"This institution is an equal opportunity provider."

Partners News

September 2018

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

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Landowner Cooperative

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PIF's Website:
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PIF Board

Joe Hovel
Jim Joyce
Joe Koehler
Charlie Mitchell
Margo Popovich
John Schwarzmann
Rod Sharka
Richard Steffes

Have you paid your PIF dues?

UPCOMING EVENTS
in APPRECIATE OUR COMMON LANDS SERIES

September 22; Fall color hike at Wildcat Falls, 1 PM Central time.

November 3; PIF annual gathering featuring noted conservationists Paul DeLong, Mike Dombeck, Ron Eckstein, John Schwarzmann, Paul Stearns and Dick Steffes. See story Page 2.

Inside this issue:

PARTNERS IN FORESTRY ANNUAL MEETING

to Highlight the Benefits of Land Conservation

This year's Partners in Forestry (PIF) Annual Gathering will take place on Saturday, November 3, with the theme "Appreciate Our Common Lands; A Hands-on Celebration of the Benefits of Forest Land Conservation". This topic was chosen to complement ongoing partnerships between PIF and the Northwoods Alliance and the UW Center for Cooperatives. The gathering will be held in Boulder Junction, WI.

The program's morning session will feature a forestry tour on the Northern Highland American Legion State Forest (NHAL), with emphasis on wildlife habitat and a discussion of the benefits of naturally occurring tip-mounds for forest regeneration. Featured leaders include DNR Wildlife Biologist (retired) Ron Eckstein, DNR NHAL ranger-forester Paul Stearns, and PIF VP John Schwarzmann, who is Forest Supervisor for the Wisconsin Board of Commissioners of Public Lands. We will car-pool to the forestry tour from the Big Bear Hideaway, located near downtown Boulder Junction, at 9:15 AM.

Lunch and the afternoon session will be held at the Big Bear Hideaway. Featured speakers are an esteemed panel of notable and deeply rooted conservation land managers. They include Paul DeLong, who was State Forester in Wisconsin from 2003 through 2016 and now represents the American Forest Foundation as Senior Vice President of Conservation. Paul is passionate about engaging the family forest owner with sustainable, conservation-based management. During Paul's career with WDNR he oversaw some of the most notable Forest Legacy projects accomplished in Wisconsin, as well as the expansion of the NHAL boundary in 2005.

The next notable speaker is Mike Dombeck, who was the Chief of the USFS from 1997-2001, after serving as acting Director of the Bureau of Land Management from 1994-1997. Dr. Dombeck has a background in aquatic ecology, and early in his career he was instrumental in bringing water quality issues to the forefront of forest management while serving in the Upper Peninsula. Today, we recognize these guidelines as Best Management Practices. Mike later served as Professor of Global Conservation at UW Stevens Point and directs the Smith Fellowship, which guides post-doctorate students with innovative ideas in natural resources. Interestingly, it was during Mike's time at the USFS when the Forest Legacy program made roots.

The third panel member is PIF board member Dick Steffes. Dick served the people of Wisconsin as real estate specialist with DNR, retiring in 2013. Since then Dick has made several trips to Washington DC to advocate for the Land and Water Conservation Fund, and he guides conservation projects through his company American Acquisitions LLC. During his career with DNR Dick negotiated most of the Forest Legacy projects benefiting Wisconsin, as well as steering the Stewardship Fund to fulfillment in fee-simple purchases. Some of these include projects in the expanded NHAL.

"We are very fortunate to have this deep quality of conservation specialists for our program, for the benefit of our members and the public at large, and we appreciate our ongoing support of these quality programs from the UW Center for Cooperatives," said PIF director Joe Hovel.

PIF hosts these programs to bring sustainable, conservation-based forestry to the forefront. Any one with an interest in natural resources is welcome, and all questions concerning conservation, sustainable forestry and natural resource management are encouraged. PIF hopes to attract younger folks to this mission and especially encourages their participation.

Please contact us for more information and to register in advance for this informative day. Phone: (715) 479-8528; email: logcabin@nnex.net.

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WISCONSIN COVERTS PROJECT

By: Joel DeAngelo

In August I attended a workshop at the Kemp Natural Resources Station in Woodruff, Wisconsin entitled "A Woodland Wildlife Management Program for Private Landowners". If you have a passion for your land and you enjoy wildlife, then this is a program that you must find the time to attend.

We learned that in Wisconsin there are approximately 525 species of wildlife including mammals, birds, reptiles and amphibians. Even if you only own 10 acres of land, there is a good chance that you have at least 200 of these animals using your property at some point during the year. They all need food, water, shelter and space and we are the stewards of their habitat.

Our speakers were wildlife and forestry professionals who shared an enthusiasm for the wildlife and their habitat. Wildlife biologists spoke about ruffed grouse & woodcock, large carnivores, songbirds, small mammals, amphibians and reptiles. Other topics included the principles of wildlife management, how to conduct a successful timber sale, private lands and forest certification, managing invasive species, and dealing with wildlife damage.

