Mazina'igan
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Preparing for winter in the Penokees

By Sue Erickson, Staff Writer

Upson, Wis.—Frosty mornings do not daunt Mel Gasper, director of the Lac Courte Oreilles (LCO) Harvest Educational Learning Project camp that has been nestled in the Penokee Mountain woods since early spring. He and four others intend to stay the full winter and couldn't be happier.

"It's so great out here," Gasper remarks with an infectious smile, obviously enjoying his life at the camp and everything of beauty the Penokee environment offers.

Eleven flags greet visitors at the entrance of the LCO campsite in the Penokees, representing: Ho Chunk Nation, Dallai Lama, St. Croix, Lac Vieux Desert, Lac Courte Oreilles, Bad River and Red Lake Ojibwe; Iroquois/Ojibwa Treaty, State of Wisconsin, AIM, and the Mole Lake Treaty. (SE)

Gasper is committed to protecting the Penokee Hills from potential damage by a proposed taconite mine. "I would like the Penokee Range to stay the way it is for the future generations—seven generations—to have the beauty and spirit of what this really is. Miigwech!" Gasper states.

Now a permanent resident of Iron County, he has spent six months at the camp, investigating the area and welcoming visitors who seem to stop by regularly. Some come to stay a few days, or a week; others are curious one-time visitors. They all receive hospitality and some education from Gasper, who is the host with the most when it comes to show and tell about the Penokees, the proposed GTac mine, treaty rights and the environment.

Recently eighteen LCO first-graders paid a visit and were treated to a campfire, roasting marshmallows and a nature walk, where the kids could run and tumble through the woods and explore. This was Gasper's opportunity to talk about the values he holds dear—the need to care for aki (earth) and nibi (water), even about conglomerate rock as well as about tribal treaty rights to hunt, fish and gather on the ceded territories. "We teach about spirituality and about how this is everybody's land," he says.

An accomplished survivalist, Gasper is relaxed and at home in his natural environment. Thrilled by the quiet evenings spent sharing stories or working on projects, such as his birch bark baskets or items whitled from diamond willow. His latest creation is a Green Bay Packer hairpiece tooled and etched in wiigwaas (birch bark) for a special friend.

Also in camp for the winter experience are Larry Ackley, his wife Jen and stepson Trevor as well as Nick Van der Puy. A narrow, well-packed trail leads to Ackley's roomy winter wigwam swathed in tightly tied blue tarps and replete with a toasty woodstove as a centerpiece, table and chairs and winter gear inside.

"We are well supplied," Gasper says, "with plenty of food. We're like a hardware store with tools, axes, mauls, chainsaws. We also live off the land."

Hunting supplies venison and poultry. The camp has also been given buffalo and elk meat which have been included in an ongoing stew. "We had some bear stew. When the pot ran low, we added more water and veggies and threw in some

(See Winter in the Penokees, page 8)

Early detection of invasive phragmites in Chequamegon Bay prompts rapid response

By Miles Falck
Wildlife Biologist

Odanah, Wis.—Several small populations of the invasive grass *phragmites australis* subsp. *australis*, or common reed grass, have been found along the western shoreline of Chequamegon Bay and inland, near wastewater treatment plants (WWTPs) in Washburn, Bayfield, and Red Cliff.

GLIFWC staff have been collaborating with Red Cliff, Bad River, Bayfield County, the National Park Service, several private landowners, and WWTP operators to survey for and treat local phragmites populations. Thirty-one populations have been identified and treated with herbicide. These sites will be monitored in the future to insure they have been eradicated.

Both a native (subsp. *americanus*) and a non-native (subsp. *australis*) subspecies of phragmites are present in North America. The non-native subspecies of phragmites is extremely invasive, growing in nearshore and wetland habitats in waters up to one meter deep as well as floating mats in deeper water. Phragmites can grow to heights of over 19 feet, and densities of 200 stems per square meter. Non-native phragmites poses a serious environmental risk to the freshwater estuaries of Chequamegon Bay, and could threaten manoomin (wild rice) waters further inland as well.

Phragmites is already a well-known menace along the Lake Michigan shoreline, however it is not common in the Wisconsin and Michigan portion of the Lake Superior watershed. When attempting to manage invasive species, it is important to pick "winnable" battles. When you weigh the current limited distribution and abundance of phragmites in the Lake Superior watershed against the potential loss of coastal estuaries and nearshore open waters, it is easy to conclude that this is a battle worth fighting.

