms of using pain to relieve pain, the U of M Medical Center also states that research "...suggests that some people find relief from joint pain by applying nettle leaf topically to the painful area. Other studies show that taking an oral extract of stinging nettle, along with nonsteroidal anti-inflammatory drugs (NSAIDs), allowed people to reduce their NSAID dose."

As The Cat in the Hat said, that is not all. You'd think the U of M was selling nettles the way they seem to promote them. Consider this endorsement: "One preliminary human study suggested that nettle capsules helped reduce sneezing and itching in people with hay fever. In another study, 57% of patients rated nettles as effective in relieving allergies, and 48% said that nettles were more effective than allergy medications they had used previously."

Gardeners use nettles as a "green manure" because they (nettles, that is—gardeners may be nitrogen-rich, but they're not routinely added to soil.) are high in nitrogen, as well as iron and manganese. Nettles can also help attract beneficial insects.

What can't you do with nettles? I guess they're kind of like Dr. Seuss' "thneed." Turns out you can wear them, too. Nettles have been used for 2,000 years as a source of fiber for cloth-making. During World War I, Germany used nettle fiber to make military uniforms. I have made cordage from nettle stems using a simple technique called reverse-wrapping.

If you have a nettle patch, spend some time picking healthful greens as spring arrives. One thing's for sure: When you're surrounded by nettles, you don't need to worry about social distancing!

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Looking outside our region; The Next Generation, in praise of their activism.

Another threat to the Monarch butterfly in their wintering grounds; a tale of hope for a young activist.

A story in *America* magazine pointed out the environmental consequences of social unrest. El Rosario is one of the four parcels making up the Monarch Butterfly Biosphere Reserve in Mexico, about 150 miles west of Mexico City. Corruption and unrest in the region have led to illegal logging and other abuses in the reserve. El Rosario is a communal land, worked by locals as a model of cooperation, they share in the work, profits as well as their love for the natural world and the importance of maintaining the Monarch butterfly.

Go'mez Gonza'laz became famous for his passionate defense of the reserve and his efforts to combat illegal logging in El Rosario. He was found murdered with local authorities first terming this an accident in an apparent attempt at cover up.

A younger Mr. Gomez, only age 19, is hoping to take on the task. But realizes the daunting challenges he faces in an area over run by organized crime and gang violence where murder is way too common. "There are a lot of risks in doing what my father did, no one has the capacity for community organizing he displayed" said the younger Gomez. "I want to do what my father did, but he knew everything. I just started to learn about the importance of the forest and the butterflies a few years ago". He sighed and said "It is a big responsibility, there is only one El Rosario".

Creighton University student activists.

Last November 86% of voting students supported a referendum encouraging Creighton University to divest its endowment portfolio of corporations linked only to fossil fuel extraction; this amounts to 10.6% of the school's portfolio. This action arose from an April 2018 action by over 200 students as they urged swift action on climate change. "Young people have become increasingly active in the climate justice arena, and are no longer willing to allow the older ruling class to decide their future", stated a University official. This could be a significant step if young people regroup on this 50th anniversary of Earth Day.

In Canada there is teenage Indigenous water activist Autumn Peltier who is shaking up the system. Autumn says she doesn't feel Canada's federal politicians are focused enough on the environment, even after years people campaigning for them to take action. The 16-year old, who hails from Wiikwemkoong First Nation on Manitoulin Island in northern Ontario, shared her dismay at their lack of attention toward the environment, while on a panel at the World Economic Forum. Peltier has spent her last eight years putting pressure on politicians to take climate change more seriously, while advocating for clean drinking water in Indigenous communities and serving as the chief water commissioner for the Anishinabek Nation, a political advocacy group for 40 First Nations across Ontario. She has urged the United Nations General Assembly to 'Warrior Up' and defend the future of the planet. "The leaders across the globe are focused on just money and we need to be more focused on the actual things going on around us," she said.

https://anishinabeknews.ca/2019/09/23/autumn-peltier-going-to-the-united-nations-to-share-her-message-about-water/

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Photos in this article:
Hans Schmitt

Habitat typing:

by Hans Schmitt, Schmitt Forestry

For many years, foresters have been habitat typing in an informal sort of way. We looked not only at the trees, but the smaller plants growing in an area to tell us something about the site. In the early 80's, John Kotar, professor of Forestry at UW-Madison, set out to quantify this previously informal book of knowledge. The result is habitat typing. To fully understand habitat typing we need to have at least some knowledge of forest succession and site.

