



# Partners News

August 2016

*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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715-479-8528

**PIF's Website:**

[www.partnersinforesy.com](http://www.partnersinforesy.com)

### PIF Board

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

Have you paid your  
PIF dues?

## WELCOME NEW PIF MEMBER(S)

LANCE POWALISZ

HANS SCHMITT, SCHMITT FORESTRY

SHAWN GRAFF, AMERICAN BIRD CONSERVANCY

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Received from Gathering Waters: Wisconsin's Alliance for Land Trusts, July 26, 2016

Joe and fellow PIF members,  
Congratulations! I remember when Rod Nilsestuen came to Joe and Mary's log home some years ago to talk about working forests and farms. Rod was a great conservationist and it's fitting that Joe and PIF receive the GW award named after him.  
Dan

**Congrats Joe - You certainly deserve all the credit for all that you have done and accomplished! Great job! My thanks for your continuing work. My very best to you, Larry**

The results are in...

Dear Joe,

We're always inspired by the nominations we receive for our annual Land Conservation Leadership Awards. This year is no exception! Check out these impressive 2016 award winners:

- [Land Trust of the Year](#) - Northeast Wisconsin Land Trust
- [Conservationist of the Year](#) - Ron Endres
- [Policymaker of the Year](#) - Kevin Shafer
- [Harold "Bud" Jordahl Lifetime Achievement Award](#) - Bill Lunney
- [Rod Nilsestuen Award for Working Lands Preservation](#) - Partners in Forestry Cooperative

These annual awards recognize the outstanding accomplishments of individuals, policymakers, and land trusts who are working to protect the places that make Wisconsin special.

Traditionally, these awards have been presented at our annual Land Conservation Leadership Awards Celebration. **This year, the awards will be presented to honorees at local events around the state throughout the summer and fall.** Stay tuned for more details.

All the best,



Mike Carlson  
Executive Director

## PARTNERS IN FORESTRY COOP RECEIVES STATEWIDE RECOGNITION FOR CONSERVATION OF WORKING FOREST LANDS

Partners in Forestry Cooperative (PIF) has been awarded a statewide recognition for their conservation efforts in the Northwoods of Wisconsin and the Upper Peninsula. This leadership award, from Gathering Waters: Wisconsin's Alliance for Land Trusts, is named after the late (former) DATCP Secretary Rod Nilsestuen, and fitting as PIF benefited from an ongoing working relationship with the Secretary that included a working lands meeting with him in Vilas County in 2008.

PIF is a sustainable forestry landowner cooperative, now in its 16<sup>th</sup> year. Early board members founded the co-op with the understanding that sustainable forestry requires *conservation* to remain truly sustainable. "We are very grateful for this recognition by our peers at the state level" stated PIF Director Joe Hovel of Conover, "We have partnered with federal and state agencies, local land trusts and conservation groups, but the core of the co-op remains the landowners who care about the future of their resource. We have eagerly worked with landowners on land conservation projects and careful forest management across the Northwood region."

PIF's most notable achievement to date may be steering the protection of over 4000 acres of working forest land and riparian habitat in Vilas County, which culminated recently with the Upper Wisconsin River Legacy Forest. This achievement was a result of coordinating at least 10 different projects with land owners who had very unique wishes, needs and concerns, and differing timelines. PIF also has an impressive record in the Upper Peninsula, coordinating the conservation of more than 1800 acres of valuable forest habitat. In both states, most of this acreage is also permanently available for non-motorized public recreation.

"Our land conservation efforts have protected not only forests, but also our highly valuable Northwoods water resources, including very special lake shoreline, river corridors and wetlands," said retired biologist and PIF Treasurer Rod Sharka of Land O Lakes. PIF has long maintained that land conservation is not only about forest economics, but involves a vast array of ecological, social and intrinsic values which benefit society as well. PIF's land conservation projects with high ecological value were a solid fit for federal and state programs like the Knowles-Nelson Stewardship Fund and the Land and Water Conservation Fund, and demonstrate the value of these programs to this area and its citizens.

"The PIF board of directors has many decades of experience in natural resource matters, including forestry, land management, real estate, and conservation, and we are proud that the co-op is poised to continue this tradition of conservation in our invaluable Northwoods," concluded Hovel.

Hovel can be reached at 715-479-8528, [logcabin@nnex.net](mailto:logcabin@nnex.net)

See [www.partnersinforesstry.com](http://www.partnersinforesstry.com) for details on PIF.

### **Have you checked out PIF's website? [www.partnersinforesstry.com](http://www.partnersinforesstry.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.

**TEXT OF JOE'S WXPB INTERVIEW CONCERNING  
THE GATHERING WATERS AWARD**

We are grateful to be recognized for our efforts in conserving forest land, but this is more a celebration of the future, of maintaining some of the resources around us.

We often talk of the intertwined multiple benefits of land conservation.

*Economic;*

The timber industry, with larger forestry equipment, maintaining large forest tracts is essential.

For tourism, folks do not visit the north to see development, the attraction is forests and water.

*Social;*

Recreation, hunting, fishing, hiking, the time with family and friends in the woods or on the water.

*Environmental;*

Land conservation contributes to clean air, clean water, habitat for flora and fauna, the open space.

*Intrinsic;*

The aesthetics, the sheer beauty of nature and all the things within that we likely will never understand.

We often say that 'sustainable forestry without conservation is not long sustainable'. All the parcelization in this area demonstrates that statement as fact.

It is truly gratifying to see these great programs, the Knowles Nelson Stewardship Fund and the Land and Water Conservation Fund, alive and directly benefiting our communities.

We did garner attention a few months ago, with our success in the Upper Wisconsin River Legacy Forest, which assures public access on 1042 acres and over 2 miles of shoreline near the headwaters. That project was one of several notable successes we are proud of in the border area, as well as substantial success in the UP as well.

Our board has decades of experience in resource management, including forestry, biology and real estate. Together we share a common vision of the benefits of these conservation actions to society.