Although non-native phragmites are classified as a restricted invasive species under Wisconsin's Administrative Code NR40, the use of non-native phragmites in WWTPs to dewater sewage sludge (reed bed technology) is permitted by Wisconsin Department of Natural Resources (WDNR), or Environmental Protection Agency (EPA) for tribal applications.

At the time these facilities were constructed, it was thought that phragmites spread primarily by floating roots

(See Phragmites, page 18)

Viable phragmites seeds escaping from reed beds at wastewater treatment plants are a source for phragmites infestations like the one pictured here near Bayfield. Once established on the shoreline, phragmites also spreads via floating roots and rhizomes [inset]. (Photos by Miles Falck)

Culture, science fuse at LCO School

By Charlie Otto Rasmussen, Staff Writer

Seeley, Wis.—Along the Pacwawong Lake shoreline, the signs are everywhere. Wisps of sage smoke filter through the alders; Ojibwemowin fills the late summer air in a soaring drum song; out on the water, the soft swishing of cedar knockers against manoomin stalks stirs a covey of red-winged blackbirds. Ricers have set up shop.

"This spot has seen a lot of camps, old rice camps," said Jim Miller, Lac Courte Oreilles School (LCO) cultural educator. "They'd stay here for two weeks if they had to—until it was done."

While the sounds and smells are the same, there's an elemental change here from old-time manoomin camps when a handful of kids played hooky to help out. An entire high school has emptied, recreating Pacwawong into a one-of-a-kind classroom where science and math merge with Ojibwe culture.

"We've got the whole student body of Lac Courte Oreilles High School out here," said Jason Bisonette, LCO education specialist. "There are all these traditional gifts like wild rice that we've been given. We're building an academic foundation with those gifts. It's an approach that involves traditional Ojibwe knowledge and federally mandated curriculum. It blends the two."

Around 50 students and a half-dozen instructors divided up between the rice camp, situated on a blacktopped parking area, and a fleet of nine canoes provided by GLIFWC. Paired off in canoes, teenagers took turns knocking manoomin with cedar sticks and propelling their fiberglass canoes with 10-foot push poles.

GLIFWC Officer Lauren Tuori patrolled Pacwawong—a lush widening of the Namekagon River—in a canoe of her own, relying mostly on audio cues to assist students concealed in the looming vegetation. Cries for help came following spills into the shallow water, and Tuori worked with life-jacketed students to drain and re-board canoes.

Robyn Trepania's unexpected entry into Pacwawong Lake did little to dampen her enthusiasm for the school-day venture.

"I'm actually experiencing my culture, doing the things that my people do," said the LCO sophomore. "I don't think I want to go deer hunting or anything like that, but this is cool. It was nice to hear the drum playing while we were out there."

Trepania dried off at the rice camp where some of her classmates were busy preparing fresh manoomin for analysis. The toasted-nut smell of heated manoomin swirled on a light breeze as LCO teens scorched their harvest in a steel tub over a propane flame. From the wooden deck of a beached dock, students and teachers examined the properties of green versus scorched wild rice, recording the weight of each on an analog scale.

Understanding how manoomin—one of the most significant natural resources to Ojibwe people—reacts when exposed to common pollutants is a core part of the program that runs throughout the school year, Bisonette said.

Lac Courte Oreilles students Jaime Thayer-Vega and Javier Yanez found a good crop of manoomin on Pacwawong Lake in early September. (Photo by Charlie Otto Rasmussen)

