



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.

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**Have you paid
your PIF dues?**

Partners News

March/April 2019



Contributed by Rod Sharka

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Charlie Mitchell serves on the boards of directors of PIF and Citizens for a Scenic Wisconsin and on the Historic Preservation Commission of Wauwatosa. Credit goes to Richard Steffes for collecting much of the biographical information.

New Guys at the DNR are not new to Conservation

By Charlie Mitchell

Governor Tony Evers has been doing his duty to appoint leaders of the administrative departments of his executive branch. During January and February he has appointed secretaries of practically all the departments and the secretaries have appointed division heads and other top administrators. Forest land owners can rest assured that the Department of Natural Resources is no exception – administrators are already picking up the reigns of authority. The credentials of the new team indicates that they are going to take their core mission of protecting natural resources and the environment more seriously than did the previous administration.

There is one catch in the roster of administrators: the Secretary needs the approval of the state senate to stay in office. You have heard of the restrictions that the out-going Republican administration has placed on the authority of the governor. That's one of them. If the senate doesn't act to approve the secretary within 75 days of the date of his appointment, he must leave office and be replaced by another appointee. Cole needs approval by mid-April to keep his job. How likely he will be approved is uncertain. The other appointed officials remain in office whether or not Cole stays. You may want to put in a word to your senator if you like Cole.

So who are the new guys in the leadership positions? The following biographies provide some indications.



Preston Cole Secretary

Preston Cole was raised on 15 acres in a southwestern Michigan farming community where his parents instilled the values of conservation in him. At the University of Missouri he enrolled in the Forestry, Fisheries and Wildlife program and received a Forestry Management degree in 1987.

Cole worked for the City of Milwaukee for 20 years in several positions: City Forester, Environmental Services Superintendent, then Director of Operations of the Dept. of Public Works.

Cole joined the Natural Resources Board in 2007. At the urging of his colleagues, who recognized his remarkable commitment to conservation of natural resources and to the best interests of Wisconsin's citizens, he ran for chairman of the NRB in 2013 – and won. Cole values transparency in public service highly and has instituted the use of social media, live broadcasts and videotaping of NRB meetings to inform the public on natural resources issues of importance to them.

During his time at the City of Milwaukee, Cole boosted "greening" programs such as Greening Milwaukee Schools and the Urban Ecology Center. The DPW identified playgrounds where the asphalt surface became too hot to play on in the summertime, then excavated the asphalt and planted trees. It became outdoor education in a science curriculum with kids toiling in the soil and gaining an understanding of their environment. He got personally involved with Urban Ecology, becoming a role model, exposing children to the natural world, laying the foundation for young people to become good stewards of the environment.

Influential in the Wisconsin Conservation Congress, with participation of young people in outdoor activities in decline Cole established the Youth Conservation Congress in 2013.



Elizabeth Kluesner
DNR Deputy Secretary

Elizabeth Kluesner has agreed to [serve](#) DNR as part of the Executive Leadership Team, in the role of Deputy Secretary. Elizabeth is currently DNR's liaison to local and federal government. She has held several positions at DNR, including Business Project Coordinator, 11 years as the agency's Legislative Liaison, and one year as Executive Assistant to Secretary Scott Hassett.

She served for 4 1/2 years as Kathleen Falk's Director of Policy and Program Development for Dane County, where her primary duties focused on land acquisition, recreation, land use and transportation planning. Elizabeth has also served as President of the Junior League of Madison and as a board member of the Groundswell Conservancy Land Trust. Elizabeth is originally from Madison, Wisconsin, and holds a B. S. and master's degree from the University of Wisconsin-Madison.



Todd Ambs
Assistant Deputy Secretary

Todd Ambs did an outstanding job as director of the Healing our Waters – Great Lakes Coalition, a group comprising over 120 environmental, conservation, and outdoor recreation organizations as well as zoos and aquariums. During his 5-year tenure, the Coalition secured over \$1.5 billion in federal funding to protect and restore the Great Lakes, beating back attempts in the US Congress to cut Great Lakes investments. Before that, he was president of River Network, a national watershed restoration organization. Ambs served as Wisconsin DNR Water Administrator from 2003 to 2010 with the important responsibility of lead negotiator for Wisconsin on the Great Lakes Compact. From 1998 to 2003, he was executive director of the River Alliance of Wisconsin and positioned the organization as one of the leaders on water policy in Wisconsin.



Sarah Hoye
Communications Director

Sarah Hoye is an award-winning journalist with nearly 20 years of field reporting for broadcast, print and digital news. Having reported from nearly every corner of the United States, Sarah has spent her career as a national TV news correspondent and storyteller for media outlets. Her awards include the Peabody, Knight Digital Media Fellowship at Ohio State University, Women's Media Center's Emerging Journalist Award and a host of others. Sarah, a Milwaukee native, is also a licensed Wisconsin REALTOR®. She received her master's degree from the University of Maryland and bachelor's degree from the University of Wisconsin-Milwaukee.



Cheryl Heilman
Chief Legal Counsel

Cheryl Heilman [will hold](#) the position of Chief Legal Counsel. Cheryl has been with the department since 2011, and has been serving as a Deputy Chief Counsel in the Bureau of Legal Services. An experienced attorney, Cheryl previously worked for the Minnesota Attorney General's Office, a federal court monitor, a criminal justice nonprofit, a private law firm and as a law clerk to US District Court and Court of Appeals judges. Cheryl is a graduate of the University of Minnesota and received her J.D. cum laude from the University of Minnesota Law School.



Fred Souba
Forestry Division Administrator

Fred Souba [will continue](#) to serve as Administrator of the Division of Forestry and Wisconsin's Chief Forester. Fred was originally appointed to this position in 2016. Prior to that he had an extensive career in the forest industry, including owner and Senior Consultant of ProVision Forestry LLC, Vice President of Wood Supply and Sustainability for NewPage Corporation and served as chair of the Wisconsin Council on Forestry for seven years. Fred graduated from the University of Minnesota with a B.S. in Forest Management and Administration.



Doug Haag
Internal Services Division Administrator

Doug Haag will continue serving as Administrator for the Division of Internal Services. Doug began working for DNR in 1986, served as Chief of the Real Estate Section and then Real Estate Director prior to his appointment as Division Administrator in 2016. He also worked for Dane County Parks Department from 1990 to 2000. Doug has a B.A. from the University of Wisconsin-Madison in Geography.



