



Partners News

October 2011

Contact us at:

Partners in Forestry
Landowner Cooperative

6063 Baker Lake Road
Conover, WI 54519

partnersinforesry@gmail.com
715-479-8528

PIF's Website:
www.partnersinforesry.com

PIF Board

Alvin Hogenmiller
Joe Hovel
Jim Joyce
Joe Koehler
Charlie Mitchell
Tom Navratil
Jeff Niese
Margo Popovich
John Schwarzmann
Rod Sharka

Inside this issue:

Welcome New Members . 1

Invasive Survey in
Vilas County 1

Announcement 1

Under the Canopy at
“Trees” First
Forest Fest 2

Twolined Chestnut Borer
Part 2..... 5

From Joe 7

Used Lumber is Ideal
for a Playhouse 8

In da Woods - Here's
Looking at Yew 10

Future Articles..... 11

WELCOME NEW PIF MEMBERS:

- **Curt Hare, Jr.**
- **Mike Sullivan**
- **Roger Jones**

INVASIVE SURVEY IN VILAS COUNTY

Our Vilas County members who participated in the invasive survey have responded in a very positive way. PIF owes a **big Thank You to Callie** for doing an excellent job surveying the lands and communicating with the participating members. Callie wrapped up her internship by giving her full report to the PIF Board, and the following day to the County Conservation committee. We wish Callie well in her forestry future and consider her a good friend. Let's also not forget that none of this would have been possible without the diligence and passion of Rod Sharka. **Thank you Rod and Callie**, PIF is a better COOP because of your efforts.



ANNOUNCEMENT

The Pilgrim River Watershed Project, of which PIF is, at least by moral support, a supporting partner, received a very nice challenge grant from the JA Woollam foundation of Lincoln, NE. Please see www.pilgrimriverwatershed.org for details. Feel free to visit the Pilgrim project and take advantage of it's great trout fishing, hiking, mountain biking and birding.

Under the Canopy at "Trees" First Forest Fest

By W. Kellogg

Imagine a fiesta set in the forest, where the morning smell of warm cinnamon buns wafted in the folksy music-laden air amid talented vendors of many eclectic disciplines. All congregated in one setting, you could visit and experience chainsaw carving, intricate pine needle basketry, paper-making, forest-themed quilting, rich-hued wood-turned bowls, encaustic art, to paper & timber companies, timber harvesting equipment, utility companies, local honey producers, northwoods authors, recreation & sport organizations and wildlife rescue centers. Wow! What better environment for learning, fun, feasting and an exchange of ideas!

Trees For Tomorrow's "Forest Fest" was a gala educating attendees in the integral role these folks play in our everyday lives. We were incredibly fortunate to have such a cohesive relationship with Partners In Forestry and the essential sponsorship of the WI Energy Office, Plum Creek Foundation, Society of American Foresters, Mr. George Stepien, WI Energy Foundation, WI Public Service, Georgia-Pacific, First National Bank of Eagle River and the Harley-Davidson Foundation.

This celebration of the forest took place Saturday, August 6, 2011, from 9am to nearly 4pm, as a severe storm threatened the fest's last hour. The event garnered a great deal of attention and attendance from local communities far and wide. We attracted over 700 visitors who were able to experience the message of sustainability that many of our visiting students, educators, and chaperones gain during their stay at "Trees". Activities such as face painting, paper-making, historical interpretive story-telling, a ventriloquist, a clown on a motorcycle, live music and horse-drawn wagon rides made for an ideal way to spend a summer day. Of course we must tout the fantastic menu we offered of healthy grass-fed, non-MG, non-corn syrup hamburgers and brats, from Futility Farms, coupled with mouth-watering buttery grilled "Corn Lady" sweet corn and free cake, ice cream and maple syrup for dessert!

All ages and curiosities were addressed with topics ranging from timber sports, arts & crafts to trapping and hunting in addition to mighty timber harvesting equipment and timber production methodologies. At Forest Fest you could witness an active partnership of harmonizing interests between those whose livelihood came directly from harvested forest resources, organizations active in mentoring youth in skills for outdoor living, wildlife rescue and farming production

organizations and lastly those who took inspiration utilizing art or musical ability to capture and translate what it means to them personally.

You could question any exhibitor and have a conversation about the many wild predator birds they've rescued, rehabilitated and set free over the year to such topics as honey production, the challenge the northwoods climate poses to apiarians and the intrinsic health benefits honey can provide to allergy sufferers. With countless demonstrations and exhibitors who were outwardly passionate about their niche in the fest, it was a meeting of the minds to educate and enliven many on the pioneer-like, industrious, artful nature of northwoods business folk!