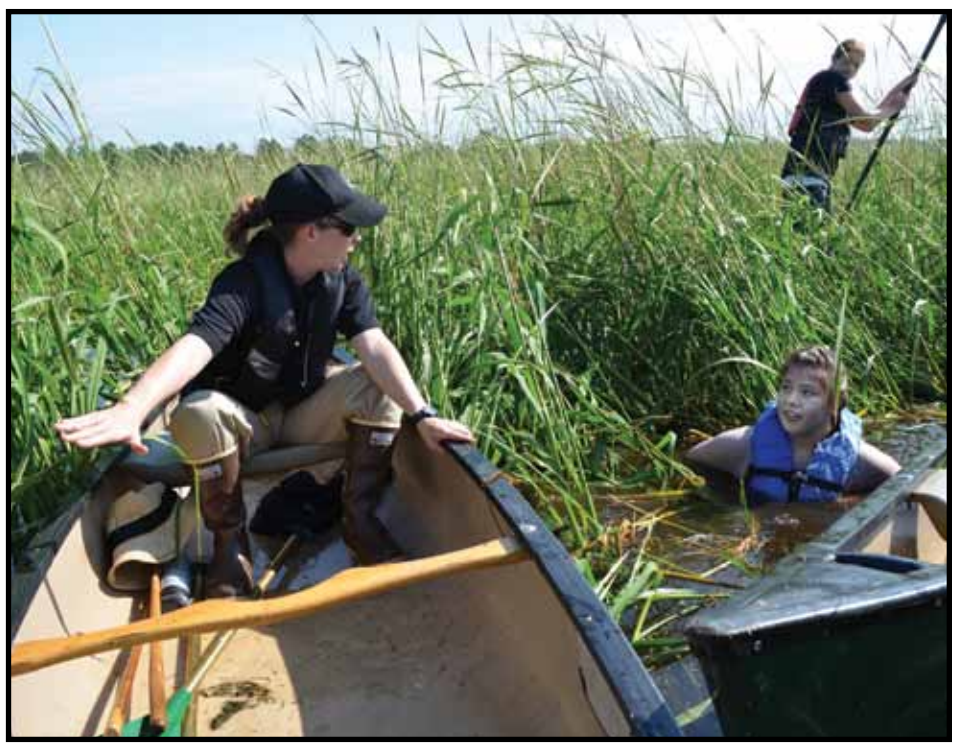
"In laboratory conditions we'll introduce things like motor oil to see how the rice reacts. We'll be raising and lowering water levels too to create normal conditions," said Bisonette.

Back at LCO K-12 Schools around a month later, students sang, danced and socialized at the all-school pow wow—Ojibwe culture thriving, alive and well. Aquariums housing manoomin experiments waited back in the upperclassmen's science room, plus the second and fourth grade classrooms.

"There's a big difference between educating Ojibwe kids and Ojibwe education," Bisonette said. "We want the kids to understand who they are as a people and all the amazing things that make them incredibly unique."

The term pacawawong (including alternate spellings) appears in a handful of locations across Ojibwe Country and is generally translated as "bay of the river" or "where the river is wide."

LeRoy Mustache, a student from the Lac Courte Oreilles Ojibwe High School, checks the weight of a cup of scorched manoomin. (COR)



Standing up in a canoe, powering a pushpole through a manoomin marsh is tricky business. When it's your first time doing it—watch out! GLIFWC Officer Lauren Tuori assisted several pairs of Lac Courte Oreilles student ricers that flipped into the drink. Pictured, Tuori guides Robyn Trepania through the process of draining her swamped canoe. Once emptied of water, Tuori steadied the canoe for Trepania and her partner to climb in and continue harvesting rice—manoominike. (Photo by COR)

Attention tribal ricers

GLIFWC is in the process of gathering information about the 2013 ricing season through telephone surveys. We much appreciate your cooperation. Your information helps us better understand and manage manoomin in the ceded territories. Miigwech!!

On the cover

Ed Wiggins, Bad River ricer, poles through the Kakagon River rice bed on the Bad River reservation. Artistic effects by Wesley Ballinger. (Photo by Charlie Otto Rasmussen)

2013 Manoomin season produced pleasantly surprising results

By Lisa David, GLIFWC Manoomin Biologist

Odanah, Wis.—Not all surprises are good but this one sure was. When September came we were pleasantly surprised by the number of successful wild rice harvesting trips we were hearing about. The late spring warm up which caused a delayed growing season in the northwoods did not seem to hinder the entire manoomin crop when it came time to harvest.

It's always a pleasant surprise when the weather cooperates too. This year harvesters were aided by the lack of storms and the overall good weather that prevailed during the ricing season.

Good weather is only one component of a productive ricing season, however. And harvesters soon discovered that manoomin was scattered across the ceded territory in a patchwork of dense and sparse stands this year. Our aerial surveys showed both the abundance and variability of rice out there. It was not uncommon to note a lake with both a prospering rice stand and a failing stand.

Information from GLIFWC's rice flights and field observations were again posted online to help guide ceded territory gaa-manoominikejig (rice harvesters). Folks who waited and scouted were fortunate to come away with manoomin to replenish dwindling stocks.

Of special interest this year was Clam Lake in Burnett County—a rice water of much concern these past few years due in large part to the destructive influence of the expanding common carp numbers. Thanks to the efforts of the St. Croix Band there was a rebound in Clam's manoomin bed. In 2013 the tribe again deployed a submerged net across the bay's narrows to keep carp out of a historic rice bed at the southern end of the lake.