Succession is how one biological community replaces another over time. Let's take the example of an old field used as pasture for dairy cows. It is no longer used for that purpose and has gone feral. Right now it's still mostly grasses with maybe a few scattered crab apples, a balsam or two and maybe even a couple big old shade trees. But as we move away, time wise, from the disturbance of grazing animals, the environment begins to change.

Perhaps in the absence of being eaten, certain species or types of grasses become more dominant on the site. They grow taller and denser, and in the process, they change the micro-environment at the soil surface. It has a bit more shade, cooler and more humid. These conditions may be favorable to other species of plants. Herbaceous and woody shrubs may take hold and spread throughout the site, again altering the micro-environment. All the while these plants are living, dying and decaying, they are further altering the soil itself. After this we may begin to see trees occupy the site. Typically, seral species often referred to as pioneers or early successional species colonize the site. In our area these are often aspen, black cherry, white birch, balsam, and if a seed source is available, oaks and pines. As this process continues the longer lived tree species replace the shorter lived pioneers until the full potential of the site is achieved. This endpoint of succession is referred to as a climax forest.

Site is the conglomeration of all the physical and environmental characteristics in a given area. It can be a small area or occupy large swathes of the landscape. Such factors as soil type and texture, bedrock, slope, aspect, average precipitation, past usage, etc. can all have effects on the site. For the purposes of habitat typing, we are mainly concerned with two factors; soil moisture and nutrient regimes. They range on a continuum from very dry/nutrient poor through very wet/nutrient rich and all the possible combinations in between.

What sort of climax forest develops and the time frame involved is a function of both the site and the degree of past disturbance. On very dry, sandy sites, jack pine might be both your pioneer species and a large part of the climax forest. This evolution would not take very long, maybe 30 or 40 years. On a moist but well drained, nutrient rich site, this evolution may take 200 years or more. Trees grow slowly and each stage or generation has to at least partially complete it's part in the development of the site for things to progress to a climax situation.

Smaller plants, however, grow and complete their life cycles much faster than trees. This means that following a disturbance, these small plant communities get back to a climax situation much faster than the forest as a whole. It is these plants and communities that Foresters key in on to evaluate the site. We are not looking for a single plant. There is no AH-HA moment. It is not a single plant species but rather a community of plants that tend to have a strong affinity for particular sites.

Using the Habitat Typing guide, working through a series of keys, foresters can determine the type in question. The guide then provides additional information about the type. Descriptions and forest types at differing successional stages allows the forester to make predictions about probable successional trends,

species composition, potential productivity and probable regeneration possibilities. This information can be used to guide silvicultural decisions and to provide landowners with options as they relate to the site, the stand and their objectives, both now and in the future.

The original Field Guide to Forest Habitat Types of Northern Wisconsin (Dept. of Forestry, UW-Madison and the WDNR; 1988) had about a dozen or so habitat types and was a very practical and widely used tool by field foresters. One could fairly quickly key in to the type, its characteristics and potential. Subsequently the typing system was refined to include more that 45 types. While this refinement is fine for research purposes, it rendered it far less useful to the field forester as a tool (sorry Dr. Kotar).

For those interested in giving it a try, I would suggest acquiring one of the earlier renditions of the guide as it is easier to use (try Amazon?). Furthermore, it requires that you become quite familiar with forest plants and how to use the dichotomous keys. The guide has a section on plant identification with photos, drawings and descriptions to help the user. I have always enjoyed habitat typing. It's a bit like going on a treasure hunt, map in hand, to see what you can find.