TFT is in the business of awakening minds to the natural ecology around us and its delicately balanced relationship with the human world. Live demonstration lectures, where animals of many species can interact with the audience, is one method TFT educators understand, reveals how inextricably linked our two worlds are.

TFT Educator Troy Walters, in conjunction with the Northwoods Wildlife Center, brought our feathered friends to light during two "Birds of Prey" programs in the Ed Hall. The admitted stars of the program are never the educator so much as the feathered teachers who clearly and truthfully exhibit massive life support skills, grace and the effects of the human world on nature. Four different species of birds were represented there: the Great Horned Owl, Red-Tailed Hawk, Eastern Screech Owl and the American Kestrel. The audience could understand the stealth of the owl family by its expertly keen eyes housed in an eye socket large enough to fit our own eyeball, as well as specially engineered feathers which make for a quiet descent upon unwitting prey. Owls even have offset asymmetrical ear canals which help to capture sound advantageously for hunting and survival. This bird has an unfathomable head-turning radius, for an owl skull can place its lower chin practically up to the crown of its head, a rotation physically impossible for humans and many animals. Fritz, the Eastern Screech Owl wore such a distinctive bark-patterned camouflaged coat of chest feathers, allowing him to effortlessly disappear within a tree trunk! Audience members able to observe this, were bewildered and those who sat in the front rows were rewarded with a special up-close-and-personal greeting from these four majestic birds of prey.

"Trees" recognizes Forest Fest was very well-received this first year and we want to offer an overwhelming "THANK YOU" with respect to our sponsors, wonderful vendors, exhibitors and animal forest ambassadors for participating in the First Annual Forest Fest. "Trees" expects, with your involvement and the public's curiosity for learning and exploring the natural world, Forest Fest will be a yearly event! We were encouraged to learn we already have commitments for August 4, 2012, so we ask you to stay tuned and check back with our website as we dream up new possibilities!

Thank You Forest Fest 2011 Participants!

PICTURES FROM FOREST FEST 2011 contributed by Rod Sharka



TWOLINED CHESTNUT BORER - PART 2

Contributed by:

John Schwarzmann

Forest Supervisor, Board of Commissioners of Public Lands



USDA by George Heaton

IDENTIFICATION OF LIFE STAGES

Adult twolined chestnut borers are slender, black beetles, 1/5 to 1/2 inch (5 mm to 13 mm) long with 2 golden stripes along their back (see cover photo). Adults are active from April to August, depending on the geographic location and temperature. In the Lake States, emergence usually begins in late May to early June and peaks in mid-to late June.



USDA by Robert A. Haack

Figure 4- Twolined chestnut borer larvae. The center larva represents the type that would be found feeding in the cambial region during late summer. The other two, doubled-overlarvae represent individuals taken from their pupal chambers during the winter

After emerging, adults fly to the crowns of oak trees and feed on foliage before moving to the branches and trunks to mate. Females lay their eggs in small clusters in bark cracks and crevices. Larvae hatch within 1 to 2 weeks.

Larvae are white, slender, about 1 inch (25 mm) long when fully grown, and have two spines at the tip of the abdomen (Figure 4); almost all other wood borer larvae lack such spines. The larvae burrow through the bark to the cambial region. Larvae construct meandering galleries (Figure 5) that are packed tightly with frass (feces mixed with boring dust). These feeding galleries cut the flow of food and water in the phloem and xylem.



Photo courtesy of Minnesota Department of Natural Resources

Figure 5- Typical larval galleries of the twolined chestnut borer as seen on the sapwood surface of an oak tree.

Larvae go through four instars (forms between molts) between early summer and fall. When fully grown (usually August to October), the larvae burrow into the outer bark and construct individual chambers in which to pass the winter. If the outer bark is thin, the larvae construct chambers in the outer sapwood. Larvae pass the winter in a doubled-over position (Figure 4). Pupation (turning into pupae, a resting stage) occurs the following spring, and adults emerge soon thereafter to renew the cycle.

The twolined chestnut borer produces only one generation per year. However, in rare cases it may take 2 years for some larvae to complete development, especially in the northern extremes of the insect's range, or when developing from eggs laid late in the growing season.

Larvae of the twolined chestnut borer, as well as other members of the family Buprestidae, are called flatheaded wood borers because of the greatly enlarged and flattened first and sometimes second and third thoracic segments (segments of the thorax, the middle of three chief divisions of the insect body). Adult Buprestidae are called metallic wood borers because their ventral (lower) side, and sometimes their dorsal (upper) side, is iridescent or metallic-colored.