Scott Loomans
Fish, Wildlife & Parks Division Administrator

Scott Loomans has been named division administrator for the Fish, Wildlife and Parks Division. Scott has been a policy initiatives advisor in the secretary's office, and prior to that worked on policies and rules in the Fish, Wildlife & Parks Division for 11 years. He initially started out in the DNR as an LTE for wildlife management before spending nine years as a staffer with the State Assembly's Natural Resources Committee. Scott majored in journalism at UW-Stevens Point.



Darsi Foss
Environmental Management Division Administrator

Darsi Foss has been named division administrator for the Environmental Management Division. Darsi has been the director of the Remediation and Redevelopment Program since 2014, and served as the RR Program's Brownfields Section chief from 1998-2014. Prior to coming to the DNR in 1989, she worked at EPA headquarters in Washington, D.C., as a policy analyst and presidential management intern. Darsi has a Bachelor of Science degree in political science and a Master's degree in public administration from Iowa State University.



Dave Siebert
External Services Division Administrator

Dave Siebert has been named division administrator for the External Services Division. Dave has been the director of the Environmental Analysis and Sustainability Program since 2004, where he focused on a number of environmental issues, including environmental impact analyses, complex project reviews, energy and utility projects and social science research. Dave has been with DNR for over 27 years. Prior to that he worked for U.S. EPA in their Region 5 office in Chicago, working on environmental analysis of federally-funded wastewater projects. He has a Bachelor of Science degree in environmental science from Bowling Green State University and a Master of Science degree in water resources management from UW-Madison.



Eric Ebersberger
Interim Budget Director

I have asked Eric Ebersberger to serve as the interim director for the DNR Office of Management & Budget. Eric's public service experience goes back more than 25 years, including working as deputy administrator in the Environmental Management Division, as chief of the Water Use Section within the Bureau of Drinking Water and Groundwater, as an analyst and manager in the Bureau of Management and Budget and as an attorney in the Bureau of Legal Services. Most recently, Eric has worked as the Foxconn project manager for the Secretary's Office. Eric will help guide us through the always challenging state biennial budget process in 2019.



Ben Van Pelt
Legislative Liaison

Ben Van Pelt has accepted the position of DNR Legislative Liaison. Ben most recently worked for the American Heart Association and American Stroke Association, where he served as the director of community advocacy and the director of government relations. He also served as an aide in the Wisconsin State Legislature, starting in 2012, and worked for State Senator Julie Lassa from 2013-2016.

LWCF Permanently Funded.....we hope!
The work is not over yet!

It has been a nerve wrecking number of months, even years for advocates of the Land and Water Conservation Fund (LWCF). Readers of Partners News well know the extensive benefits of LWCF, and also are aware of the facts on funding the program; that being the program is NOT a burden to tax payers. We have covered LWCF for years, including the citizen lobby day trips by Nancy Warren, Bill Deephouse, Dick Steffes and Carol Mason Sherrill.



Using LWCF the Ottawa National Forest acquired the lands on the Sturgeon River with numerous feeder streams, protecting water quality and public access..

The program is a boom to the forest industry, supporting the Forest Legacy Program. A remarkable benefit LWCF is, to all outdoor enthusiasts providing public access and protecting clean water all across the USA. A program with a 53 year history of success.

The loosely termed 'public lands bill' made its way through Congress recently, with permanent reauthorization of the program. The voting numbers in this bi-partisan effort were an incredible consolation to any one concerned with the partisan divide in congress in recent years. In the Senate mid February 2019 vote, 92 members voted in the affirmative while 8 voted no. Among the 8 no votes was our own Ron Johnson. In the House there were 363 Yea votes, 62 Nays and 6 not voting. Amazingly, our own Sean Duffy, representing an area rich in the forest products tradition, an area greatly benefited by LWCF many times, was among the nays. Wisconsin Congressman Sensenbrenner was also a nay vote. Perhaps these guys have never connected to the outdoors, perhaps they have never enjoyed a good hike in the woods. Or perhaps they need to take a hike!

Despite overwhelming bipartisan support for the permanent reauthorization of the Land and Water Conservation Fund by Congress and signage into law as part of the massive John D. Dingell Jr. Conservation, Management and Recreation Act by President Trump, the president went on to nearly completely de-fund the program in his 2020 budget. The LWCF has helped fund outdoor and recreation projects in every county in the United States and the program **is** funded by offshore oil and gas leases.

So, as it appears, we have a program, but as we are well accustomed, we need to fight for the funding it deserves. Please be vocal to your congressional representative about the benefits of LWCF.

With the success of LWCF as noted in this issue, we know the vast majority of people support land conservation on critical habitat. Let us continue to do our part and realize the Stewardship Fund is responsible for much of the public access and land protection in Wisconsin. The Upper Wisconsin River Legacy Forest was a result of this program.

KNOWLES-NELSON STEWARDSHIP PROGRAM UPDATE

From Gathering Waters, Wisconsin's Alliance for Land Trusts, February 28, 2019

Knowles-Nelson funds help pay for the purchase of public land and conservation easements that protect Wisconsin's unique landscapes. Stewardship also protects clean water, funds urban and wild trail projects, and pays for crucial recreation infrastructure like boat launches and campgrounds. Without a strong Knowles-Nelson Program, we won't have funding to protect the lands and waters that make Wisconsin such a special place to work, live, and play.

Stewardship is an incredibly popular program, with polling consistently showing public support around 90%.

The last time that the Knowles-Nelson Stewardship Program was reauthorized back in 2007, funding was set at \$86 million per and was renewed for a full decade. There was broad bi-partisan support at the time. The current funding is less than half of that amount, a significant loss of buying power.

Governor Tony Evers has released his budget proposal, and it includes a two-year extension of the Knowles-Nelson Stewardship Program as well as a pledge to form a blue-ribbon task force to make recommendations on the future of the program. His proposal now goes to the state legislature.

The two-year extension proposed by Governor Evers would continue funding for the program into 2022. However, we are disappointed that the proposal falls far short of the long-term investment that Wisconsin needs to protect our land, water, wildlife, and way of life.

With your help, we will fight for continued funding for the Stewardship Program. Together, we can deliver a strong message to the Governor and legislators.



The Stewardship Program protected the land which grew the state record balsam fir tree as part of the NHAL in 2009.

UNNATURAL SELECTION: CHOOSE YOUR PLANTINGS PROPERLY.