What added to the enjoyment of the program was the three field tours:

On the first tour we traveled by bus with three wildlife biologists who took us to 5 different locations in the Northern Highlands American Legion State Forest. Each stop was a different type of forest which illustrated the effects of different types of logging cuts over the last 2 to 20 years. At each stop we discussed what kind of wildlife might prefer this type of habitat and what we might do as a next step in managing this type of forest.

The second tour was a walk through a forested area of the Kemp Center bordering a wetlands area. There we learned how to take a wildlife

ATTENDEES AT KEMP CENTER FIREPIT

inventory of our property through live trapping, animal footprints and the use of trail cameras. We were also taught a method for identifying birds by sight and sound. We actually caught a flying squirrel along with other animals that were examined, tallied and released. As a side note, if you are interested in legacy planning this is an amazing way to get your kids or grandkids engaged in your land.

The third tour was a walk through a property owned by a couple who are Coverts Cooperators that have been managing their property for the past 20 years with an emphasis on grouse habitat. This was a great example of how to utilize a forestry plan on 400 acres with an emphasis on wildlife. There where towering white pines and wetlands with staggered cutting of clear and select cuts. While the income from their cuts were important to them, the focus of their plan was on wildlife habitat.

Most sessions of the workshop were conducted in the new Connor Forestry Center which I've enclosed a picture of. Three of our sessions were outside conducted around a campfire after dinner. Our group photo that I enclosed shows the attendees along with some of the presenters at the fire pit. The building in the center behind us is the kitchen and eating area. Because we had perfect weather we ate most of our meals outside at the picnic tables. The building behind us to the right is the Lodge that most of the attendees stayed at.

The Kemp Center facilities are a beautiful rustic setting on 235 acres on the shores of Lake Tomahawk. The workshop is free. Lodging, meals and materials are paid for by the sponsors. Applications for 2019 will be available early next year. Plan now to set aside time next August for a 4 day weekend that is an incredible experience. For more information about the Wisconsin Coverts Project program go to their website at http://fwe.wisc.edu/coverts. For more information about the Kemp Natural Resource Station facilities go to their website at http://www.kemp.wisc.edu. For questions you can contact Jamie Nack the project coordinator. All of her contact information is on the Coverts' website. If you have any questions that I can answer as an attendee, please feel free to contact me at joeldeangelo@yahoo.com.

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 FEATURED AT THE 50TH ANNIVERSARY CELEBRATION OF LUMBERJACK RC&D COUNCIL, INC.

Rod Sharka

On August 16th, Joe Hovel and Rod Sharka had the honor of being invited to give a presentation to an audience of about 60 people at the Lumberjack RC& D's 50th anniversary celebration. Our presentation was listed under the title: "Partners in Forestry - A Project Success Story", and we were asked to speak about what Partners in Forestry COOP. (PIF) has been up to since its origin in 2001. The dinner celebration was held at the impressive Cedric A. Vig Outdoor Classroom & Lumberjack funded trails in Rhinelander, WI. Many of our more recent members may not realize it, but our COOP was originally supported by a grant awarded by Lumberjack RC&D, and it turns out that PIF is the longest running Lumberjack supported COOP still in existence.

For those not familiar, Lumberjack RC&D Council, Inc., is a multi-county, non-profit serving 9 counties in NE Wisconsin. Its mission is to enhance area natural resources, promote a higher standard of living and improve the quality of life for area citizens by fostering partnerships between public and private sectors and strategically investing in area natural resources. Their motto is "Sustainable Resources for Vibrant Communities."

Not only was Lumberjack instrumental in PIF's beginnings, but it also serves as the fiscal agent for the Wisconsin Headwaters Invasive Partnership (WHIP) to which PIF is a signed, MOU partner and Rod has been a serving as a steering committee member since its creation. Many members may recall the terrestrial invasive species survey and control service that WHIP provided on over 3400 acres of our member owned private forest lands a few years ago.

During our presentation, Joe and I reviewed the many PIF accomplishments, from the Local Lumber Use Law to the array of land conservation projects we were instrumental in achieving. I think the audience was impressed with all of the accomplishments that PIF has had over the years. Joe and I would like to extend our thanks to Lumberjack for their support of PIF, as well as all of the other worthwhile projects to which they provide assistance.

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"Appreciate Our Common Lands: A Hands-On Celebration of the Benefits of Forest Land Conservation"

Guido Rahr Sr. Tenderfoot Forest Reserve Trip
By C.S. Mason

August 25th arrived wet, foggy, and cool, but the drizzly weather couldn't stop 22 intrepid souls who had in mind a paddle across a couple of spectacularly beautiful lakes and a hike through old growth forest. Partners in Forestry, in cooperation with Northwoods Alliance and the University of Wisconsin Center for Cooperatives, organized and led this paddle and hike to the Tenderfoot Reserve in the continuing series. The Nature Conservancy (TNC) owns the *Guido Rahr Sr. Tenderfoot Forest Reserve* of 971 acres of minimally disturbed forest land along nearly four miles of undeveloped shoreline on Tenderfoot, Roach, and Mirror Lakes and contains over 500 acres of old-growth hemlock forest. The only public access to the reserve is by water approximately 3 miles across Palmer Lake and the stream connecting it to Roach Lake. Leaders of the trip included well-known local naturalist and author John Bates, and former USFS Chief Michael Dombeck. Rod Sharka planned and organized the trip.