Although not yet open to general public harvest, the St. Croix Tribe was able to harvest from this manoomin stand to use as reseeding efforts to further help Clam's depleted seed bank.

State harvest surveys are starting to come to the office which means that the tribal phone surveys will soon be underway. So, be ready to let us know about your 2013 rice harvest experience, your impressions and comments. Information from the two state and tribal harvest surveys will be used to assess the 2013 ceded territory manoomin harvest.

As we wrap up the manoomin season and put the thresher into storage, we can enjoy binaakwii-giizis (October or falling leaves moon) and as one survey respondent put it "… and look forward to next year."

"First time ricing. I plan to do it again in the future... It was a wonderful experience."

"One of the better ricing years—we did well for the short amount of time we were out."

"Miigwech for all that you do to regulate, educate and protect our wild rice!"

—Random comments from GLIFWC's state ricer survey

Former Lac Courte Oreilles chairman and tribal council member gaiashkibos harvested manoomin from Pacwawong Lake on the same day LCO High School set up their rice camp. He said he was pleased to learn that the school cleared out to go ricing and offered up a bit of Ojibwe insight passed down to him many years ago. "You know the old people used to say to look for the rice birds. That's where you find ripe rice. When you see those birds, that's the way you go." (Photo by COR)

Fresh off the stalks, harvested manoomin lies in the bottom of a jiimaan (canoe) ready to be taken ashore and processed. Successful harvesting took place on many manoomin lakes this fall—a pleasant surprise. (Photo by COR)

Nibi and manoomin: Building lasting relationships

By Lisa David, GLIFWC Manoomin Biologist

Onamia, Minn.—Nibi and manoomin. Water and wild rice. The entwined relationship of these two important resources was the central theme of a recent symposium held at the Grand Casino in Mille Lacs.

The gathering brought together elders, harvesters, water walkers, university staff, and citizens all interested in maintaining both healthy rice beds as well as healthy relationships between all the parties involved in the manoomin dialogue.

This year's symposium titled "Nibi and Manoomin: Building Lasting Relationships" was the third held since 2009 focusing on creating a trusted environment for the exchange of knowledge between western and Anishinaabe cultural world views.

Presentations by several tribal elders stressed the need to infuse traditional ecological knowledge into everyday practices to ensure plenty of natural wild rice for future generations. Keynote themes revolved around respect for indigenous knowledge, balanced decision-making, and the fact that integrated perspectives must involve the full participation of indigenous peoples.

It is clear that these two culturally important resources will continue to thrive as long as all the parties work together to respect, preserve and properly care for them.

Summaries of the keynote speakers as well as summaries from the four working group sessions of the 2013 Nibi symposium are available online through the University of Minnesota website or by using the following address: *www.cfans.umn.edu/diversity/Initiatives/wildrice.htm*

Bill Burns puts harvested manoomin into the "scorcher" which turns the rice as it is heated, making the husks brittle. A small garage in back of Myron Burns' home on the Bad River reservation houses a neat mechanical manoomin processing operation run by Bill and his father Myron. A three-step operation, involving a scorcher, a separating machine or thresher and a winnower, yields a clean batch of manoomin as the end product. The duo process their own rice and also take in wild rice from other harvesters. (Photo by Sue Erickson)

For additional information on wild rice go to *www.manoomin.com*

Omashkooz on the move (with help) in Wisconsin

By Charlie Otto Rasmussen, Staff Writer

Odanah, Wis.—The Wisconsin ceded territory is likely to have more elk (omashkooz) in more places following updates to the state management plan. The changes—which include importing around 75 elk over three years and expanding their overall range—should help establish a healthy, more vibrant herd.

"There's a considerable amount of good habitat available for elk in the ceded territory," said Jonathan Gilbert, GLIFWC wildlife section leader. "We have several initiatives underway to help them get there."

Unlike migrating western United States elk herds, eastern omashkooz stick to limited home ranges. In early 2014 wildlife biologists intend to carry out the third "assisted dispersal" translocation of Clam Lake elk; plans for 2015 include another assisted dispersal, plus releasing 20 elk imported from Kentucky. Elk imports totaling 55 animals are scheduled over the following two years. The management action is designed to jumpstart elk reproduction and injects new genes into the small herd that numbers just 180 animals.