Paul Hetzler, Cornell Extension

After a winter fraught with temperature swings, ice and near-record cold such as this past one, being able to finally plant things outdoors is especially welcome. While flowers can be dug up and replanted around the yard much like arranging the lawn furniture, it is different with trees.

Consider that the act of planting a tree is in many ways a transcendent one. Sure, a new tree will give us shade, beauty, energy savings and increased property value, but in most cases it will outlive us by a long shot. In a sense, we donate a tree to the world even when it is on our own property – to future generations of people, to songbirds, to cleaner air, to a better neighborhood.

And once a tree is sited in the landscape, it is not practical, or even possible in many cases, to move it after the first year. For these reasons, it is important to give adequate thought to selection. In an acre of mature forest, nature has selected the few hundred best trees from perhaps as many as 10,000 seedlings. But if we plant one to a few trees, we would like them all to reach their potential. This requires a bit of homework, and is well worth the effort.

A basic question to answer is whether a tree is cold-hardy to your location. The USDA Plant-Hardiness Zone Map is available at <https://planthardiness.ars.usda.gov/PHZMWeb/> Don't assume every tree for sale at a garden center is appropriate for the area. "Big-box" chains may ship the same nursery stock to Raleigh, NC as they do to the far north. Check the tag.

Most commonly used landscape trees have one or more cultivated varieties or cultivars, each with its own profile in terms of mature height, branch spread, and tolerance of various site conditions. Make sure your selection can reach full-size without tangling with overhead wires, obscuring a road sign, or encroaching on your neighbors. Some species and cultivars can handle shade, road salt, poor drainage, or disease and pest pressure better than others.

But even when you've settled on a candidate with genes well-suited to your site, choice at the individual level is also important. Trees at a nursery or garden center resemble green lollipops from a distance, but checking under the hood can save a lot of trouble later on. A good specimen has a crown like a stoned elephant: it has a single trunk, and is well spaced-out.

Trees having two or more competing (co-dominant) stems are more vulnerable to splitting as they age. Check the trunk carefully for wounds, removing any trunk wrap if present. A good specimen should be free of crossing and rubbing limbs. Several branches originating close to one another on the trunk will create a focal point for stress, another structural weakness. Ideally the branch placement should have symmetry as the specimen is viewed from all sides, and from above.

It is harder to check out the root system, but if a tree is container-grown, ask the vendor if they would slip off the container to be sure the roots are not excessively pot-bound. Before planting, always tease roots out straight, and locate the trunk flare, which may be hidden under soil in the container or root ball. The planting hole must be at least twice as wide as the roots, and just deep enough so the trunk flare is visible above the soil line when you are done.

Don't be embarrassed to admit that when you plant a tree, you are leaving a legacy. As such, it is worth the time to select the proper species and cultivar for the site, as well as a specimen having strong, breakage-resistant form. The International Society of Arboriculture has great information on tree selection and planting at: <http://www.treesaregood.org/treeowner/choosingtherighttree>

SHADY CHARACTERS



PAUL HETZLER is Horticulture and Natural Resources Educator for Cornell Cooperative Extension of St. Lawrence County, NY. His work has appeared in *The Lancet*, *Prime Number*, *Highlights for Children*, and in weekly natural history columns he writes for newspapers across northern New York State.

Look for Paul Hetzler's second book, "Don't Be Such a Duck! Mallard Malfeasance, Incendiary Spiders, Killer Caterpillars, and Other true Stories"

Partners News favorite, Paul Hetzler reached a milestone on October 5, 2018 with the release of his book **Shady Characters, Plat Vampires, Caterpillar Soup, Leprechaun Trees and Other Hilarities of the Natural World.**

Should you wish to check out the book, the direct link is <https://www.amazon.com/dp/099860609X>



THE ROOT OF THE PROBLEM

Paul Hetzler, Cornell University Extension

It may not look like it at now, but mud season is right around the corner. In towns and villages, spring involves returning songbirds, blooming flowers, and a birth-frenzy of construction projects fresh off their winter-long gestation.

But “construction damage” does not only apply to human landscapes. In rural areas, maple production often brings tractors into the woods during mud season, and timber harvests may continue even during the period between snow melt, and dry soil conditions.

More often than not, residents and developers are on the same page in protecting mature trees from construction damage. Sadly, a great many tree-preservation efforts fail in the end, but not due to lack of political will or good intentions. The same tips are relevant to your yard trees, or along the woods roads.

The issue is that brilliant engineers, architects, landscape designers, and community activists are rarely also experts in tree biology. As an example, those good folks I just mentioned would probably say it would be a problem if a forwarder or cement truck were to clip a tree as it drove by, tearing a huge divot from the trunk.

An arborist would tell you differently. She or he would explain that the real problem is the massive, irreparable, fatal but invisible harm inflicted by that heavy vehicle on its way past the tree. A glaring wound on its stem would be of no significance whatever, because that tree has been killed. It will take 3 to 7 years before it starts to “realize” it is dead, however – lethal root damage shows up over time. A tree preservation plan which focuses on guarding trunks from being hit by vehicles is worthless. Construction damage to trees is root damage; there is no other kind.

About 90% of tree roots are in the top 10" (26 cm) of soil, and 98% are in the top 18" (46 cm). A

tree's roots extend, unless there's an obstacle like a road or building, two to three times the length of its branches. This is a tree's root zone: a broad, shallow, vulnerable mass of roots.

It's true that trees such as oaks and walnuts have a taproot when young, but in maturity their root systems look like a pancake, not a carrot. Most of us have seen trees which have been uprooted by a storm, but that monster taproot has yet to be spotted. It's no coincidence that the flat root system one sees on a wind-thrown tree is referred to as a root plate.

To survive, roots need to get oxygen directly from soil pores. Compaction from vehicles or equipment operated within the root zone will permanently compress pores and exclude oxygen. Adding soil to the root zone to raise the grade (for instance to lay sod) has the same effect. In these cases, roots slowly suffocate, and trees will eventually show symptoms of decline. In wet soil conditions, such damage potential is far, far greater.

Excavation or trenching activities within a root zone will sever some tree roots, and probably will compact the rest. Root damage may kill a tree outright within a few years, but more commonly there will be a prolonged decline over 5-10 years. Because of this time lag, oftentimes it is secondary, opportunistic agents which get the blame.

It is fair to ask how street trees in little concrete pits in the sidewalk survive. Because they are put there when young, they adapt to available root space. In technical parlance they are deemed "unhappy." When a tree with a normal root system has its roots cut or damaged to the size of a tree pit, it is termed "dead."