"Tenderfoot Reserve is a critical link in a network of public and private lands that make up the Border Lakes Area, which spans about 24,000 acres in Vilas County. The area harbors white pine up to 400 years old and includes wetlands, spring-fed ponds, many wild lakes and streams," according to TNC. "The Border Lakes Areas is also the headwaters of the Presque Isle and Ontonagon Rivers. The Tenderfoot property contributes surface and ground water to both rivers, whose watersheds cover more than 1.25 million acres in Wisconsin and Michigan." The preserve is named in honor of Guido Rahr, Sr., who served on the Wisconsin Conservation Commission for 23 years and whose family had owned and cared for the land for more than 120 years. Rahr's leadership and business experience made the Wisconsin's Conservation Department one of the most outstanding wildlife agencies in the region.

Discussions on the characteristics and values of old growth forest happened all along the trip – canoe to canoe—kayak to kayak—and on the hiking trail and at Mirror Lake where everyone enjoyed a welcome break and lunch. Spirits were high among the group of like-minded and like-hearted participants who all share a passion for valuing and preserving these old-growth remnants that somehow escaped the great logging era.

"So many birds and wildlife depend on the 'random chaos' of old growth forests from standing old trees to dying and dead trees on the ground," John Bates explained. "Attributes of a woody habitat provide 32 species of cavity nesters and 30 plus ground nesting birds with places to fledge their young. This wild forest provides perch sites and singing sites for warblers and thrushes, and cover for some kinds of bats. Pileated woodpeckers and chickadees depend on the dead trees." Old growth trees are a rarity with only about 72,000 acres left in the entire Midwest, and there is not one square mile of old growth left in Wisconsin.

Mike Dombeck, retired USFS Chief, shared that the "historical old growth reminds us how small we are and that they provide the 'genetic bank' for future trees and forests." He also stressed the importance of forests in water quality that "the cleanest water comes off forested landscapes." Agriculture is tough on topsoil and degrades water, so preservation and conservation of old growth forests is vital to water. He also stressed the importance of keeping children connected to the forests and wilderness citing the iconic book by Richard Loews Last Child in the Woods: Saving

Our Children from Nature Deficit Disorder. Loews documents how decreased exposure of children to nature in American society harms children and society.

The hike to Mirror Lake revealed some encouraging signs of a healthy, sustainable forest in seeing many young hemlocks from seedlings to 5-6-7 feet tall. These trees were growing and somehow protected from deer browse that devastates new growth in forests. Two nearby wolf packs may be the saving grace of this forest as they keep deer moving and away from some areas. Also noted were many varieties of mushrooms, lungwort on yellow birch trees, turtlehead plants, arrowroot in bloom, abundant jewelweed and, and a bard owl chiming his opinions in to the discussions on stewardship.

Bob Simeone shared his experience working in Peru on forest conservation and the value, benefits, and success of the Forest Stewardship Council (FSC) whose mission is to promote environmentally sound, socially beneficial and economically prosperous management of the world's forests. Their vision is that they can meet current needs for forest products without compromising the health of the world's forests for future generations. FSC has established a set of 10 principles and 57 criteria that apply to FSC-certified forests around the world. Visit the FSC site at http://us.fsc.org.

All of the wonderful input and contributions of participants helped all to a better understanding of old growth, sustainable forestry and the benefits of forest land conservation. Northwoods Alliance also shared information about Wildcat Falls Community Forest Project-- a pristine, 160-acre old growth forest saved by a group of conservationists. Several seasonal events are planned throughout the year with the first outing on September 22; a "Color Hike" starting at 1 p.m. More information and directions to Wildcat Falls can be found at www.northwoodalliance.org.

Stewardship of our forests in the future will not be dependent on government and organizations but on education to reach and receive goals and on the local level – which may be small—acre by acre. Our group was a little quieter on the paddle back and many of us were deep in thought about what the future may hold for these unique, amazing, life-giving old growth forests.

Mike Dombeck

Photo courtesy of Carol Mason-Sherril

Photo courtesy of Carol Mason-Sherrill

Photo courtesy of Rod Sharka

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MOSQUITO NIGHTMARES

Paul Hetzler, Cornell Extension

Although much of our summer was a lot drier than normal in many places, which resulted in a temporary lull in the mosquito population, the little ear-whiners seem to be making up for lost time now that they have gotten some rain. The evenings have been replete with blood suckers in the past couple of weeks. Really all it takes is one mosquito in the room to spoil a night's sleep. I'm convinced their ear-buzzing is meant to raise our blood pressure so they fill up faster. Makes you wish you could return the favor somehow.

Well if they actually slept, there is something that might keep them up at night: The Mosquito Monster! Or rather, the monster mosquito, *Psorophora ciliata.* In addition to terrorizing campers and picnickers, this hulking menace, two to three times the size of most mosquitoes, regularly dines on its smaller kin.