**Pilgrim River Watershed Project**  
 Sustainable Forestry - Habitat and Pristine Water Protection - Non-motorized Public Enjoyment

Please call for information!

Local contact: **Cowenaw Land Trust**  
 989-482-0820

Management questions:  
**Forestry in Forests**  
 989-470-9528

Your community conservation interests at work:



Photo by Rod Sharka

PIF actions creating the Upper Wisconsin River Legacy Forest have protected the home of *this* rare Spruce Grouse.



Photo by Rachel Hovel

In the UP of Michigan, PIF actions are instrumental in protecting 1700 acres and over 3 miles of the Pilgrim River. This effort gained federal funding under the Community Forest Program and the Forest Legacy Program and is a passionate community project.



10.30.2010

Photo by Margo Popovich

Not only was this new home built with local materials from the PIF network, but the surrounding 60 acres is under a Conservation Easement with the Northwoods Land Trust because of PIF action. PIF is proud this project protects the border of the Sylvania Wilderness on the state line. (Article featured in May 2011 PIF Newsletter, Popoviches Preserve Their Land for Prosperity by Charlie Mitchell)

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## SAVE THE DATE!

Partners in Forestry 2016 Annual Meeting and Program  
November 5, 2016 in Boulder Junction, WI

### PROPERTY RIGHTS!

We all hear, time and time again, the term “property rights”. Legislation is often passed because of property rights. All land owners are concerned with their property rights. If we give or sell an easement, be it for conservation or access, we alter our property rights. New legislation is often pro Emminent Domain, which can be a tremendous detriment to our property rights.

What are the parameters of our property rights? What are the values of our individual property rights? What rights are insured with our title insurance? What are the limits of our title insurance? What is Emminent Domain? Can a corporation seize our property for utility easements? If I give a neighbor an access easement, what do I lose? If I sell or donate a conservation easement, how are those values determined?

There are no limits to our questions of this continually unfolding and complex discussion. If you are a land owner, if you have questions, if you have a story to share, or if you are simply interested, please be part of this important discussion.

The many decades of experience in land management, real estate and conservation available from the PIF Board will be enhanced by our two special guests. Roy D Antonio owns and manages Associated and Guardian Title Companies in Ironwood MI, insuring properties in both Wisconsin and Michigan. James Botsford is a Wausau area lawyer who is currently involved in a North Dakota Supreme Court case. His family was sued by Enbridge under eminent domain, for not allowing the Sandpiper Pipeline across their family farm.

Keep this date open and stay tuned for further details.

As a service to PIF members, contact Joe for special pricing in your needs for:

- Napoleon wood stoves
- wood finishes and preservatives
- garden and tree amendments
- grass seed for trails
- Tool handles, replacement handles



*The following story explains very well why organizations like PIF are so vital to the future landscape. We thank Sarah Butler, a Research Fellow at the Family Forest Research Center of the University of Massachusetts for offering and contributing this feature for our area. PIF has had many activities, and made many efforts to engage forest owners. With an aging population and transfers of land it can be a struggle. But as you read else where in this issue of Partners News, there are at times recognition for our work.*

## **Wisconsin and the upper peninsula of Michigan Family Forest Owners Rule! Survey highlights the challenges they face**

If we are interested in the conservation of the forests and woods of the United States, we must be interested in those who control its fate: the forest and woodland owners. Woodland owners make decisions related to land use and forest management that impact the forest and woodland resources that are described throughout the rest of this article, and these decisions influence the wealth of benefits these forests and woodlands provide, from timber supply to water supply to carbon sequestration to wildlife habitat.

Forests, woods, and trees – oh my. Which words we use to describe forests and woods can be important when relating to landowners. The forestry community often gets tangled up in definitions, and different groups use different terms to refer to the same thing. Most “family forest owners” do not own “forests” and indeed many of them are not even “families.” We define wooded land or woodlands as woods, woodlots, timberland, and forests. Families include individuals, joint ownerships, such as a husband and wife or other family members or friends, family partnerships, family LLCs or LLPs, and family trusts or estates. Because this definition can include more than just individuals, we refer to these as woodland ownerships instead of owners. In the article below, we discuss “family forest owners” as “woodland ownerships”.

The USDA Forest Service, Forest Inventory and Analysis program, through the Family Forest Research Center (FFRC; [www.familyforestresearchcenter.org](http://www.familyforestresearchcenter.org)), conducts the National Woodland Owner Survey (NWOS; [www.fia.fs.fed.us/nwos/](http://www.fia.fs.fed.us/nwos/)) to better understand: who owns the woodlands, why they own it, what they have done with it, and what do they intend to do with it. The results presented below are based on responses from 383 randomly selected woodland ownerships with 10+ acres in Wisconsin and the upper peninsula of Michigan that participated in the NWOS between 2011 and 2013.

### **Family Forest Owners Dominate!**

An estimated 8.8 million acres of woodland 10+ acres in Wisconsin and the upper peninsula of Michigan are owned by an estimated 182,000 families, individuals, trusts, estates, and woodland partnerships, collectively referred to as woodland ownerships.

### **Size of Holdings Makes a Big Difference**

The average woodland ownership in Wisconsin and the upper peninsula of Michigan has 49 acres of wooded land. 53 percent of the ownerships have relatively small holdings between 1-9 acres, but 92% of the woodland area is owned by ownerships with 10 acres or more. This is important because size of holdings constrains what an ownership can do with her/his land, such as timber harvesting, wildfire protection, or control of invasive species. This is also important because size of holdings is a strong predictor of many ownership characteristics, such as woodland management practices.

### **The Future, Beauty, Wildlife, and Nature are What Matter**

The most commonly cited reasons for owning woodland in Wisconsin and the upper peninsula of Michigan are related to beauty and wildlife, as well as privacy the wooded land provides and nature and water protection. The goal of passing land onto future generations is also important to many owners. Hunting and recreation are also highly regarded as an important reason for owning woodland in Wisconsin and the upper peninsula of Michigan. Financial objectives, such as land investment and timber production, are important to far fewer woodland owners.