To preserve trees, one must take preventive action BEFORE the first vehicle or worker arrives. Work with an Arborist to cordon off root zones on your important trees, at least to the drip line or branch length. Even stockpiling material under a tree can cause root damage. If driving close to trees is unavoidable, maintain wood chips at a depth of 8-16" (20-40 cm) in the traffic lane(s) throughout the life of the project.

When excavation within the root zone is necessary, consider directional drilling, which can tunnel below roots. If that is not an option, try to cut roots cleanly, flush with the trench wall. Lay wet burlap over the root ends until it is time to backfill. If over 40% of a tree's root system is cut, it is better to remove the tree. Damage of that magnitude will lead to future instability.

Mitigating damage after the fact is not as effective, but anyone dealing with that scenario must act quickly. By the time symptoms show up, it will be too late. For important cases, hire a Certified Arborist to loosen soil with high-pressure water or air injection. Soil injections of beneficial microbes in solution has been proven valuable.

For more information on avoiding root damage to trees, visit the ISA's educational pages at treesaregood.org or reach out to your Extension office.

An ISA Certified Arborist since 1996, Paul is an Educator for Cornell Extension. He is a member of the Society of American Foresters, NY Arborists, the Canadian Institute of Forestry, & the Canadian Society of Environmental Biologists.

TREE BASICS

Hans Schmitt

It is widely rumored that when Vince Lombardi took over as coach of the Packers he called a team meeting. At the meeting he informed the team “we are going to start with the basics” and held up a ball.

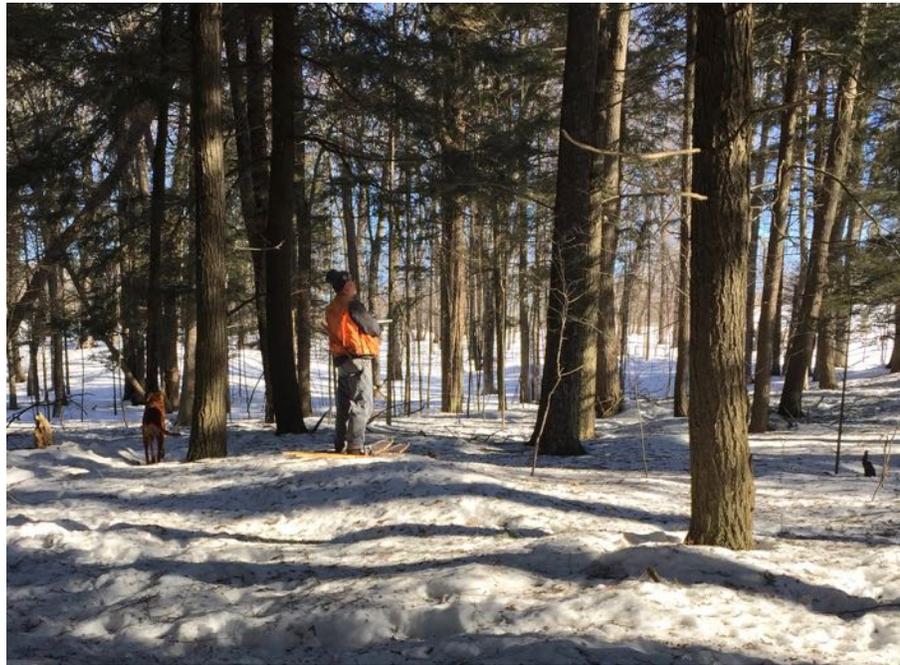
“Gentlemen, this is a football”, to which Max McGee replied “could you go a little slower coach”. In order to understand the forest, forest ecology and the art and science of management, we need to have a basic

understanding of trees and how they grow.

Trees have three basic parts; roots, trunk or bole and the crown. The roots provide mechanical support to the bole and crown while absorbing water and nutrients. The bole provides mechanical support to the crown and moves water and nutrients from the roots to the crown via evapotranspiration. The crown is the factory of the tree and transforms nutrients into sugars used for growth.

Trees grow tall as a function of how well suited they are to the site on which they are growing, but they grow in diameter as a function of how much competition there is around them. The height attained by a tree within a 50 year period is called “site index”. This number provides the manager with a measure of productivity by site and species. Site index curves can be extrapolated from one species to another for potential planning purposes.

Competition or stocking can be measured by a number of criteria. “trees per acre” is



*Hans out in his woods taking some plots for a management plan.
Photo by Julie Schmitt*

commonly used for younger growing stock such as seedlings and saplings. “Basal area” (BA) and “crown closure” are typically used for larger merchantable sized trees. Basal area is the actual square feet of stems per acre while crown closure is expressed as a percentage of occupied growing space within the canopy. Of the two, BA is most commonly used to measure stocking because it is both quick and easy.

Excessive competition results in tall trees with small diameters. An example would be a red pine plantation that may be 40 or 50 years old but was never thinned. The trees may be 40 to 60 feet tall but are only 4 to 6 inches in diameter. This is because there are too many trees occupying the growing space. When the trees are thinned, the crowns expand and produce more sugars for growth. It stands to reason that a larger factory requires a greater supply and transportation network, henceforth, larger root systems and boles.

Controlling stocking is important for many reasons. It helps to regulate growth rates

which has a huge bearing in regard to the economic value and internal rate of return (IRR) for any given tree (that's a subject for another day). It also helps control the form of a tree. When a branch gets shaded and is no longer producing a net gain for the tree, the tree self prunes and the branch is eventually discarded. Should the tree be growing in full sunlight it will retain nearly all the branches and display an "open grown" form. By regulating stocking levels managers attempt to maximize both the form and growth rate of the trees.

Trees also have limits to their potential growth. Tree height is a function of the size of the vessel elements located in the bole of the tree. These elements act as the straw that allows the crown to pull water and nutrients upward into the factory for photosynthesis. The smaller the diameter of the vessels, the higher the tree can translocate water. Conversely, trees with larger diameter vessels are less capable of the translocation and attain lesser heights. A few species, such as redwoods, also sequester some of their nutrients from the atmosphere, enabling them to grow to extraordinary heights.