The cannibalism only happens in the larval stage, but still, when *Psorophora ciliata* touches down, I like to imagine that even full-grown mosquitoes back away slowly. It would be comparable to having an eighteen-foot tall biker cut the line at the deli. You'd back down, from her, right? (Remember that all those winged vampires are females—the males are strict vegans who eat flower nectar.)

Not only is it big—more than 2.5 centimetres long, and possessing a 1.5 cm. wingspan—this native 'skeeter is aggressive, and delivers a unusually painful bite. Through the years the monster mosquito has engendered more than a few nicknames, most of which are not fit to print. Dubbed the "gallinipper," or "shaggy-legged gallinipper" because of its fuzzy or appearance, *Psorophora ciliata* was described in 1897 by naturalist David Flanery in the journal *Nature* as "…the shyest, slyest, meanest and most venomous of them all."

Depending on environmental conditions and species, mosquitoes live between a week and a few months, but during that time a single fertile female can potentially spawn thousands of progeny. It is important to limit standing water on our properties to help control mosquitoes. They can breed in just a few millilitres of even the filthiest water. Change pets' water often, and clean their dish every time, as mosquito eggs stick to the inside of containers. The same goes for birdbaths or kiddie pools.

If there is one "nice" thing you could say about *Psorophora ciliata*, it is that it does not transmit disease, as far as anyone knows. There are roughly 60-70 species of mosquitoes in this region, and just a few of them can carry diseases such as West Nile virus, eastern equine encephalitis, or Zika virus.

Another plus, of sorts, is that the shaggy-legged gallinipper has never become very numerous. In fact, raising *Psorophora ciliata* was once proposed as a method of keeping the populations of disease-carrying mosquitoes in check, but no one could figure out how to produce enough gallinippers to create an effective control.

Whatever the reason they don't breed like flies, we should all be grateful we're not overrun by monster mosquitoes.

As a follow up to our pollinator features in the last issue, you will find this story interesting.

BT is long considered very safe and is used in organic food production; however as you read on we discover just how delicate the balance of nature can be.

Examining Threats to Monarch Butterfly Migration

by Richard Gast, Cornell Extension (retired)

The monarch butterfly may be the most recognized butterfly in the world. With the exception of the Polar Regions, the medium-size butterflies can be found on every continent on Earth.

Their spectacular migration in eastern North America, from breeding locations in Canada and the United States to overwintering sites in Mexico, is nothing short of a miracle and has been the subject of decades of study.

Monarchs have four life stages; egg, larva (caterpillar), pupa, and adult (butterfly). The search for milkweed, the only food that monarch larvae eat, is the sole reason for the annual monarch migration.

This is the time of year when monarchs are here, laying their eggs upon the leaves of milkweed plants growing in meadows and fields and along roadsides and rights-of-way. The eggs hatch in 4 or 5 days. Newly-hatched caterpillars grow through 4 larval instars, each time shedding a skin that they've outgrown. Before shedding their skin for the fifth and final time, they fasten themselves to twigs and leaves by a sticky, silk-like thread. The green pupae that emerge hang there for 10-15 days, during which time the pupal casings harden, forming the chrysalises from which the adult monarch butterflies emerge.

With the coming of cool fall temperatures and shorter days, the last generation of adult monarchs born here and across much of the northern United States and southern Canada will set out for overwintering sites in stands of Oyamel fir growing high in the mountain forests of central Mexico; 2000 miles away. The entire eastern population will arrive there in late November; so many of them that the combined flapping of their wings creates a clear and constant sound. There they wait for the coming of spring, when they again take flight; this time headed for the Gulf coast states to breed, lay their eggs, and die.

The brood hatched in the southern states will migrate northward, breeding along the way. They arrive here, and at other locations at the northern extreme of their range, beginning in early summer and the cycle starts again.

Milkweed was abundant in much of the United States and Canada. But, as the name indicates, it's considered by most to be a weed and, as such, mowed down or eliminated with chemical herbicides. It's also being eradicated inadvertently as fields and meadows are replaced with housing, parking lots, shopping malls, and industrial centers. Such efficient suppression of milkweed has long been considered the greatest threat to the survival of eastern North American monarchs.

Anurag Agrawal disagrees. The Cornell University professor of ecology and evolutionary biology (James A. Perkins Professor of Environmental Studies) and senior author of a paper titled "Linking the Continental Migratory Cycle of the Monarch Butterfly to Understand Its Population Decline,"

published April 4, 2016 in the journal Oikos, believes "lack of milkweed … is unlikely to be driving the monarch's population decline, as the problem appears to occur after they take flight in the fall." Milkweed is not a food source for adult butterflies during their southern migration in autumn.

Agrawal and the scientist/co-authors of the paper: lead author Hidetoshi Inamine, a graduate student in the field of ecology and evolutionary biology at the time; Stephen P. Ellner, Horace White Professor of Ecology and Evolutionary Biology; and James P. Springer of the North American Butterfly Association hypothesize that the real threats to monarch populations are a scarcity of autumnal nectar sources, weather, and habitat fragmentation. Their research was funded by Cornell's Atkinson Center for a Sustainable Future.