As you become better at habitat typing, you will find you become much more aware of even subtle changes in the forest. It might be slight changes in species composition, tree heights or changes in regeneration to name but a few. It will also help you to understand what these changes mean and, perhaps, why it's happening. One last thing to note, don't confuse a climax forest with an old growth forest. Most old growth forests represent the climax forest but a climax forest is not necessarily old growth. Happy (habitat) typing and keep your stick on the ice!

Hans Schmitt is a PIF member and a forester with decades working in all facets of forest management and forest products industry. He currently manages Schmitt Forestry and can be reached at schmitt.forestry@gmail.com or www.schmittforestry.com

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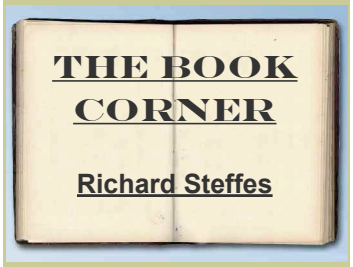

THE OVERSTORY

A novel by Richard Powers

I recommend this book, but with a qualification: The author clearly is a brilliant writer who weaves nine characters through a 500-page book with many threads. Interspersed are facts and information about trees, history and ecology that tie nature to the characters and their lives. The author creates a sort of mystic atmosphere about old growth forests and ecosystems. But some readers may find this element of the story somewhat forced, as I did. Thus the book may not please everyone, but is a fresh idea in story telling. I stand behind my recommendation though as this story teller will be read for generations to come due to sheer talent.

The nine main characters, introduced in the eight chapters, become inspired by events in their youth to truly love and respect nature and old growth forests. The forests are threatened by overharvest, betrayal of protected areas and other man-related destruction. Redwood giants and national forests play large roles in the story. There are interesting depictions of the creatures that live in the remote corners of old growth forests and in specific large trees. These depictions help the reader deal with some possibly over the top behaviors of the nine characters turned activists for forest preservation.

The last three chapters are better described as sections due to size and construction. There are personal successes as well as sudden tragedies. These events among the characters reflect, in a way, the transitions we all see in the natural world. While the setbacks are abrupt and devastating, the strong preservation principles of the characters endure.

One of the side stories in the book illustrates the multi-generational nature of the book, both for human and tree. Nicholas Hoel ends the book doing artistic depictions to show reverence by nature. The book starts with Jorgen Hoel, Nick's ancestor, newly arrived from Norway. Jorgen inadvertently finds chestnuts in a coat pocket when he arrives at his Iowa homestead. Jorgen's grandson, later running the farm, starts a practice of photographing the tree Jorgen planted each month on the 21st, from the same spot. The tree survives, due to its remote location far from other chestnut trees, for many years before succumbing to the blight. The descendants continue the photo taking, which results in a unique photo collection. The collection inspires the young artist to his activism.

The book does not conclude with an overall success of promoting better human stewardship of nature. Rather, it concludes that environmental activists will soldier on and that mankind will gradually learn to live in harmony with nature.

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We are fortunate to present Marianne's column on Forest Ethics, in cooperation with the Northern Logger magazine. This issue we hear about the logger. What are your concerns when we talk about ethics in forest management? How may ethics play in to our decisions as family forest owners? Transferring land to our heirs? Our intrinsic philosophy on conserving our forest land? Please share your thoughts and give Marianne an opportunity to weigh in.

THE FOREST ETHICIST

By Marianne Patinelli-Dubay

It is often difficult for loggers to take on full-time employees and to provide health benefits because it cuts into profits in an already thin-margins business. An employer is under no particular obligation to hire full-time versus contract employees though a shortage of full-time positions presents challenges for employers and employees alike. We wondered what folks in the field are saying about this. Below are my questions followed by a composite of what a few of you had to say in response.

Do loggers have a responsibility to hire full-time employees rather than independent contractors?