Tree diameter is generally limited by time and physics. Despite the obvious differences, trees and people have many commonalities. When we are young we need care, nourishment and perhaps a little luck to grow and survive. As we get older our growth rate increases, then slows until we hit our peak of strength and vitality. Following that period we transition into old age and our overall health and strength tend to decline. So it is with trees. The physical demand required to support the burgeoning biomass will eventually fail. Time is also a key element as some species (often pioneer species) are short lived and can only accumulate a finite amount of biomass over the course of their lives. Longer lived species will likely also encounter disease, insect attacks, and wounds which further weaken the tree and add to it's eventual demise.

Trees also have different growing habits and site requirements. Deciduous trees (trees which lose their leaves, and no, not all hardwoods lose their leaves annually) are "phototropic" meaning they grow in response to light. Trees along the edge of a field or road will reach outward toward the available light source. While these trees may have considerable aesthetic or wildlife values, their forest product values are typically low and somewhat limited. Coniferous (cone bearing trees, and yes, some conifers do lose their leaves annually) are geotropic meaning they grow in response to gravity. A classic example is a white cedar in the swamp that has been tipped by wind yet remains alive. Without delving into cellular biology, suffice it to say that the cells on the bottom side of the tree begin growing faster than the cells on the top side of the tree. It begins to right itself until equilibrium is reached and the cells resume normal growth.

Trees are also somewhat site specific, meaning they prefer to grow under certain light and soil nutrient/moisture regimes. In some cases the requirements may be fairly narrow while other species will occupy a much larger range of conditions. For example, sugar maple prefers a well drained, nutrient rich soil and will outcompete many other species on these sites. While white pine, red maple and others will occupy both drier, nutrient medium sites as well as much wetter sites. This ability gives them a competitive advantage over other species on a variety of sites. Jack pine will grow on very droughty, nutrient poor soils where most other trees cannot.

Available light also has a huge impact on tree growth. Many species such as aspen, white birch and cherry require considerable sunlight to grow and regenerate. These tend to be early successional or pioneer species, occupying either open sites or areas of heavy disturbance such as fire, windstorms and logging. As these trees grow into a stand they begin to change the environment, mostly on the forest floor as the shaded conditions allow

for decreased temperatures, greater relative humidity and increased nutrient cycling. These changes allow for other species that are more shade tolerant to begin growing under the canopy. As the pioneer species mature and die, the younger understory species take over the site, continually changing the environment and may be followed by a different group of species. This process is referred to as “forest succession”.

There is a wide variety of factors influencing the trees and the forest. Tree species and genetics, site characteristics, weather, time, type and degree of disturbance, levels of stocking and animal activities, not mention

insects and diseases, work in concert to determine the natural processes within the forest. As stewards and managers of the forest, equipped with knowledge of these factors, we can guide these processes, at least to some degree, to accomplish our individual goals and the betterment of the ecosystem while still providing resources for societies needs.

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



Tapping Maples is an early spring tradition and requires large crowns for viable sap production.

Mark your calendar for this presentation if you are concerned about Lyme or any Tick-Mosquito transmitted infection!

Ticks and Mosquitoes in Wisconsin: what we can do to reduce the nuisance and the risk of disease transmission

Susan Paskewitz, PhD Professor and Department Chair of Entomology, University of Wisconsin
Wednesday, May 22, 2019, 9:30 – 11:30 am, Nicolet College Lakeside Center Theater

Dr. Paskewitz will talk about two important groups of bloodsucking arthropods in Wisconsin, ticks and mosquitoes. She will start with some fun facts and then discuss the current picture for disease risks in the state and concerns about new invasive species. Finally, the lecture will provide information about what works for personal protection and strategies that are available for controlling these pests on properties. Come with questions!

LOOKING OUTSIDE OUR REGION!

Plastic debris: Documents from Science-direct, Marine Pollution Bulletin talk of the alarming quantity of plastic debris affecting the northern Gulf of Mexico. Texas was affected the most detrimentally as 10 times more thrash washes up on the Texas coast in a year than any other Gulf state. The debris includes plastic bottles, straws, caps and shredded plastic thrash.

Monarch in Trouble: The Xerces Society of Invertebrate Conservation has conducted a Monarch butterfly count since the early 1980s. Called the Western Monarch Thanksgiving Count, the 2018 results were shocking. They report the lowest Monarch numbers to date, a 99.4% decline in Monarch populations in their California wintering grounds compared to the mid 80's. Comparatively the Mexican breeding grounds have suffered an 80% decline in the past 20 years.

Beech Trees: Wisconsin and Michigan have beech, but we are on its western range for the most part. In the journal Forest Pathology researchers from Ohio State University reported on an emerging Beech Leaf Disease epidemic with yet unexplained cause. To date 11 Ohio counties, 8 Pennsylvania counties and 5 counties in Ontario Canada have been affected.

Natural Habitats for Apple Orchards: A Cornell lead study, published in the journal Science, showed that apples orchards do better among natural habitats than they do in dense agricultural areas. The researchers followed 27 orchards over a ten year period in NY State. They studied bee species and numbers, apple production and the relativity to neighboring landscapes. Their conclusion was that fruit trees grown in natural settings attracted more diverse populations of pollinators, which positively affect the fruit production.

Natural Mosquito Control: According to "Beyond Pesticides", a University of Maine research study demonstrated that adding blackberry leaf litter to water catch basins creates a 'ecological trap' enticing female mosquito to lay the eggs in a site unsuited for the larvae to survive. They hope this can be a control measure to help in the threat of diseases including West Nile Virus, and claim it can be especially effective in urban environments. They term this an 'attract and kill tool' for mosquito control.

Have you checked out PIF's website? 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.

FUTURE ARTICLES

Next issue of Partners News will continue the series on Timber harvests with John Schwarzmann, more on forest management from Hans Schmitt, more on LWCF and updates on Wildcat Falls.

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 partnersinforesstry@gmail.com or by mail:

Partners In Forestry
6063 Baker Lake Rd
Conover, WI 54519

PIF board member Charlie Mitchell talks about the importance of urban sanctuaries.

Woods preservation becomes part of Wauwatosa long range plan

Action by Common Council is result of citizen protests. Will it be enough to save Sanctuary Woods?

By Charlie Mitchell

February 8, 2019

At their Dec 18 meeting, the Wauwatosa Common Council approved a long-delayed and greatly-revised Life Sciences District Master Plan for incorporation into the City of Wauwatosa Comprehensive Plan. The District includes the County Grounds which has a remnant of old-growth forest, a grove of majestic white oaks, on the 58-acre tract which has become known as Sanctuary Woods. Now included in the Plan is a provision that the Woods be re-zoned as a Conservation District. Revisions adding protection for the Woods were made by City staff working with County Grounds Coalition representatives as recently as the week before the meeting. Alderman Jason Wilke's amendment at the meeting strengthened those protections.