While at Cornell Cooperative Extension, I became aware of ongoing public concern about the risk that Bt corn might present to monarchs. Bt corn is bioengineered with a gene from the soil bacterium Bacillus thuringiensis, which is toxic to European corn borer caterpillars, a significant crop pest, but shown to have no effect on many 'non-target' organisms (e.g. honeybees, ladybugs).

Bt corn is, however, toxic to monarch butterfly larvae. But monarchs don't eat corn. The danger is from exposure to Bt corn pollen, which contains crystalline endotoxin from the bacterium genes. When the pollen is dispersed by the wind, it lands on other plants, including milkweed.

A collaborative research effort across the U.S. corn belt and Ontario (University of Guelph), coordinated by the U.S. Department of Agriculture's Agricultural Research Service, specifically addressed the impact of Bt pollen on monarch butterfly and other caterpillar species. The studies showed that monarch caterpillars have to be exposed to pollen levels greater than 1,000 grains/cm2 to show toxic effects. Caterpillars were found to be present on milkweed during the one to two weeks that pollen is shed by corn, but corn pollen levels on milkweed leaves were found to average only about 170 grains/cm2, posing only a negligible threat.

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READERS' COMMENTS:

We always enjoy member feed back. Let us hear from you! These short comments give us the energy to keep going!

- Congratulations on all you have done re: the Pilgrim River Forest Project! You continue to amaze me with all the good things you accomplish. L M

- You do outstanding quality work! Thank you. R M

- Grateful for your work! Thank you! D&C S

FUTURE ARTICLES

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

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With our ongoing discussion of Lyme Disease and the rate at which it is spreading across the landscape, we need to be aware of looming threats.

This story talks about the Bush tick or Asian Long Horn tick now in the northeastern US. We truly appreciate our ongoing relationship with Paul, he goes a long way to help PIF.

NEW TICK SPECIES SPREADING

Paul Hetzler, Cornell Extension

Years ago I read an author interview, and although I don't recall her name, one of the images she raised has stayed with me. It's not an exact quote, but she said something to the effect that writing ought to feel to an author as if they were water skiing behind their work, not towing it upstream like a barge. In general, I find this to be the case. The hours or days of research which go into an article are hardly exhilarating, but the wave-jumping that comes after shrinking those pages of facts into 800 words makes it worth the effort.

However, when I tried to water-ski behind a brand-new invasive tick that can reproduce without mating, drain the blood out of livestock, and potentially carry ten or more human diseases, including one similar to Ebola, something changed. A few topics whip across the water at high speed. Most at least pull me at a leisurely pace. This one made me drop the whole water skiing idea and swim for my life. Turns out there is a limit to how many miles you can get out of happy imagery. And to how long a writer should be be allowed to spend alone in a room with the same metaphor.

The invasive species, *Haemaphysalis longicornis*, is commonly called the bush tick, Asian longhorned tick, or simply the longhorned tick, which is confusing since a number of invasive wood-boring beetles also bear the name "longhorned." Native to parts of Central and East Asia, as well as to Fiji, New Zealand, Australia, Hawaii and other Pacific islands, it was first identified in North America in November 2017 in Hunterdon County, New Jersey. A lone pet Icelandic sheep had been critically weakened from blood loss due to the estimated thousand longhorned ticks which were found attached.

How the tick arrived in New Jersey remains a mystery, since the sheep had reportedly never been off the manicured, upscale property, but birds sometimes give ticks free air miles. Within a few months, authorities had confirmed it in several other states, and as of August 2018, it is believed to be in nine states total, including New York, where it has been found in Westchester County. While US Customs officials had occasionally found the longhorned tick on quarantined animals as long ago as 1969, this is the first time it has been found in the wild in North America. Given how far it has already spread, experts believe it has been here several years, perhaps as far back as 2013.

It is fairly nondescript, being light to dark brown, and lacking any visible "longhorns," which can only be seen under magnification. It is also tiny, roughly the same size as the blacklegged or deer tick, and only half as big as a dog or wood tick. It is more rounded in outline than the deer tick,

though, and a bit more textured. A Texas A&M University fact sheet offers these helpful details: "**H. longicornus** has a 5:5 apical hypostomal dentition, and with palp article 3 each possessing an elevated dorso-median spur." On second thought, a web search is a better bet.

To be fair to the longhorned tick—which is more than it deserves—at this time, it is not yet known to carry human pathogens here on this continent. In its home range it does transmit several species of *Borrelia* spirochete bacteria known to cause Lyme disease, as well pathogens which cause Babesiosis, spotted-fever rickettsia, Erlichiosis, Anaplasmosis, Khasan virus, Powassan virus and at least two other types of tick-borne encephalitis. A relatively new illness with symptoms like those of Ebola, called "severe fever with thrombocytopenia syndrome" or SFTS, is also carried by the longhorned tick in its native area.