"With the population at such a low level over time, reproduction suffers and there is a potential for inbreeding to occur." Gilbert explained. "Males can have difficulty finding females during the breeding season with animals dispersed across the landscape. We also know that when 'founder' populations remain low, there can be adverse genetic consequences."

Simply put, genetic diversity fosters healthier, more adaptive animals. The Clam Lake group began as an experimental 25-animal herd in 1995 with elk translocated from Lower Michigan. Since then, herd growth has been modest.

Wildlife officials, with input from a GLIFWC-led habitat analysis of northern Wisconsin, selected the best areas for elk expansion beyond Clam Lake. Factoring in woodland harvest practices, wolf pack ranges, roads and other variables, a broad intersection of actively managed state and county forest topped the list. The upcoming release area covers portions of Price, Rusk and Sawyer Counties, which includes the Flambeau River State Forest.

Wisconsin is not only bringing in neighboring elk, wildlife managers are drawing from successful strategies used to create the robust Kentucky herd. In 1998 Kentucky went big with its reintroduction program, starting with the release of 1,549 elk. With help from assisted dispersal—trapping and moving small groups of young animals away from the main herd—the state boasted more than 10,000 elk by 2009.

Cow elk north of Clam Lake, Wisconsin. (Photo by Cyrus Hester)

Elk in Ho-Chunk Country

An additional 75 elk are slated for release south of the ceded territory, bringing the Kentucky-to-Wisconsin import total to 150 animals by 2017. The establishment of this second herd in the Black River State Forest would fulfill a reintroduction program that's sat idle for the past dozen years following the discovery of the fatal cervid ailment, chronic wasting disease, in wild deer in southern Wisconsin.

Ceremonial hunt

More than a year after the first ceremonial elk in the Clam Lake area, Ojibwe treaty tribes conducted a second ceremonial hunt on October 19 for one bull. One shot was fired resulting in a grazing wound on the leg of a bull elk. The hunt was suspended and, after a lengthy search, formally ended without a harvest.

Tribes cancel 2013 moose season

Cloquet, Minn.—Fond du Lac (FdL) and two other Ojibwe bands called off the 2013 off-reservation moose hunt in the 1854 Treaty ceded territory.

"We made the decision to cancel this year based on the population decline. We'll be reviewing survey numbers that come in this winter and into spring," said Reginald DeFoe, FdL Natural Resources Director. The Bois Forte and Grand Portage Bands in northeast Minnesota also suspended moose hunting for 2013.

Moose numbers in Minnesota's Arrowhead region have dropped precipitously in recent years, including an estimated 35% decline from 4,320 to 2,760 just last year. Biologists agree that the modest harvests by state and tribal hunters over the same period had little to do with the downward trend. Researches suspect a mix of health issues likely related to climate change is to blame. Cooperative state-tribal studies on moose health are ongoing.

—CO Rasmussen

Registration clerks from across the ceded territory met in Odanah for preseason updates before the dagwaagin harvest got underway. On-reservation stations manned by GLIFWC clerks issue harvest permits and register animals taken in the ceded territory. New in 2013-14: clerks are collecting skinned bobcat carcasses for biological analysis and are conducting a survey of forest product harvests—non-timber resources like balsam boughs and firewood.

An important information source, clerks also advise tribal members how to identify and help stop invasive species like emerald ash borer and other forest pests. (Photo by Charlie Otto Rasmussen)

Tribes still wait for a decision on night-hunting of deer

The parties wait for a decision from Federal Judge Barbara Crabb following a July 26 trial on the tribal night hunting of deer in Wisconsin's ceded territory. Six Wisconsin Ojibwe tribes are seeking relief from a 1991 judgment by the US District Court, Western District, prohibiting night hunting of deer under treaty in the ceded territories. The decision called LCO VII resulted from the "Deer Trial" which decided the scope of the off-reservation, treaty deer harvest. Today, the tribes argue that circumstances have significantly changed, so the Court should be able to revisit the night hunting issue and alter the original judgment.

North American Fur Auctions predicts a strong fur trade in 2014

In an August 2013 posting the North American Fur Auctions (NAFA) was very upbeat about the upcoming fur season based on an outstanding market in 2013, largely bolstered by a vigorous Chinese trade for furs.