Sanctuary Woods is a refreshing natural area cherished by many Wauwatosa residents, especially dog-walkers. Northeast Quadrant of the County Grounds, North of the Ronald McDonald House, it borders County Grounds Park to the north, a perfect neighbor. The Woods is the last piece of the Grounds which remains undisturbed by development.

The Life Sciences District (LSD) plan became controversial soon after it was introduced in early 2017 because, while it used language that is respectful of the natural environment in the District, it was obviously a blueprint for extensive development with high-rise residential and commercial buildings. The plan was written for City administrators by consultants with backgrounds in real estate development and construction.

The LSD plan is the latest in a history of gradual development of the County Grounds which continued essentially undeterred by periodic public protests. In the 1960s, the Grounds comprised about 1000 acres north and south of Watertown Plank Road roughly from Harwood Avenue near the village west to about Highway 100. It was largely fields and woods. Then the "county institutions" were not much more than County Hospital and a few medical and social service buildings in a park-like setting south of Watertown Plank Road. A few handsome old County buildings survived in the fields and trees north of Watertown Plank.

By 2016, the Milwaukee Regional Medical Center had grown to be a dense agglomeration of large buildings, most of them clad in plain glass, some of them 6 stories tall - a mini-city of hospitals, office buildings and parking structures, and stop lights. West of I94, the Research Park was nearly full with massive business buildings. North of Watertown Plank, there was Discovery Parkway, on a right of way gouged deeply into the sloping terrain where there used to be a savanna of oak and maple, and cliché modern buildings were sprouting along it.

When driving west out of Wauwatosa on Watertown Plank years ago you enjoyed the drive and felt good almost as if you were on a scenic route. Now you feel glad when you get through without a traffic delay.

So when the LSD plan became public, with its proposals for extensive additional development and urbanization described in the latest developer's jargon such as "mixed-use", and even though it had beautiful architectural renderings, it stimulated a reaction from the public which bordered on revolt.

Public meetings and hearings draw large crowds

The plan was first made public by the BizTimes which had obtained a draft of it and reported on Dec 19, 2016: "Wauwatosa officials have been meeting with a team from Milwaukee-based engineering firm GRAEF for more than a year to develop a master plan for the area around I94 and Watertown Plank Road." "The robust plan . . . envisions Watertown Plank Road . . . becoming a central business corridor connecting to Wauwatosa's village area." "The plan includes more density in the form of retail, restaurants and housing . . . allow for 6,500 housing units, 250,000 square feet office space and 70,000 square feet of retail. The estimated annual tax revenue generated by this additional development would be \$40 to 50 million.

The citizenry was further informed about the County Grounds by an article by Eddee Daniel in Milwaukee Magazine Jan 09, 2017 entitled "Wauwatosa Master Plan Would Bulldoze Last Corner of County Grounds". The subtitle read: "Must 'Sanctuary Woods' be sacrificed for retail and residential development?" Wonderful photographs depicted the beauty of the Woods.

The ensuing public meetings held by the City of Wauwatosa drew overflow crowds, the first two at city hall, Jan 17 and Feb 7. On March 11, Grassroots Wauwatosa staged a public forum on the future of the County Grounds featuring leaders of local environmental groups as speakers: Jim Price, Monarch Trail; Diane Dagelen, Sierra Club; Cheryl Nenn, Milwaukee Riverkeeper; Nancy Welch, alderperson; and Barb Agnew, Monarch Trail. It drew about 200 people. A third City-hosted meeting took place in the Muellner building in Hart Park on April 6, 2017, and drew about 300 people, practically all of whom spoke in opposition to the LSD plan. They told their reasons for conserving the woods: natural beauty, peace and quiet, wildlife habitat, historic preservation and increasing the market values of the properties near it.

In the continuing approval process, a series of public hearings were held at city hall by the responsible committees. People turned out in great numbers to those hearings to question the plan - the largest steady turnout of people that anybody could remember. Credit the County Grounds Coalition with its well-timed and informative messages written by chairman Peter Abbott.

On May 9, 2017, after a recommendation by the Community Affairs Committee, the Common Council voted to ask the County to re-zone the wooded County-owned land as conservancy. On May 25, Milwaukee County responded by passing a resolution in support of making the wooded area a park. In September, a zoning application was received by the City, but it was fraught with exclusions of environmental land and gerrymandering of commercial land to allow for possible development in the area to the west of the Woods where the vacant Food Services building exists.

On Oct 12, 2017, the Woods received national recognition when the Cultural Landscape Foundation included it on their annual list of threatened landscapes. It lent credibility to local conservation efforts.

Dissatisfied with the re-zoning request by the County and buoyed by the Landscape recognition, a large number of Wauwatosa residents rallied and filled the chamber of the County Parks Commission's Oct 24 meeting in the Courthouse in Milwaukee to ask that the County re-write the re-zoning application.

After months of uncertainty, on June 20, 2018, Alderman Matt Stippich issued a request to the Community Affairs committee to modify the LSD plan to call for zoning the wooded County-owned land as a Conservation District with the Sanctuary Woods area clearly defined on a map in the plan document for the first time. It passed, to applause by the audience, in their Oct 26 meeting. On Oct 8, the Plan Commission followed suit.

On Dec 4, the Common Council held another public hearing on the LSD plan. Again the subject drew a crowd that filled the chamber, 25 of whom spoke. Almost equal numbers spoke in the categories For, Against and Comment, but all called the plan inadequate in regard to ecology and the environment. Barb Agnew re-iterated her request for specific ecological protections. City officials complied, adding wording to the plan before it was up for approval on Dec 18.

Will the city be able to fulfill the plan to conserve the Woods?

In order for Sanctuary Woods to be conserved, it needs to be re-zoned as a Conservation District, which the City has the authority to do. However, it needs the cooperation of the landowner which is Milwaukee County, especially since the land is in parcels with boundaries which do not correspond exactly to the boundaries of the Sanctuary Woods as described in the LSD plan.

The County has indicated its intention to respect the wishes of the City of Wauwatosa as laid out in the new LSD plan, according to a recent message from Peter Abbott. However, the County must deal with a proposal from a developer to do a project on a parcel to the west of the Woods which also encroaches on the Woods. This current situation is reminiscent of September 2017 before the County submitted a zoning application which was unacceptable to the City.