Another "good" point is that humans to not appear to be one of its primary hosts. In the wild it prefers rodents and other small mammals, in addition to deer, bear, canines and hares. In domestic herds it travels fast, and can overwhelm and kill young livestock, and those weakened by internal parasites or other stressors. Female ticks reproduce without mating, laying about 2,000 eggs each after a blood meal. All the ticks which hatch out are females as well, a reproductive strategy known as parthenogenesis. Apparently, longhorned ticks may even have more than one generation per year.

The fact that female longhorned ticks can churn out young without the fuss of Tinder or Craigslist to find a guy may give them an edge on population growth, but it also makes them vulnerable. The high degree of genetic variation which comes with sexual reproduction is what helps organisms adapt to change. Since longhorned ticks hail from a temperate climate, an extreme cold snap such as February 2013's "polar vortex" might decimate their numbers without selecting for cold-hardiness in the species.

The public is advised to continue with precautions they already use against deer ticks, especially the use of DEET (20% or stronger) on exposed skin, and the use of permethrin-treated clothes and gear. Since all ticks are ferried by rodents throughout rural, urban and suburban landscapes alike, using tick tubes such as the Damminix brand can be effective in reducing tick populations greatly. Pets should be treated for ticks from April through December, and during unseasonably warm winters too. For help identifying ticks found on humans, contact your nearest Health Department or Extension office.

It is no fun writing about bad news, but there are times when knowing is important. Spend time outdoors often, but keep your eyes peeled, and clothing, exposed skin, and pets treated appropriately. And water ski as much as possible—it remains a tick-free activity.

Here is a link to a great story about forest fragmentation, Wall Street, Invasive Species and Lyme Disease! Also to be on PIF website under Forest Habitat.
https://slate.com/technology/2018/08/lyme-disease-how-i-came-to-blame-wall-street-for-my-illness.html

More than ever this summer we have heard from a number of folks being treated for Lyme Disease. The prevalence of tick borne infections is growing across the landscape. Here we look at a link. We do not want Lyme Disease to keep people from enjoying their woodlands.

In reading a research paper from Peter W. Rand, MD, Co-Director Vector-borne Disease Laboratory Maine Medical Center Research Institute; we print only the summation line. In our discussion of deer densities, it seems apparent that much more than forest health is at play. This is likely the reason Dr. Paul Curtis from Cornell states that deer numbers over 6 per square mile are a threat to human health.

Relationship of tick density to deer

To summarize, a unique study revealing 90% reduction in questing ticks following the complete and permanent extirpation of deer from an offshore island has demonstrated the quintessential role of this host in the maintenance of deer tick populations. In addition, mainland transect surveys have demonstrated a strong, positive relationship between deer presence and tick abundance, with few infected ticks found below deer densities of approximately 15 deer/mi2.

Because the abundance of ticks is directly related to the abundance of deer, herd reduction represents an extremely important and effective method to reduce the risk of Lyme disease, particularly in populated areas where deer ticks are established and local ordinances and posted properties allow deer herds to burgeon.

Respectfully submitted,
Peter W. Rand, MD

And yet another insight into this issue! From The National Institute for Health:

The relationship between deer density, tick abundance, and human cases of Lyme disease in a residential community.

National Institute for Health, Kilpatrick HJ, LaBonte AM, Stafford KC.

White-tailed deer (Odocoileus virginianus Zimmerman), serve as the primary host for the adult blacklegged tick (Ixodes scapularis Say), the vector for Lyme disease, human babesiosis, and human granulocytic anaplasmosis. Our objective was to evaluate the degree of association between deer density, tick abundance, and human cases of Lyme disease in one Connecticut community over a 13-yr period. We surveyed 90-98% of all permanent residents in the community six times from 1995 to 2008 to document resident's exposure to tick-related disease and frequency and abundance of deer observations. After hunts were initiated, number and frequency of deer observations in the community were greatly reduced as were resident-reported cases of Lyme disease.

Number of resident-reported cases of Lyme disease per 100 households was strongly correlated to deer density in the community. Reducing deer density below 5 deer per square kilometer resulted in a 76% reduction in tick abundance, 70% reduction in the entomological risk index, *and 80% reduction* in resident-reported cases of Lyme disease in the community from before to after a hunt was initiated.

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Some Trees
By John Ashbury

These are amazing: each
Joining a neighbor, as though speech
Were a still performance
Arranging by chance

To meet as far this morning
From the world as agreeing
With it, you and I
Are suddenly what the trees try

To tell us we are:
That their merely being there
Means something; that soon
We may touch, love, explain.

And glad not to have invented
Some comeliness, we are surrounded:
A silence already filled with noises,
A canvas on which emerges

A chorus of smiles, a winter morning.
Place in a puzzling light, and moving,
Our days put on such reticence
These accents seem their own defense

THE FIRST SHALL NOT LAST

Paul Hetzler, Cornell University Extension

Seems like competitiveness may be a part of human DNA. But it does not always pay to be first.

No prize awaits the fastest car that passes a radar patrol, or the first person to come down with the flu at the office. And for trees, the first ones to turn color in autumn are not envied by their peers. If trees experience envy, which no one knows. The first trees to show orange and red and drop their leaves are telling us to get quotes from a tree-removal company, because they are not going to last.