Management Techniques

When discussing control strategies for the twolined chestnut borer, it is important to remember that this insect attacks stressed oaks. Recall also that practically nothing can be done to save infested portions of a tree once symptoms become visible, because at that time the damage to the host tree is nearly complete.

Management programs should first attempt to prevent attack from occurring, but if it happens, managers have several control options to use.

Prevention: Thin overstocked stands to increase the vigor of the remaining trees, but use caution to minimize injury to the residual stand. Harvest first the overmature oaks and those of poor vigor. Twolined chestnut borer populations will not build up in logging slash because the material dries too quickly to support larval development.

In residential areas, improve tree vigor by implementing mulching, watering, soil aeration, and fertilization programs. Avoid using lawn fertilizers that contain weed killers near oaks. Use caution

during construction and landscaping to avoid soil compaction and damage to roots and trunks.

Natural Control: Larval parasites provide limited natural control of the twolined chestnut borer. One larval parasite, the chalcid wasp *Phasgonophora sulfate* (Figure 6), has caused as much as 10 percent annual larval mortality in Wisconsin.

Downy and hairy woodpeckers, *Picoides pubescens* and *Picoides villosus*, are the two most important predators, feeding primarily on the overwintering larvae. These woodpeckers consumed 78 percent of the larvae from a single white oak tree during one winter in New York State.

Cultural Control: Twolined chestnut borer larvae are sensitive to rapid drying of the host tissues. Felling infested oaks during the summer promotes faster drying of the cambial region and can kill the developing larvae. It is critical to fell oaks after most egg laying has ended, but before most larvae have become third instars. In the Lake States, best results occur when oaks are felled during mid-July. Somewhat earlier dates would apply further south. This approach eliminates the need to destroy the infested material quickly because few if any adults will ever emerge.

Pruning is a control option best conducted in late summer when heavily infested branches can be easily identified by foliage that has prematurely wilted. Prune below the last wilted leaves on each infested branch. Burn, chip, or bury the infested material



USDA by Peter Rush

Figure 6. - Female (above) and male (below) *Phasgonophora sulcata* adults, common larval parasites of the twolined chestnut borer.

before adults emerge. Proper removal of infested branches during the first year of infestation, combined with cultural treatments to improve tree vigor, may allow some trees to survive. However, no treatment program can guarantee lifelong protection against future attack by twolined chestnut borer.

From autumn through the following spring, control strategies are aimed primarily at fully grown larvae that are located primarily in the outer bark. For severely infested oaks, like those described in the second or third year of attack, fell and destroy them before adults emerge. Felling infested oaks from autumn through spring, and even cutting them to firewood lengths, will not greatly reduce borer survival. If possible, remove and destroy the outer bark from currently infested logs; such material will have galleries under the bark (Figure 5), but no exit holes. Destroying the outer bark kills almost all overwintering larvae. The remaining debarked logs pose no further threat from the twolined chestnut borer.

In salvage operations, mark dead and infested oaks in late summer and complete the salvage project before adults emerge the following spring. Prompt removal can lower local borer populations. Make efforts to minimize damage to the residual trees, thereby reducing the number of host trees under stress.

If the infested wood cannot be disposed of prior to adult emergence, place a heavy tarp over the stacked logs or firewood and seal the tarp at the base with soil. Keep it sealed during the entire period of adult activity-May and June in the North, but earlier further south. The adults will emerge and die beneath the tarp.

Remember that once a tree has been killed and the twolined chestnut borer adults have emerged, the tree poses no further threat as a breeding site for this particular beetle. Efforts to reduce local twolined chestnut borer populations should therefore be aimed at currently infested oaks.

Another option is to use trap trees to attract adult twolined chestnut borers. Do this by girdling living oak trees 1 to 4 weeks before adults are expected to emerge, preferably suppressed (smaller or weaker) trees or ones that have been selected for later removal. Note that oaks in the white oak group must be girdled deeper than those in the red oak group to cause death. Adult females are attracted to and lay eggs on girdled oaks, but the larvae will die because the host tissues become excessively dry. Girdle trees close to the ground, because borer larvae can complete development between the groundline and where the tree was girdled.

FROM JOE:

Have ya paid your dues?