### **They Love Their Land, but they are not Engaging**

Most woodland owners in Wisconsin and the upper peninsula of Michigan have a deep, deep love of their land – “they’re not making any more of it.” The vast majority of owners, 96%, agreed or strongly agreed with the statement “I want my wooded land to stay wooded.” But most are not involved in traditional woodland management practices – only 24% of woodland ownerships have a written management plan and only 22% have received woodland management advice in the previous five years.

### **They are Old(er)**

The average age of woodland owners in Wisconsin and the upper peninsula of Michigan is 61 years with 23% of the woodland owned by people who are at least 65 years of age. Many acres of woodland will soon pass on to the next generation, but many ownerships, 74%, are worried about keeping the land intact for future generations.

### **Conclusions**

People interested in woodland conservation must also be interested in those who own the woodland. Across Wisconsin and the upper peninsula of Michigan, families and individuals own a significant number of acres, and this land has great potential for conservation. Owners are engaged with their land, but not in many of the traditional “forestry” activities –

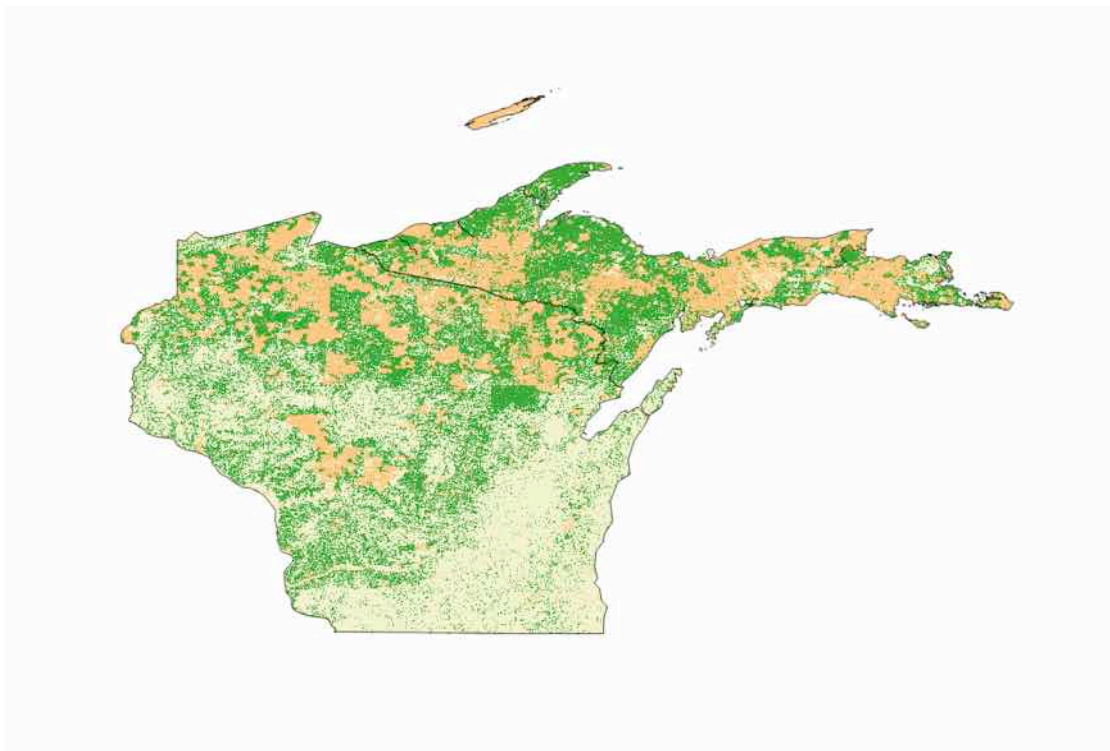


there is a general disconnect between forestry and woodland owners that, if bridged, could have a major impact on the woodlands of these states and the people that own them. Be it wildfire, inter-generational transfer of land, or invasive species, understanding the threats to the land and the concerns of those who own and influence this resource is critical for woodland conservation efforts. Using a common language and designing policies and programs that meet the needs of owners and practitioners will have a major impact on the current and future owners and the vital lands that they own.

### Additional Information

For more results from this survey, visit the U.S. Forest Service's National Woodland Owner Survey website at [www.fia.fs.fed.us/nwos](http://www.fia.fs.fed.us/nwos).

To learn more about the services and resources available to woodland and forest owners in your state, contact your local forestry agency or association (<http://www.familyforestresearchcenter.org/landowners/>).



Private (■) and public (■) forest land across Wisconsin and the upper peninsula of Michigan. Source: Hewes, J.H., Butler, B.J., Liknes, G.C., Nelson, M.D., and Snyder, S.A. 2014. Public and private forest ownership in the conterminous United States: Distribution of six ownership types – geospatial database. USDA Forest Service, Northern Research Station: RDS-2014-0002.

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## BASSWOOD BEST FOR WOODEN BASS

Paul Hetzler  
*Natural Resources Educator*  
*Cornell University Extension*

Having received my first pocket knife at age eight, I wasted no time in launching my career as a famous sculptor. How hard could it be, I thought, and gathered a pile of two-by-four lumber scrap ends which to carve. Thinking I should warm up before producing a Remington-inspired bucking bronco, I set about to make a fish.

Fresh from a rigorous Sharp Object Safety Class (“Always cut away from yourself, son. Alright, have fun.”), I was careful with the blade. However, that lumber was tough and knotty, and after a while my hand started bleeding. Thus I learned about blisters. As they healed, I lowered my sights from carving to whittling sticks into mere shavings for no good reason, a skill to which I remain well-suited.