The reason that some trees turn color ahead of their compatriots has to do with their balance sheets. Trees are meticulous accountants, and tend to be good savers that never live beyond their means. When it's no longer profitable to operate, they start closing down for the season.

Each spring, deciduous trees take money out of the bank—starches out of trunk and root tissues—and invest in a huge solar-powered sugar factory, known as leaves. After paying for its annual complement of leaves, a

tree's costs for the season are nighttime respiration, in addition to as-needed maintenance such as chemical responses to insect feeding, pathogen incursion, or injury. Its income is the form of sugars it makes from water, carbon dioxide and sunlight via photosynthesis.

As summer wanes, the longer nights drive up costs (respiration), while the shorter days bring down income. Eventually, a tree reaches a point where it only breaks even, and it closes shop for the season. However, trees that are under stress for one reason or another have a hard time procuring the raw materials for their business. If nutrients are missing, if roots are burned by salt, physically damaged or find it hard to breathe properly due to soil compaction, or if uptake and transport of water is reduced, that makes their sugar factory inefficient. They cannot earn as much, and are less profitable overall.

Yard and street trees, for example, experience high soil temperatures, restricted root zones, intense competition from turfgrass, and other conditions that make it tough to get water. If road salt is deposited in the root area, this exacerbates the problem. Trees with waterfront homes have other challenges: fluctuating water levels tax their root systems, and those soils tend to be nutrient-poor. Such trees will reach the break-even point earlier than healthy trees, and they will close their doors early to avoid losing money, thus triggering color change.

We know that orange (carotenes) and yellow (xanthophylls) colors are already present within the leaves, masked by green chlorophyll. Trees begin to make a waxy compound to block off water and nutrients to their leaves, which is the equivalent to winterizing a camp or boat. It avoids winter damage. as the leaves are thus choked off, chlorophyll dies and yellow and orange are revealed. Red (anthocyanins) is a different story. It is manufactured in the fall by some species, maples in particular, at significant cost. Science has yet to come up with a plausible explanation for this. Probably, enjoying the color show is far more important than figuring out why red happens in fall.

Sometimes you'll see a bright-colored branch on a mainly green tree, which means business is good overall except for that "branch office." In these cases, it is a particular major root which is in trouble. It's not always the root directly below the early-color branch, because vascular systems may spiral.

Whenever you see a tree hanging a "See You Next Year" sign earlier than others, you can be sure it's facing severe stress and is taking the most prudent action. Our prudent response would be to choose a replacement tree, and plan to remove the early bird. And to remember that first is not always best when we are tempted to cut a queue.

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Think Globally -- How Big Forests Solve Global Problems, *please see the story on the importance of large forested areas to the ecosystem. This story highlights the necessity of the Amazon rain forest to our well being.*

By Thomas E. Lovejoy and John Reid
Mr. Reid has pioneered the use of economic insights to conserve forests and other ecosystems globally. Mr. Lovejoy has worked in the Amazon (the largest tropical forest) since 1965.

View this at www.partnersinforestry.com under the Conservation section.

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BITS AND PIECES

More on the Glyphosate controversy!
Less than a week after a jury found Monsanto liable in a $289 million-dollar-cancer verdict, independent lab tests commissioned by the Environmental Working Group (EWG) report large doses of glyphosate in cereal for kids, oat bars and other oat-based products.

EWG turned to Eurofins, a nationally recognized lab with extensive experience testing for chemicals. This testing involved measuring the amount of glyphosate found in popular products containing oats.

In a new book by Bethany McLean, stating that Americas next financial crisis looms under ground, claims are made that the fracking boom which brought us recent cheap oil is not sustainable. 'Some of fracking's biggest skeptics are on Wall Street. They argue that the industry's financial foundation is unstable: Frackers haven't proven that they can make money. "The industry has a very bad history of money going into it and never coming out," says the hedge fund manager Jim Chanos, who founded one of the world's largest short-selling hedge funds. The 60 biggest exploration and production firms are not generating enough cash from their operations to cover their operating and capital expenses.'

Note from a land owner in Montello area
Montello is a soggy, sorry mess today. More rain this weekend. We're told there's no such thing as climate change, so just bad karma, I guess.

An observation: crazy weather.....climate change or bad karma?
Multi millions of dollars damage in the Houghton area on Fathers Day, in August western Dane County flooded and the following week central Wisconsin flooded with this link tracking a confirmed 16 tornados in late August. https://www.weather.gov/mkx/aug2818

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WILDCAT FALLS' STORY

By C.S. Mason

Every person has a story—tales of their lives, their experiences, and relationships. Some lives are filled with exhilaration and great accomplishments. Some lives are filled with tragedy and sadness. Most lives are a combination of both and all are a narrative of living life, struggling to survive, and making sense of it all.

This is also true of the land with its forests, water, and wildlife. Many things impact land—time, weather, man. Wildcat Falls' story is the struggle for survival of its beautiful diversity of habitat with each part joining another to be an environment of forest, water, and wildlife. Each part sings its own song, bringing into the landscape the harmony of voices of the wilderness, creating a symphony of peace and purpose.