As I am certain is the case with most organizations, our renewals have not kept up with the pace we need. This is your COOP, please be involved. No one receives any compensation for the expenditure of time in this organization, your humble dues simply pay for expenses to serve you. If you do not care about retaining your membership, please notify us and we can omit your name from the mailing list.

Also, I have too many outdated email addresses. If you are not receiving PIF emails, I need your address. We will not share it. I personally extend a big thank you to all of you who have paid your dues timely, and to the new members, for placing faith in us.

There is no shortage of threats out there to what we care about. What concerns you? Prolonged droughts have harmed the northern forests, invasive species seem too much to handle. Deer browse has cost forestry more than most can comprehend. Fragmentation remains a big issue, even in this recession time. Wisconsin is looking at a rewrite of the MFL. Mining is taking over Northern Wisconsin and the UP. Where are you at on these issues? You need to let us know so we can represent your interests. Do you have something to offer your COOP? Get active.

USED LUMBER IS IDEAL FOR A PLAYHOUSE

By Charles Mitchell

Last year I re-built our wooden lake-view deck. It was 19 years old and many of the cedar floor boards were rotting in spots and deflecting under foot. The only practical repair was to remove and replace the whole floor which left me with a large pile of used but mostly-sound 2 x 6-inch boards. After considering discarding the boards, and thinking about what they could be used for, wife Carolyn and I decided they were well-suited as material for a playhouse.

We had considered building a playhouse in years past to help entertain our grandchildren when they came to visit. We weren't sure how interested they would be in playing in it, how much time they would spend in it, so we never wanted to sink much money into it. But now, after some thought about how it could be designed, we had ninety percent of the material on hand.

Construction of a playhouse would be a good learning experience for the children, especially the eight- and eleven-year old boys. They would gain building skills that would be useful in home maintenance the rest of their lives. So we decided to go ahead with the playhouse, as long as the children participated in building it.

Last Fall, 2010, we started construction. I selected a site about 100 feet from our house, in the woods beyond some fir trees – far enough so the kids would feel independent, but close enough to be supervised from the house. We made the floor area a simple eight by eight feet, and the foundation is pressure-treated 4 x 4's. The boys, Jimmy, 11, and Johnny, 8, leveled the ground, under my supervision, using shovels.

By the end of the week, they had screwed the outdoor rated plywood floor on, I had erected a simple frame with the least possible sticks of wood, their father had cut a bunch of siding boards to length, and the boys had screwed about three-quarters of the siding on. With the advent of





"deck" screws with star-drive sockets, and light-weight variable-speed electric tools, the boys were able to make quick work of it. One of them would start the screw with a couple of hammer blows, and the other would drive it home.

The playhouse sat untouched over the winter and most of the spring. It took discipline for me not to just go and finish it up. In June the boys came up with their mother for a week, and we got the rest of the siding boards up, with caulking between them, and most of the roof on. They started having fun on the roof, a height that their mother disapproved of, and they saw quick progress. They nailed tar-paper over one half of the roof and didn't want to go home.

In July, I finished the roof and shingled it with the same shingles as on our house. I hung the door and installed the knob and mounted a used double-hung window in the back wall. Carolyn painted the interior and I put down some discarded carpet tiles.

We have a fine new cedar deck (There is nothing like natural wood.) and we made good use of the old boards. The worst deterioration of the boards had occurred at the joints between the ends of the boards, where moisture from rain and snow had penetrated the end-grain of the wood. To make the boards acceptable for re-use involved cutting off practically all the ends. This taught me that the ends of floor boards installed outdoors need to be sealed with a good penetrating wood sealer. The builder of our deck had applied a coat of penetrating wood finish all around each board before bringing them to our yard, but then when the boards were cut to length, the ends were bare. When I installed the new cedar lumber, I sealed the ends of boards after I cut them, two coats. This is a method I seriously recommend for all deck construction.

In late July, we had six grand-children up from the city for four days of what has come to be termed "cousins camp." They made a project of painting some wooden letters that Carolyn bought at a craft store and making a placard that states Cousins Club which I installed over the door. Oh, and they did play in it, even had lunch in it and a picnic outside it. How much more they ever use it, we'll see.

IN DA WOODS

by Melanie B. Fullman, US Forest Service

HERE'S LOOKING AT YEW



A lush understory of yew on the Pilgrim River watershed project, where apparently deep winter snows prevent the deer from extensive browsing.

A gentleman from Bessemer recently called to ask what I knew about the increasing scarcity of "ground hemlock"? He said he frequently walks along the Black River near Bessemer and used to see lots of ground hemlock, even avoiding it whenever possible because "the 6-8' ground branches impeded walking". He stated it is definitely NOT a tree, more shrub-like.