NAFA reports that the international trimming trade was a major supporter of wild fur and their support influenced the upward trade in prices. Raccoon, muskrat, coyote, fisher and sable are reported to have seen large jumps in prices. NAFA sold nearly a million raccoon at high price levels and muskrats also achieved historic price levels in the May sale. Prices reported by the Fur Harvesters Auction Inc. based on their June 2013 sale results are as follows:

Species	Average price	Top price
Beaver	$27.38 (Eastern) $16.56 (III Section)	$66.00
Wild mink	$28.90	$33.00
Otter	$104.90	$132.00
Fisher	$$107.86	$125.00
Muskrat	$14.27	$18.50
Raccoon	$20.61	$46.00
Red fox	$48.87	$90.00
Coyote	$66.27 (Western) $33.97 (Eastern)	$100.00
Wolverine	$273.68	$400.00
Black bear	$136.69	$350.00

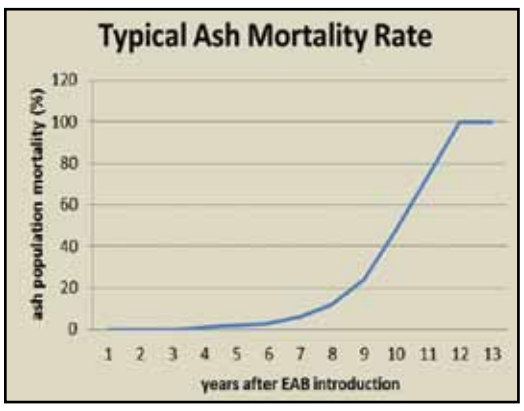
For Fur Harvesters Auction Inc. go to: *www.furharvesters.com/results/2013/June/june13us.pdf*. For North American Fur Auctions go to: *www.nafa.ca*.

Update on the emerald ash borer infestation in Superior, Wisconsin

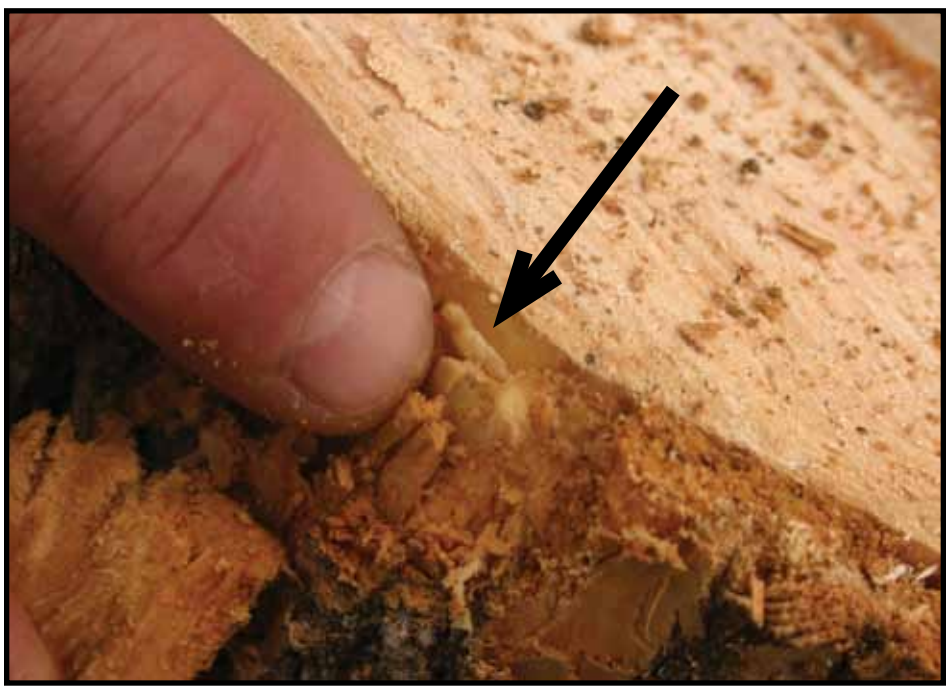
By Steve Garske, ANA Forest Pest Env. Grant Coordinator

Superior, Wis.—The emerald ash borer (EAB) is notorious for showing up where it is least expected. Still it was a bit of a shock when infested ash *(Fraxinus spp.)* trees were found in Superior, Wisconsin, (pop. 26,862) 144 miles from the nearest previously known site, the Minneapolis-St. Paul metropolitan area. First discovered in August by the Superior city tree crew on the north end of town, a second infestation was soon found just south of US Hwy 2, in the middle of town.