Wildcat Falls, a unique and beautiful 160 acres, was originally part of the Ottawa National Forest in the Upper Peninsula. This parcel boasts old growth forest of hemlock, white pine, and cedar where the abundance of wildlife is astounding with over 40 bird species and counting, and bobcat, fox, bear, wolf and fisher. The falls, aptly named, for the elusive bobcat frequently seen there, meanders into Scott & Howe Creek, and even sustains an artesian spring. Native wildflowers of several species of orchids, ferns, and various flora are found in the different habitats. Vernal pools, seep springs, a wetland, and beaver pond are host to many aquatic species including mayflies and caddisflies, while the granite rock outcropping is perfect bat hibernacula.

The property had been part of the Ottawa National Forest until 2016 but was traded away in a controversial land swap that lagged for several years with legal litigation following U.S. Forest Service administrative appeals. The Forest Service exchanged 240 acres of Ottawa National Forest land for 420 acres of cut-over acreage near the Porcupine Mountains with a private individual, which was perhaps beneficial for the larger scope of the US Forest but was not for the community of people who love and know this property.

A public protest and outcry against this land trade ensued. For generations Wildcat Falls made memories--stories of first dates and hiking with parents who are now gone...memories that now were threatened with loss of the property and change from the community's access to a fragmented landscape of no trespass. All of the concern, protest, letters, phone calls and meetings were ignored, and the trade went through much to the community's dismay.

In a positive turn of events following the 2016 land swap, a conservation-minded partnership in the Northwoods Alliance' network negotiated and purchased the Wildcat Falls property from the new owner and requested assistance in procuring a permanent, publicly beneficial conservation solution. Northwoods Alliance is a nonprofit conservation group and public charity spearheading the fundraising efforts to develop Wildcat Falls as a community forest through the USFS State and Private Forestry Community Forest and Open Space Conservation Program, other grants, and community gifts. The grants can match up to 50 percent of acquisition value, making local fundraising critical to achieve the goal.

Partners in support of the effort include the Copper Country Chapter of Trout Unlimited, Friends of Sylvania, Jack Parker Associates, Keweenaw Land Trust, Partners in Forestry Co-op, and The Wilderness Society, as well as the Upper Peninsula Environmental Coalition, which recently approved a $10,000 award.

The Community Forest concept is an opportunity to develop and enhance appreciation, respect, and sustainable use of forest resources while also protecting and preserving old growth forest, wildlife habitat, and lakes, streams, and waterfalls. Involvement of the greater community through input and guidance with the management, activities, and land use will benefit future generations and will result in the conservation and protection of this diverse and pristine land.

Another chapter is being written in Wildcat Falls' story. This story is encouraging and hope-filled with the commitment of individuals and conservation groups. This chapter of Wildcat Falls has an unequivocal ending of conservation, protection, and provision for the wildlife, woods, and water to live in peace and harmony, as it always should have been from the beginning.

*Several outings to Wildcat Falls will be hosted this year to highlight the natural features this project will protect. A "Fall Color Hike" is planned for September 22nd at 1 p.m. with other outings to be decided throughout the year — "Wildcat Falls throughout the Seasons". Everyone is welcome to help create and enjoy their community forest—Wildcat Falls!

(cut here)
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Wildcat Falls
Making It Your Community Forest

I want to help support Northwoods Alliance in their work to make Wildcat Falls Community Forest a reality by donating:

$25_____ $50_____ $75_____ $100_____ $_____

Name_____

Address_____

State_____ Zip_____

Phone_____ email_____

You will receive a receipt for your personal tax records for charitable contributions. Northwoods Alliance, Inc. is a 501C-3 organization and 509(a)2 public charity. Contact us at www.northwoodalliance.org and www.partnersinforestry.com

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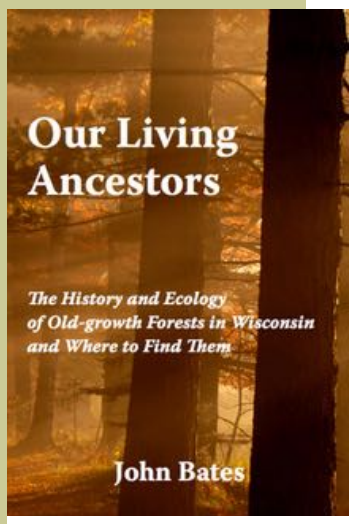

Our Living Ancestors: The History and Ecology of Old-Growth Forests in Wisconsin (and Where to Find Them)

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.

"*Our Living Ancestors* is a remarkable blend of the beauty, history and ecology of Wisconsin's 16 million acres of forest. This book should be required reading for all who depend upon and care about our amazing forests."
Michael Dombeck, PhD, Chief Emeritus, U.S. Forest Service

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Joan Maloof, Founder and Director of the Old-Growth Forest Network

"The book is a veritable goldmine of information . . . There is simply no better book written on these topics for a wide audience."
Robert T. Leverett, co-founder, The Native Tree Society; co-author, *The Sierra Club Guide to Ancient Forests of the Northeast*

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