Let's hope that the County remains steadfast in its respect for the LSD plan and works out a reasonable policy for potential developers of land on the borders of Sanctuary Woods, and that City officials involve themselves with the County to accomplish the objective of conserving the Woods.

Charlie Mitchell, a life-long conservationist and preservationist, is a member of the Wauwatosa Historic Preservation Commission. He attended most of the public hearings and meetings about the county grounds and spoke at several of them.

TIDBITS

Thank You: We give a continuing thank you to the UW Center for Cooperatives, for their ongoing support of the forestry and conservation efforts by PIF and Northwoods Alliance. Their support is the impetus for our programs, and their partnership is valuable to us all.

PIF dues: Since the very beginning of existence our required dues have been a mere \$25 annually, and we hope to keep them as such. We have appreciated the extra that some folks have contributed, and encourage you to send along a little extra when you are pleased with our efforts. Or, better yet, be more involved.

Wildcat Falls: Watch for the spring outing at a date to be determined. The winter snow shoe outing was cancelled because of excessive snow conditions at the time. Contributions to Northwoods Alliance Inc., 6063 Baker Lake Rd., Conover, WI 54519 for this project are much appreciated. As we continue to build community to realize the dream of a Wildcat Falls Community Forest. The Upper Peninsula Environmental Coalition and the Friends of Sylvania have joined other individual contributors in this effort. The Friends of Sylvania have pledged a \$3000 matching challenge donation which we are working on to complete. Be part of the *community!*

ERMINES

During winter, the ermine, also called the short-tailed weasel, (*Mustela erminea*) sheds its brown coat and replaces it with an all-white covering, (except for a black tip on the tail and a hint of black on the nose). This winter white coat is camouflage for life in snow country. The tiny ermine's cold-weather covering is valued highly by trappers, and the black-tipped tails have long been part of garments worn by kings and queens. In Old England laws protected ermine skins for only royalty! In less snowy climes, the ermine has only a partly white winter coat.

They are the smallest of the Weasel family (mustelids) in the north country, following the river otter, fisher, mink, marten and long tailed weasel. Male ermine are almost twice as large as females, varying in length from 7½ to 13½ inches. They are featherweights of the mammal kingdom, the ermine weighs a slight 2 to 6 ounces. They defy 'Bergmann's Rule' that states that larger members of a species live in the colder environments. The smaller size of weasels in the north apparently reflects a complex interplay of body size, energy requirements, fecundity, and vulnerability to predation.



Photo contributed by Rod Sharka

Don't let the lack of size lead you to think these tiny weasels get pushed around by other animals in the forest. They eat 50% or more of their body weight daily. Ounce for ounce, ermine are likely the most tenacious carnivores around. These little

bundles of energy typically hunt on the ground, running along fallen logs, though they are good tree climbers and will even pursue their prey in water. Mice are their main food. After a surprise attack, ermine pounce on their victim with all four feet, biting through the neck near the base of the skull. Other prey include birds, baby rabbits and shrews. They can have a detrimental effect on birds, however they normally prey low on the food chain to avoid the competition. They are known to take up residence in homes and buildings, and clear out the deer mice before they vacate, thus perhaps they should be welcomed.

The weasel also digs tunnels in the snow to escape danger. Den sites are usually situated beneath logs, stumps, roots, brush piles or stone walls, and have numerous entrances. Concealed within the den is a nest of plant material and hair. Ermine mate in July and give birth to four to nine young the following spring.

APEX PREDATORS: WHAT GOOD ARE THEY?

By Nancy Warren

When speaking of wolves or coyotes blogs often reflect negative comments such as wolves are decimating deer populations (they are not); wolves are lurking near bus stops waiting to snatch up a child (they are not) or wolf populations are “out of control” (they are not) and coyotes are nothing more than varmints (they aren't).

Predator contests, targeting coyotes, bobcat and foxes are held across the country, including Wisconsin and Michigan. For prize money and bragging rights, hunters are encouraged to kill the most; kill the biggest or the smallest. To some, fewer predators mean more deer or more birds to hunt. Sadly, the Department of Natural Resources does nothing to dispel the myths.

The fact is predators help keep the ecosystem in balance. Thousands of studies have shown that when predators are removed from food web, the system can become unbalanced, triggering often-catastrophic alterations.

So what good are wolves? Research suggests that:

- Wolves alter deer movements which allows for forest and habitat regeneration simply because deer spend less time in one place.
- In areas where wolves have returned, ungulate populations are reduced (by predation of the sick, weak, old and young). Ungulates are more vigilant and active (fear of predation), which takes browsing pressure off streamside trees and shrubs, allowing them to grow.
- With the return of riparian habitat, beaver and many bird species benefit and the beaver becomes an important food source for the wolf.
- In high wolf use areas, average maple sapling height more than doubled, forb species richness nearly doubled, and recruitment of maples was 24-fold higher.

CWD, a fatal disease, with no known treatment or recovery, has now been identified in 24 states. The economic impact of CWD in Wisconsin is estimated to exceed \$1 billion. After a long incubation period, deer and elk infected with CWD suffer neurological and behavioral problems such as staggering, shaking, and excessive salivation and urination. The CWD prions can remain infectious in soil for several years, especially in heavy clay soil.

It is not a coincidence that areas where CWD is most prevalent happen to be where there are few or no wolves. Research suggests that wolves may limit the spread of CWD because they eliminate infected animals at an early stage of the disease.

Benefits of Coyotes

Coyotes can have a regulatory effect on smaller predator populations such as fox, cats, raccoons, which allows the prey of the smaller predator species to survive. For example, raccoons consume

bird and turtle eggs and small or young ground nesting birds, an increase in raccoons can greatly affect bird and turtle populations.

By exerting a top-down regulation of other species, coyotes maintain the balance in the food web below and around them. When coyotes are absent or even just greatly reduced in a natural area, the relationships between species below them in the web are altered.

Coyotes are incredibly smart and have learned to survive in just about any habitat. They are skilled hunters and provide us with free pest control by keeping populations of mice and rats in check; yet, they are aggressively hunted and trapped throughout the Great Lakes Region.

Should Wolves Be Delisted?