It's no surprise I tried to carve a fish. I was familiar with perch and bullhead and bass. If only I'd been familiar with basswood, and the idea that there's a difference between softwood, which is wood produced by conifers, and soft wood. Dimensional lumber like two-by-fours comes from softwood, which is soft enough to drive a nail through without splitting, but may not readily yield to a blade.

Soft wood, on the other hand, often comes from deciduous “hardwood” species, and is too soft for use as structural lumber. Poplars and willows are soft-wooded, but for carving, basswood is tops. Not only is the wood soft, it's also consistent across grain and resists checking, or cracking.

Basswood, also known as American linden, *Tilia* (its genus) or lime (go figure, right?), is a fast-growing native tree that prefers deep rich soils where it attains heights of 80-100 feet. Presumably named for the striped pattern of its bark, basswood has broad heart-shaped leaves with double-serrated margins, and its small round seeds are and dry and grayish. Basswood's exceptionally fragrant flowers are sought by honey bees, and harvested both casually and commercially for herbal teas and sleep-aid supplements. (Look on the ingredients list for *Tilia* or lime blossom.)

While it's an obscure claim to fame, basswood is one of the best materials for making fire by friction. This is not as mysterious or difficult as it sounds—with a little practice you can start a fire in a minute or two



Basswood trees. Photo by Rod Sharka

with a bow drill and a dry basswood spindle and fire board.

Equally obscure, but just as fun and probably more useful is the fact that basswood's inner bark is the strongest plant-based fiber in our region. The bark peels readily in spring and early summer. It's then soaked 3-5 days until the inner bark separates into thin flexible strips. These can be braided and/ or reverse-wrapped into rope and string. It's something you can do while chatting or watching a movie, much like knitting. I've made basswood ropes over a hundred feet long, and it never felt like work.

I haven't taken a stab—so to speak—at carving in some time. I love seeing the exquisite detail in many basswood carvings, such as the song birds wrought by “The Bird Lady of Pierrepont,” Hazel Tyrell, in whose house I now live. If only some of her artistic ability, or at least inspiration, would rub off on me.



Basswood leaves. Photo by Rod Sharka

Please consider sharing your experiences and interesting observations with us for the newsletter.

### More on Basswood, Linden, Tilia (sources were too numerous for this information)

Basswood, also known as American Linden is a large native North American tree that can grow more than 80 feet tall. In addition to being a majestic tree in the landscape, basswood is a soft, light wood and prized for hand carvings and making baskets. Not of high value for pulp wood or construction lumber. Native American basswood is found on rich, wet soils of the central and eastern United States. In the landscape, is a very beautiful tree with a majestic oval canopy mounted on a tall, straight trunk. Mid-summer brings abundant clusters of aromatic, yellow blooms which attract bees who make a prized honey - the tree is often fondly called the honey or bee tree.

The scientific name of basswood is *Tilia americana* and is pronounced TILL-ee-uh uh-mair-ih-KAY-nuh. Common names include American basswood, American linden and bee-tree and the tree is a member of the plant family Tiliaceae. Basswood grows in USDA hardiness zones 3 through 8 and is native to North America, east of the Missouri River. Fast growing, it is a perfect shade tree and can be used as a residential street tree.

Pests of Basswood include; Insects: aphids are notorious pests on basswood but will not kill a healthy tree. Aphids produce a sticky substance called "honeydew" which then introduces a dark sooty mold that will cover objects under the tree including parked vehicles and lawn furniture. Other attacking insects include bark borers, walnut lace bug, Basswood leaf miner, scales and Linden mite can all be troublesome problems. Disease: Leaf rust is a major defoliator of basswood but some cultivars are resistant. Other diseases that infect basswood are Anthracnose, canker, leaf spots, powdery mildew, and verticillium wilt.

Individual crown forms of Linden are consistent with an oval to pyramidal canopy shape. Crown density is tight and the tree's growth rate is medium to rapid, depending on the site condition. Basswood branches droop as the tree grows and may benefit from pruning. If you have regular walking and vehicular traffic, a pruning may need to be done for clearance beneath the canopy. The tree form is not particularly showy but maintains a pleasing symmetry best grown with one single trunk to maturity.

Leaf arrangement: alternate. Leaf type: simple. Leaf margin: serrate. Leaf shape: cordate; ovate. Leaf type and persistence: deciduous.

Leaf blade length: 4 to 8 inches. Leaf color: green. Fall color: yellow but not dramatic.

The native American basswood grows best on moist, fertile soils where those soils are somewhat acid or slightly alkaline. The tree likes to grow in full sun or partial shade and is more shade-tolerant than oaks and hickories. The leaves will show some wilting and scorching after a long dry season, but the tree appears fine the following year. The tree is often found growing along creeks and streams but will take short periods of drought. The trees favorite habitat is on moist sites.

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## **PARTNERS IN FORESTRY PEER PROGRAM**

In the winter of 2015 Joe and Mark Hovel met with a team of DNR Foresters and UW Extension representatives. The meeting discussed the 'Woodland Advocate Program,' which is essentially what PIF has referred to as our peer program. In essence if you do not have a Stewardship Plan, and if you are not in the Managed Forest, PIF would like to help you get a plan with a DNR Forester. Contact us for a visit by a peer, who can help you learn a little more about your woodland and help engage a Forester for a Stewardship Plan.