I was confused. Ground hemlock??? So I consulted the Oracle - Forest Botanist Sue Trull, who quickly surmised he was referring to Canada yew (*Taxus Canadensis*).

Yew There?

Canada yew is a low, straggling, evergreen shrub typically 3-6' tall with spreading limbs that be twice as wide as the overall height. Short, flat needles are dark green above, pale green below, becoming a reddish-brown in winter. The brown bark is thin and scaly.

The shrub lives in moist, mixed woods from Newfoundland to southeastern Manitoba and south through the northeastern and central US, including the North Woods. It thrives in swampy forests, ravines,

riverbanks, and on lake shores. In some places it is simply called "yew"; in other parts, American yew or ground-hemlock.

Like other yews, it is highly shade-tolerant, with clumps of the plants often forming a fairly continuous, dense ground cover. Interestingly, the creation of a dense yew covering appears to prevent the establishment of balsam fir. Canada yew does not live at all in open, well-light communities like aspen stands. It is also highly intolerant of disturbance, readily extirpated by logging or fire. Regeneration by seed is primarily from the droppings of birds perched in older forests.

Highly preferred by moose and white-tailed deer, it can be easily eaten out of an area. Its widespread decline in Wisconsin and the UP, including the Bessemer area, is probably due to excessive deer browsing.

Yew-Turn

Canada yew berries are small, fleshy, and bright red. While that's makes an easy meal for several species of birds – namely grouse, cedar waxwings, and robins – the attractiveness of the fruits is generally bad news for parents. Most parts of the yew are poisonous to humans, horses, and cattle. Sensitivity to the toxin varies by age, weight, physical condition, and individual susceptibility. Children are most vulnerable because of their curiosity and small size. Toxicity can also vary in a particular plant, by season, the plant parts, and its stage of growth.

In an odd twist of nature, this toxin that can sicken people unintentionally can also save lives. In 1960, the USDA and National Cancer Institute started testing plants for chemicals that might have the potential to fight cancer. A compound called paclitaxel was identified as an anti-cancer chemical in the bark of Pacific yew shrubs. Unfortunately, the demand for the chemical was greater than the supply of Pacific yew. And it has proven quite difficult to produce by synthetic means.

Enter the Canada yew, a close relative of, and much more abundant species than the Pacific. Plus, the critical taxane compound can be obtained from new shoots of Canada yew branches on a 5-year cycle, whereas it must be stripped from the bark of the Pacific variety, which kills the plant. Given the high levels of taxanes in Canada yew, this species is poised to become one of the most valuable natural sources of taxane for the pharmaceutical industry.

No More Taxus? (sorry, couldn't resist)

Not surprisingly, commercial yew harvest has increased dramatically in Canada and the US in the last 20 years. Both the European Union and US Food and Drug Agency require that all plants used for drug production be harvested in a sustainable manner. An audit of some harvesters in Ontario concluded they were using sustainable harvest practices, but the regulations are difficult to enforce.

Given its susceptibility to disturbance and browse pressure, it will be critical to ensure that wild Canada yew populations remain healthy, for the sake of the forest and us!

Like I always say, hoping to see YEW in the woods. [OK, you can stop groaning now at the awful puns! ☺]



Yew berry

Future Articles

As of press time we had not received the final form of two additional stories, by Joe's interviews, but we hope to have a follow up issue very soon and include these. Look for a feature with the industry perspective on wood preservation and decay from our friends at Biewer Lumber. Also learn about wood (and forest) destroying insects in our exclusive interview with Phil Pellitteri, Entomologist at UW.

PIF members are encouraged to submit articles, announcements, photos, and items of interest for future newsletters. Submissions may be forwarded to Margo Popovich at margo122050@mac.com or mailed to:

Partners In Forestry
6063 Baker Lake Rd
Conover, WI 54519

Have you checked out

PIF's website?

www.partnersinforestry.com

Please use the website to expose your business, service, or tree farm. Share thoughts, ideas, articles, photos, links.

All suggestions are welcome and appreciated! This is your COOP, we need your input as much or more than your dues.

Please forward the information to Margo Popovich at margo122050@mac.com.

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

- Napoleon wood stoves
- wood finishes and preservatives
- garden and tree amendments
- grass seed for trails



**Winter is an etching, spring a watercolor,
summer an oil painting and autumn a
mosaic of them all. ~Stanley Horowitz**



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"This institution is an equal opportunity provider."

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.