During the period January 2012-December 2014, when wolves were federally delisted, 1473 wolves were killed through hunting and trapping (mostly in Minnesota and Wisconsin). More 900 wolves were killed in control actions. Wolves are on the cusp of being federal delisted again and we can expect the carnage to resume. Wisconsin law mandates a hunting/trapping season upon delisting.

Politically based management does little to protect the ecological benefits of wolves and coyotes. Nor does it increase tolerance for predators.

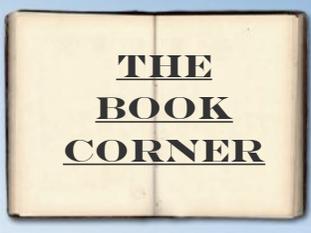
But, there is a possible solution. On December 17, 2018, the Center for Biological Diversity along with the Humane Society of the United States filed a formal petition with the Department of Interior and US Fish and Wildlife Services. The petition offered several options. Among them is to downlist the wolf as a federally threatened species. This will not only afford wolves a level of protection but also continue funding of wolf-recovery efforts and would allow state wildlife managers the flexibility to address wolf conflicts through lethal means. The petition also encourages the Service to develop a national recovery plan for wolves to promote recovery of wolves in areas of suitable habitat but without wolf populations such as the Adirondacks, southern Rockies and the Dakotas. Will the USFWS listen?

Aldo Leopold, considered by many to be the father of wildlife ecology, said it best, "The last word in ignorance is the man who says of an animal or plant: What good is it?"

Nancy Warren is secretary for Northwoods Alliance. She was awarded the Petosky Prize for Environmental Leadership in 2018, recognizing her commitment as a grass roots conservationist. She lives in the UP with her husband Al.

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Zen and the Art of Firewood

A PIF book review of:

Norwegian Wood

Chopping, Stacking and Drying Wood the Scandinavian Way

By Lars Mytting



Stacking method where all walls of a house or shed are completely covered with firewood, as described in **Norwegian Wood**. Photograph: Inge Hådem

Rick Plonsky

March 17, 2019

Few tasks in life are as satisfying as striking a round of red oak with quick axe strokes, and watching it split into equally divided pieces of fire wood. Yet, few things are as maddening, as swinging that same three- pound axe into an elm log, and have it stick firm, hopelessly trapped by the elm's fibrous tentacles. Such is the yin and yang of firewood.

Those hardy souls who heat their homes with split cord wood, know both the agony and ecstasy of the process. It's not easy; it takes dedication and hard work. But, for those who revel in the satisfaction of a job well done - and basking in the warm glow of their efforts- Lars Mytting has a book for you. *Norwegian Wood* is a paean to firewood, and all manner of things associated with it.

Although Mytting wrote the book for a Scandinavian audience, it travels well, and anyone who lives in a northern clime can learn much from it. Better yet, it's an enjoyable read, not just a how- to manual. He speaks to both the primal need of humans in cold country: stay warm or die, and the emotional satisfaction that comes from providing heat with a simple, carbon neutral solution, that is

as old as mankind itself. Who among us can resist the warm glow of a fire on a cold winter's night, or the scent of hardwood smoke from a cabin's chimney? In a fast paced and complex world, the simple tasks of cutting, splitting, stacking and burning wood are easily defined, and satisfying in their results.

Even the humble woodpile becomes an object lesson in psychology, and behavioral economics when he writes:

“You know exactly where you are with a woodpile. Its share price doesn't fall on the stock market. It won't rust. It won't sue for divorce. It just stands there and does one thing: it waits for winter. An investment account reminding you of all the hard work you've put into it. On bitterly cold January mornings it will bring back memories of those spring days when you sawed, split, and stacked as you worked to insure yourself against the cold.”

The text is peppered with anecdotes of Norwegians who are skilled practitioners. We learn the importance of sustainable forestry, the best way to fell trees, and listen to the debate on the best wood for heating; Birch (the predominant Norwegian species,) is much favored, but all species' characteristics, BTU value, drying time and other factors are considered. We learn the design features of popular axe heads and receive tips for easy splitting. For example: Wipe snow on the fresh cut ends of birch logs, the sun melts the snow during the day, the water soaks into the butt end and freezes when the temperature drops at night, forming cracks that split easily the next morning. We learn the history of woodpile design, along with the pros and cons of each style, and admire sculpted woodpiles shaped like fish or kings, created by artists. Efficiencies in chainsaw use, and transporting logs are discussed, as is wood stove design and operation, with some surprising insights on how wood burns, and the best way to capture its heat in the process.

But what truly makes this book enjoyable, is the way the author weaves bright threads of history, poetry, famous quotations, and even prayers into the story of firewood and fire. The classic Jotul 118 woodstove - exported around the world- is inscribed with this medieval Norwegian prayer:

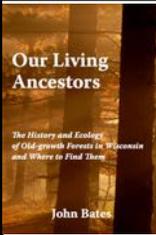
(English translation) “I damp down my fire, late at night, when day is done. God grant that my fire never goes out.”

The author explains:

“This fire prayer was originally said last thing at night, when the fire was damped down. A folk belief of the time held that fire kept the forces of evil at bay, and should the fire go out, these might yet enter the house.”

Norwegian Wood is not merely a firewood primer; it's a Zen like reflection on the forest, the trees and us. It provides several insights, and perhaps the most important is this: If we manage the boreal forests responsibly, the trees will provide us with heat to ward off the cold, and death itself, which lurks just outside our door.

Rick Plonsky is a PIF member, a Northwoods Alliance board member and a woodland owner in the UP.



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.

Is That Smell A Skunk?

As spring unfolds many of our critter friends become more active. We recently read of a very safe, and hopefully effective, remedy for skunk odor, devised by chemist Paul Krebaum. Skunk spray is a oily, yellow liquid which contains thiols—sulfur compounds which also contribute to the smell in garlic, onions, sweat and even decaying organic matter.

Recipe for pets or people. One quart 3% hydrogen peroxide, ¼ cup baking soda, 1 tbs. dish detergent. Dilute only slightly as needed with lukewarm water and apply immediately. Rinse with fresh water. Repeat as needed. Do not place mixture in a closed container or spray bottle. On clothes, or surfaces like decks and siding use the soap with a heavy dose of oxygen bleach.

This remedy is said to do much more than the tomato juice-vinegar recipes which only mask the smell temporarily.



Contributed by Rod Sharka

Did you know?

All branches of a tree when put together are equal in thickness to its trunk. Leonardo Davinci came up with this “rule of trees” and his rule was finally proven true by physicist Christophe Eloy in 2011.