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## DEER DENSITY

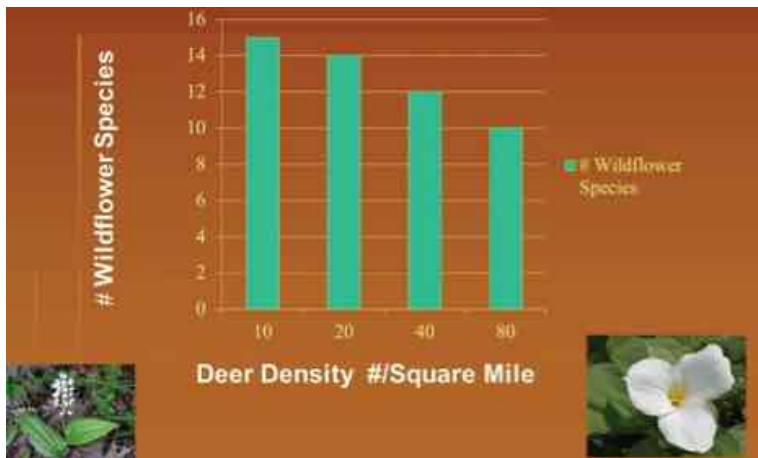
It is truly a pleasure to present the following research segments from Dr. Paul Curtis, Cornell University Dept. of Natural Resources. For several months now Paul Hetzler from Cornell Extension has contributed his great writing and recently put us in contact with Dr. Curtis, who has also been anxious to help us. We appreciate this affiliation with these folks from Cornell University, they have certainly been an asset to Partners News. Thanks to Rachel Hovel PhD. from the University of Washington for selecting these items. For more of Dr. Curtis' presentation see the PIF website.

Whitetail deer are an important keystone herbivore for Northwoods ecosystems, but their adaptable habitat requirements allow them to become highly habituated to humans and exceed historic densities and their habitat carrying capacity. Intense deer herbivory can have multiple detrimental impacts on forested ecosystems. In this article, we present some selected figures from a presentation entitled "Impact of Deer on Northeast Forests and Strategies for Management" by Dr. Curtis, to introduce some research on the impacts of high deer densities on temperate forests.

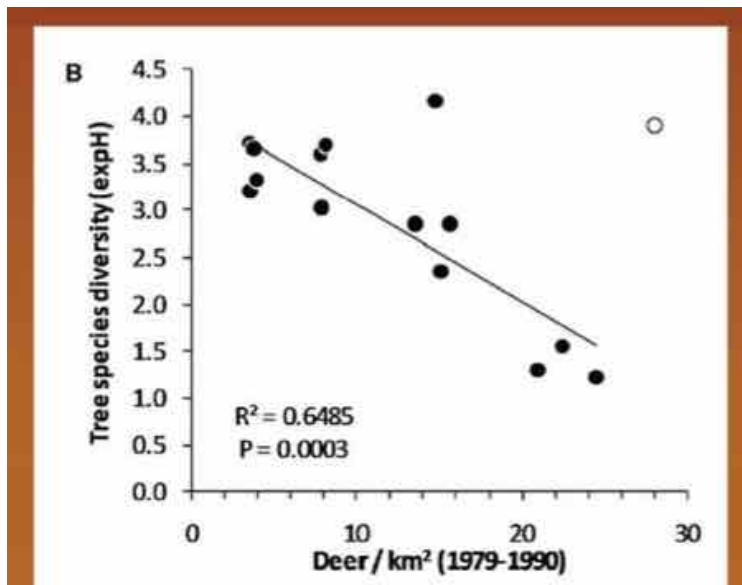
Especially when occurring in high abundance, whitetail deer can strongly shape ecosystems (Côté et al. 2004). Deer herbivory can shape the structure of forests by reducing ground vegetation and browsing on limbs, especially at heights that are above winter snow level and below grazing height for deer. They also modify plant diversity and abundance by targeting select species. Many of the prevalent trees and shrubs in the Wisconsin and Michigan Northwoods are preferred forage base for whitetail deer.

High Preference Species	Low Preference Species
Red maple ( <i>Acer rubrum</i> )	American beech ( <i>Fagus grandifolia</i> )
Sugar maple ( <i>Acer saccharum</i> )	Hop hornbeam ( <i>Ostrya virginiana</i> )
White ash ( <i>Fraxinus americana</i> )	Striped maple ( <i>Acer pensylvanicum</i> )
Aspen ( <i>Populus spp.</i> )	White pine ( <i>Pinus strobus</i> )
Oak ( <i>Quercus spp.</i> )	Red pine ( <i>Pinus resinosa</i> )
Basswood ( <i>Tilia americana</i> )	Spruce ( <i>Picea spp.</i> )
Eastern hemlock ( <i>Tsuga canadensis</i> )	American hornbeam ( <i>Carpinus carolinensis</i> )
Birch ( <i>Betula spp.</i> )	Black cherry ( <i>Prunus serotina</i> )
Maple-leaf viburnum ( <i>Viburnum acerifolium</i> )	
Red elderberry ( <i>Sambucus racemosa</i> )	
Blackberry and raspberry ( <i>Rubus spp.</i> )	

Multiple studies have shown deer to impact the viability and species richness (the number of unique species observed in a surveyed area) of wildflowers (e.g. Waser et al.), and, as shown in this figure, richness declines with increasing deer density.



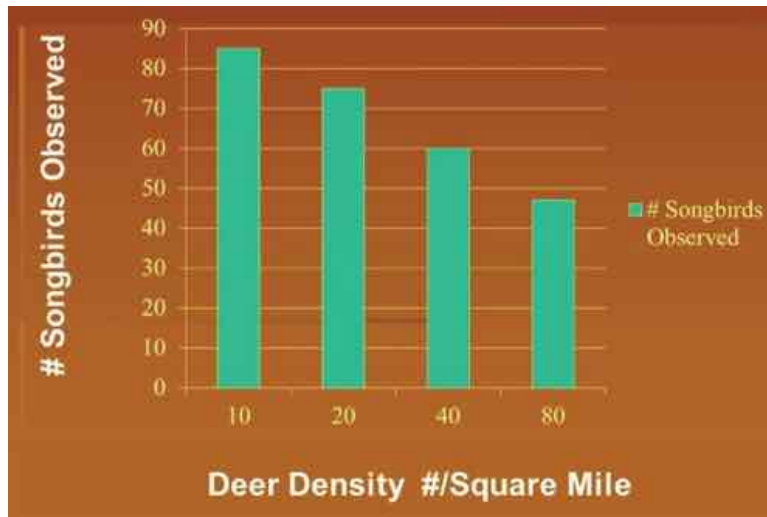
For some species, deer browsing pressure may be strong enough to cause localized or regional plant extinctions (e.g. McGraw and Furedi 2005). A long-term study in Pennsylvania manipulated deer densities in experimental plots (Nuttall et al. 2014), and found that this pattern also persists for longer-lived plant and trees; species diversity declines as deer density increases.