In a perfect world, yes, and ideally employees might also be unionized. But logging, like any business, is far from perfect and the financial pressure on owners often makes it impossible for them to offer permanent work. This can make it difficult to put a steady crew together, but you have to be able to do what's right for your business financially. The reality is that an extended mud season or a mill shutdown is all it takes for an operation to face bankruptcy, with this kind of uncertainty it can be impossible to provide full-time employment and benefits. The trouble is, what you're left with is simply to hope that nothing goes horribly wrong and that no one gets hurt. That's a gamble, given that logging is a dangerous job with a high death rate and odds are that accidents will happen. It's worth noting too that safety concerns in a conventional logging operation are different from mechanized logging which is safer, but much more expensive to get started. It's a Catch 22: you don't hear about injuries in mechanized crews and if they're running a bigger operation they may need to keep working despite weather and market conditions because they can't afford to shut down. Because of this, they're more likely to be able to afford full-time help, but very few can afford to get into the trade that way. There will always be a niche for small operators, but more and more in a lot of areas you have to be a mechanized operation to compete. This issue is a real challenge in the current market.

How do you differentiate between a full-time employee and an independent contractor?

It's not as simple as it may seem. On the one hand, if you're an independent contractor you're set up with a business that enables you to invoice for your time and services and you're likely to be

doing that for more than one job. For example some guys doing contract work might have their own equipment, so they can work one job and then move onto another one. If you're an employee then you're making a commitment to one outfit and that's your sole source of income. Still there are a lot of gray areas, like if you hire someone to run your equipment – that should be a clear cut employer-employee arrangement. But, if you hire someone to work on your job using their own equipment – that is typically considered contracting. The biggest issue usually comes down to liability and ultimately who is responsible for whom. As an employee the owner is responsible for employee safety and insurance. An independent contractor is responsible for themselves which is much cheaper for the employer and involves limited liability.

What are the drawbacks of relying on contract rather than full-time employees?
Holding onto long-term full-time employees is better for any business than relying on short-term independent contractors. For one thing if you're relying on a contract rather than a full-time employee it's understandable that loyalty is harder to come by, and you might find yourself at the mercy of a crew that is out on other jobs. In contrast, you can rely on a crew that's in your full-time employ.

What are loggers saying about the importance of health, retirement and workers compensation benefits?
Often good employees will take another job once they get a better offer, and good benefits are one of the biggest reasons people leave. Most jobs offer pay and benefits according to education and/or based on job hazard, but logging is an exception. It might be helpful for the industry to consider grades of employment, with higher wage and benefits for higher skill levels or based on the level of risk associated. Those of us who do this work understand the dangers and what we can expect in return; we do it because we like the work, not for good pay and pension.

As an employer it seems it would be beneficial in the long-term to offer better wages and benefits, but where might the money come from to pay for them?
For many professions it is as easy as simply raising the rates to accommodate pay and benefit packages. For loggers it's a matter of taking less profit to allow for higher wages. This sounds simple, but profit margins in the business are already thin. If you think about the income from a timber harvest like a pie, giving a bigger piece to the employee has to come out of what the land owner gets from the harvest. You have to figure it's going to cost the mill a set amount to make and move lumber, and those margins aren't much. Then the people doing the work have to be paid a living wage, preferably with health benefits and workers compensation, so one option might be that the landowner has to take less from the job. It's also worth noting that the money that a logger is receiving for logs and pulp these days isn't much more than what they'd have been making years ago when costs were a lot lower; the business hasn't kept up with inflation. And remember that it's

not just the cost of what you can pay your employees, but also the cost of starting up and what you laid out just to get in the game.

How do you see the future of logging?

The average age of a logger is about 54 years old. In order to keep this business going, that number needs to go down. Younger professionals would be attracted to the industry by better pay and benefits, and even then it's going to be a hard-sell unless they've got a family history in the trade. Still, it's not as likely as it once was considering you can do better somewhere else like as an equipment operator for a town where you have benefits, better pay and a better work/life balance. In contrast you've got some guys working 12-hour days just to make ends meet. It's a very expensive business to be in with high risk and minimal financial reward; those of us who are in it are just trying to hang on, to keep doing what we love.

You can send questions or topics like this that you would like us to focus on to Marianne Patinelli-Dubay at mpatinelli@esf.edu, by mail to SUNY-ESF's Newcomb Campus, 6312 State Route 28N, Newcomb, NY 12852 or by FAX at 518-582-2181.

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