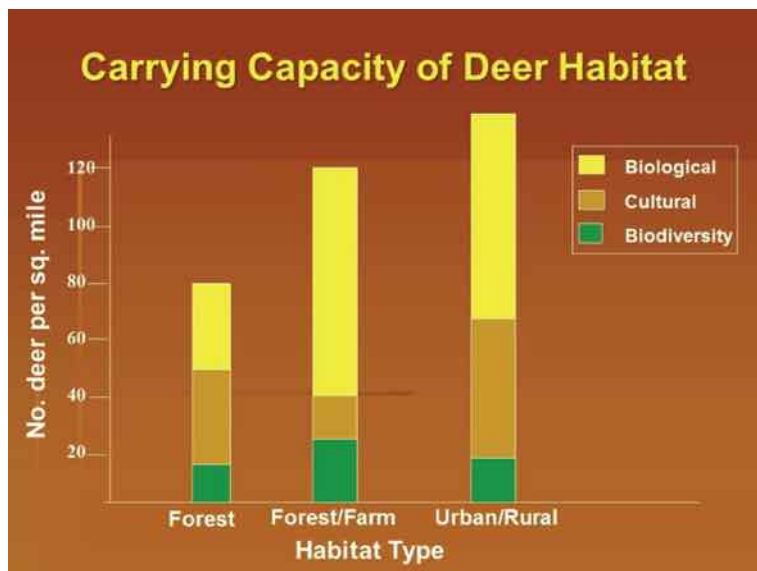
Loss of flora diversity can facilitate establishment of non-native species, favor grazing-tolerant native species and simplify the plant community, and even shift the forests to habitat that favors undesirable animals such as ticks.

Deer grazing modifies habitat for other wildlife in northern forests, including mobile species such as songbirds. The number of songbirds declines with increasing deer density in forests from Pennsylvania to British Columbia, Canada, due to changes in forest structure and tree and plant diversity and represented species (deCalesta 1994; Allombert et al. 2005).



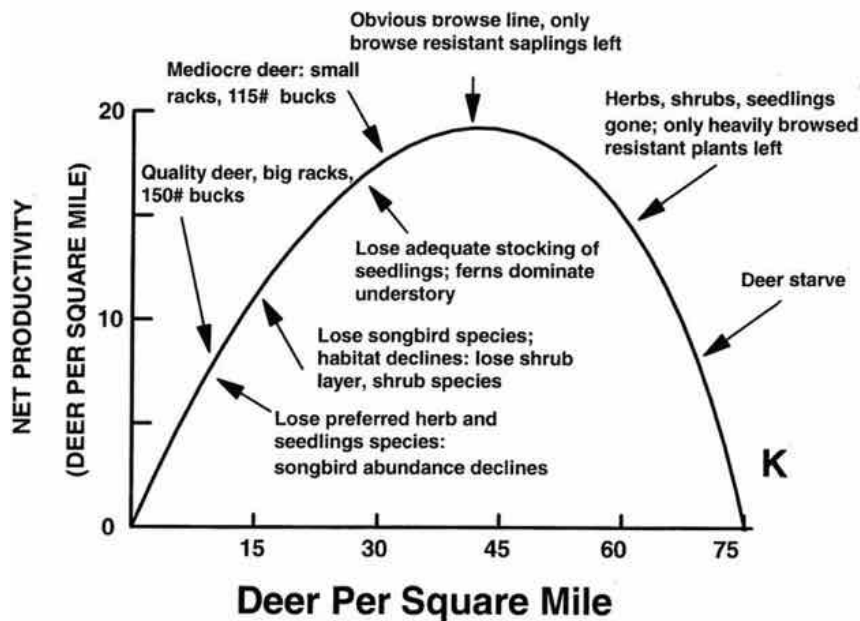


Carrying capacity densities for whitetail deer depend in part on the habitat type and the management goals for the region. Biological carrying capacity, dictated by food availability, disease resistance, and other factors, can sometimes support high deer densities, but when biodiversity goals and intact forest habitats are considered a sustainable density of deer is below 20 deer/square mile.



The "stock-recruitment" herd productivity curve for deer is maximized at about 45 animals per square mile; this is the density at which the herd is producing the highest number of deer and is most biologically productive and able to support the highest harvest rate (the "maximum sustainable yield" or MSY). At densities above this, the herd become less productive due to density dependent effects such as competition for food and disease, and will eventually reach carrying capacity (K, the density at which new individuals reduce

population survival such that the population will not increase). However, optimal condition of individual deer and highest ecosystem biodiversity occur at much lower densities than MSY (less than 15 animals/square mile).



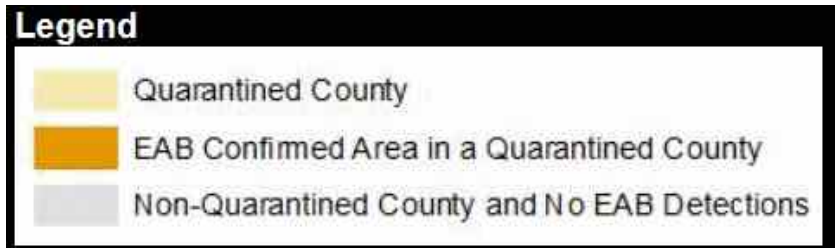
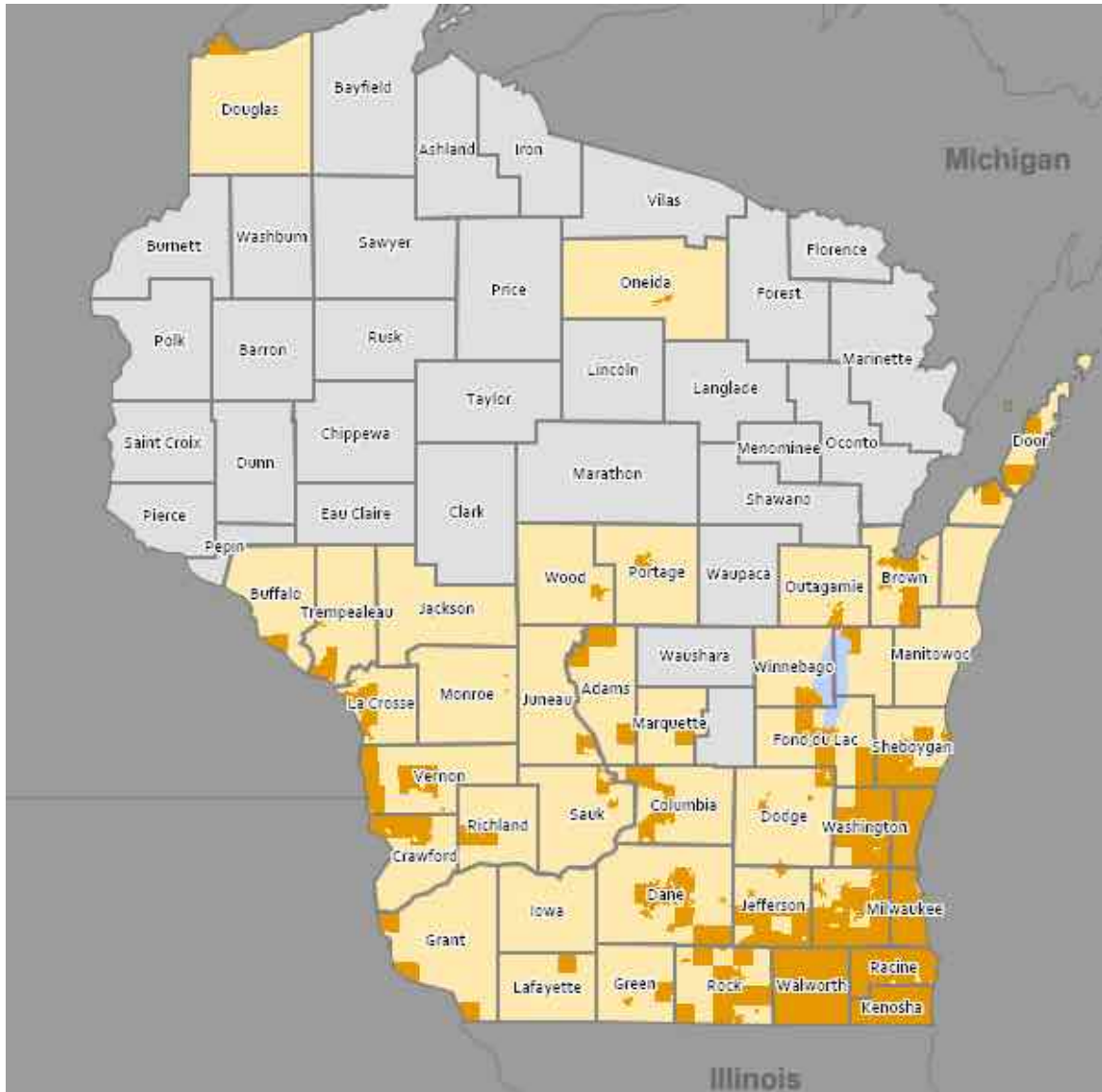
Landowners in the Wisconsin and Michigan Northwoods have multiple options for controlling deer herbivory and reducing damage to existing trees, regenerating forests, and other plants and wildlife. Depending on the size of the tract to be targeted, these options can include fence enclosures around plots or individual trees, retaining slash from harvests to protect seedlings, using deer repellants, and allowing hunting access. PIF is happy to advise landowners on these efforts.

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**EMERALD ASH BORER** *The following is the professional recommendation from PIF Vice President John Schwarzmann, who is the forest supervisor for the Board of Commissioners of Public Lands. John is in charge of managing the State of Wisconsin Trust Lands.*



## EMERALD ASH BORER FORCING TOUGH DECISIONS

The map above shows the spread of Emerald Ash Borer (EAB) in Wisconsin as of last fall. If the spread of the insect matches other states like Michigan and Illinois, the invasive insect will finish sweeping through SE Wisconsin and flood the remainder of the state within the next 6 -10 years. All Wisconsin ash species (black ash, blue ash, white ash and green ash) are killed by this Asian beetle. Once the beetles locate a woods with ash trees, it takes about four years before all of the ash trees are dead. Since the beetle was first discovered in Michigan in 2002, no ash trees have exhibited any resistance to the beetle so far. The epidemic appears to be an extinction event according to the studies that have looked at the impact of EAB on our ash species.

### What Should I do with my woods?

The answer depends upon whether your ash trees are a component in a mixed species stand or whether your ash trees form a nearly pure ash forest which is often the case with black ash swamp forests or green ash river bottom forests.

- 1) Mixed species stand. – In the situation where ash is part of a mixed species forest, mark most of your the ash trees for removal during your next harvest entry. Leave the poorly formed low, quality trees for wildlife snags. Marking should resemble a classic “high grade” exploitation where the best quality trees are liquidated and the poorest timber trees are left. Since many forests have few snags and a dearth of dead coarse woody debris, it is a good idea to leave at least 4-6 ash trees per acre. If your woods is not scheduled for a timber sale within the next 6-10 years and it contains a 20% or more ash, then it would be a good idea to “pre-salvage” your ash timber before the beetles kill them.
- 2) Pure Black or green ash forest. – In many cases black ash trees grow as nearly pure, single-species stands that grow on very wet muck soils. In the situation where there is regeneration of non-ash trees in the understory, EAB will likely cause a shift to the non-ash trees. In the situation where ash also forms the understory trees, or there are few if any trees in the understory, EAB will kill the trees and cause the site to “swamp”. That term describes the situation where the evapotranspiration of water vapor leaving the leaves during the summer ceases and the water table jumps leading to standing water during most of the year.

If you have a large black ash stand with volumes of wood attractive to commercial timber buyers, generally 20-40 acres or more, then you may want to consider cutting the trees before they die. In order to cut black ash, the swamp has to be frozen hard in mid-winter that allows access by machinery. Weather cold enough to freeze a black ash swamp does not occur every winter so it may take a reasonably long wait for access to become possible. If access is possible, you will want to harvest about 80% of your black ash and leave the remainder as snags for wildlife. The wildlife trees can be left as small islands of unharvested trees.

If you own a large ash swamp of 40 acres or more with no conversion options to other tree species, EAB will render your land unproductive for forestry. Your swamped property with an elevated water table may lose all economic and nearly all ecological value. In those situations, **I would recommend quit paying taxes on any parcel that is all ash and turn it back over to the County !**

**What does EAB Look Like?**

EAB looks different in each of its four life stages

Adult emerald ash borers emerge from beneath the bark of ash trees late May through mid-July. They create a D-shaped exit hole as they chew their way out of the tree. The beetles are most active during warm and sunny days. They never wander far from where they exit a tree (less than one mile) in search of a mate. Once they find a mate, the female will lay 60 - 90 eggs, one at a time, in the crevices of ash tree bark. The beetles will feed lightly on ash tree leaves, but do not cause much harm that way. EAB beetles live a total of three to six weeks.



**Adult (beetle) -** Emerald ash borer adults are very small, metallic green beetles. They are about the size of a cooked grain of rice: only 3/8 - 1/2 inch long and 1/16 inch wide.

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**FUTURE ARTICLES**

Future stories we are working on and hoping to share with you soon:

- Roy D' Antonio of Associated Title on the things to look for in title issues when buying or selling a real estate holding
- Dustin Bronson on woody biomass.
- Information on the Managed Forest Law, pros and cons and what DNR Foresters can and cannot do for the landowner
- Timber Theft by Paul Hetzler
- Updates on big trees, White Pine and more

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 [partnersinforesy@gmail.com](mailto:partnersinforesy@gmail.com) or by mail:

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*The following is another great feature by our friend Paul Hetzler, Horticulture and Natural Resources Educator, from Cornell University Extension. Though centered around landscape trees, the lesson is relevant to our forests as well.*

## **SUDDENLY IS RELATIVE**

Paul Hetzler

One of the drawbacks of being an arborist is the language barrier. Routinely I spout off about trees such as *Corylus*, *Carpinus*, and *Crataegus* before noticing a glazed look on the faces of my victims, I mean audience. Once I engage my Nerd Translator, though, such offensive words are corrected to hazelnut, ironwood, and hawthorn, and everyone breathes a sigh of relief. Sadly, this works in reverse, too.

Fairly often someone calls up to report the unexpected and untimely death of their well-established landscape tree that “suddenly” died over the spring or summer. As a result of my arborist-ailment this sounds to me as absurd as if they said the tree shot up from a sapling to thirty feet tall with no warning at all while they were on vacation.

Trees have a different time scale—it can take them years to “get the memo” their days are done. With very few exceptions, when a tree “up and dies,” any bug or blight lurking on it did not cause its demise.

Young transplants are easy to kill, I’ll grant you. Right out of the box they have lost 80 to 90 percent of their roots, not to mention they get parched in the packing and shipping process, then bake on some staging lot before ever finding a home. Deep planting, air pockets in the backfill, and lack of water (especially beyond the first year) can finish them off within two or three years.

But like a small business, once a tree survives beyond three years its chances of long-term success increase greatly. Think about the decline of established trees like heart disease: it takes a long time to set up the conditions that prove fatal. For trees, a sedentary lifestyle is ideal, and they are not affected by cholesterol. So what are their risk factors?

The short answer is stress, but its causes are not always obvious. One reason is that the problem is usually underground. For example, trees in the 20-35

year age range commonly succumb to poor planting. Talk about obscure—who would guess that? Leaving the burlap and wire basket on the root ball after the tree is in the hole, and/or placing it too deep often leads to a condition called girdling root, which chokes off the tree below (or just at) grade once the trunk expands to a certain diameter.

We all want a gorgeous lawn, yet that is the least compatible setting for trees here in the Northeast, whose roots evolved with very different understory vegetation. Tree roots, the vast majority of which are less than a foot deep, are no match for the greedy, ultra-efficient roots of turf grasses. Unless it is a super wet year, turf roots absorb nearly all the rain that falls from late spring on.

Not only are tree roots surprisingly shallow, they extend two to three times the branch length. Given those less-than-obvious facts, you can imagine how easy it is to damage roots. Adding topsoil, driving on them, excavation, or even chronic line-dancing can readily harm them. The confounding thing is that, like the girdling root example, there is a lag time between cause and effect.

Symptoms of root damage typically begin to show up 3-5 years after the event, and continue to manifest for as long as a decade or more. By that time, who the heck remembers the incident that caused the harm, or even recognized the fact it could be a problem? Once a tree shows signs of severe decline, it’s natural to look for a current cause rather than thinking back on its history.

After mid-August you could strip all the leaves off a tree (you could, but please don’t), and it would have no measurable effect on its health, either short- or long-term. Yet a single six-week period of hot, dry weather can cause such extensive root death that it takes two to three years for that tree to recover.

In the meantime, plenty of other factors like mower injury, road salt, volcano mulch, and lush grass add further stress. Just as it’s the accretion of arterial plaque, not one flight of stairs, that causes a heart attack, it is almost always cumulative stress that kills a tree.

So provide your tree plenty of water during the summer, and protect its root system (line dancing is actually permissible), and it should “suddenly” live a long time.

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