It is unclear when the EAB first reached Superior or exactly how far it has spread. But much has been learned about this introduced Asian beetle since it was first detected in Detroit in 2002. The EAB generally attacks the top branches of the tree first, working their way down as the tree begins to die. But as the city tree crew began to cut down the infested ash, they found EAB larvae chomping away under the bark, clear down to the bases of the trunks of some trees. As Superior City Forester Mary Morgan points out, this is a good indication that the EAB has been in these sites for at least five years. (see graph)



This graph shows the typical pattern of ash tree mortality (for untreated ash), based on EAB infested communities in Michigan, Ohio, Indiana and Illinois over the last decade. Mortality is low at first as the beetle builds to lethal levels, but then the trees begin to die rapidly. Superior is now thought to be at year five of this curve, after a second infestation was found. (Graph provided by the WDNR)



GLIFWC's Administration for Native Americans Forest Pest Project intern Marie Ericksen-Pilch points out an EAB larva exposed at the base of an ash tree, after it was just taken down and chipped. Superior, Wisconsin, August 28, 2013. (Photo by Steve Garske).

In anticipation of the EAB reaching Superior at some point, the city had already inventoried its ash trees and had invested in a tree chipper in 2011. According to Morgan, Superior has about 3,000 ash trees on city streets and parks. Of these, about 1,800 are smaller trees of up to 12 inches in diameter, while the remaining 1,200 range from 12 inches up to about 24 inches. One tree crew member remarked that the city has so many trees that it looks more like a forest than a city from the air.

At first the city planned on injecting some of their trees with emamectin benzoate, sold under the brand name TREE-äge. TREE-äge is a naturally-derived compound that protects ash trees from the EAB for at least two years, when they have to be treated again. But now the city has decided to systematically take down all their ash trees, starting in November.

Another EAB-infested street tree bites the dust in Superior. (Photo by Steve Garske).

GLIFWC's work with forest pest management and educational outreach is made possible through a grant from the Administration for Native Americans.

So far about 120 infested ash trees have been cut down and chipped. Morgan estimates that it will take the city six years to take down and dispose of the rest of their ash trees. The city plans on replacing the trees mainly with honey locust, Kentucky coffee tree and Japanese lilac. The first two species are native to the east central US, as far north as southern Wisconsin and southern Lower Michigan.

The financial cost of this EAB infestation will be substantial. An early estimate was that it would cost the city $1 million to take all their ash down, and $1.2 million to replace them with other tree species. And this doesn't include costs to private landowners to cut down or treat ash trees on their own land. The trees must be chipped to one inch or less in diameter on at least two sides to be legally shipped out of the quarantine area (Douglas County). Because the city's new chipper only gets about 90% of the chips down to this size, the chips must be stored until November 1st, when they'll be shipped to biomass plants and incinerated.

Former ash street trees, awaiting cold weather and shipment to a biomass plant. (Photo by Steve Garske)

It is still unclear how fast the EAB will spread through the rest of Superior and into the surrounding landscape. On average the beetle spreads about ½ mile per year on its own. They are capable of flying for several miles, though, and will do just that if they can't find any ash close by. They can also travel for hundreds of miles at 70 miles per hour down highways, if someone throws infested logs or firewood in their pickup or trailer.

A late-season adult EAB hanging out in the canopy of one of Superior's many ash street trees. Accidentally introduced to the Detroit area sometime in the early 1990s, this once-obscure East Asian beetle is on course to driving North America's once-abundant ash trees to the brink of extinction. (Photo by Steve Garske)

Since its arrival in North America the EAB has devastated ash forests in Lower Michigan, killing an estimated 40-50 million trees so far. Another 10 million trees have been killed elsewhere in the eastern and central US. The EAB has now spread to the eastern UP, Houghton, Michigan; Green Bay, Wisconsin; multiple sites in southern Wisconsin; and the Twin Cities of Minnesota. How fast this bug spreads throughout the northwoods depends on whether people avoid hauling infested logs and firewood. Will it disperse from Superior at ½ mile per year, meaning (for example) it won't arrive in the Chequamegon Bay area for 40 years, or will it reach the Bay area tomorrow? The decisions we make and the precautions we choose to take (or ignore) will decide.

Thanks to Superior City Forester Mary Morgan for updating us on how the city is dealing with the EAB. Thanks also to City Arborist John Krivinchuk and the Superior city tree crew, who patiently answered our questions and allowed us to take numerous photos of their operation.

Summer surveys keep tabs on aquatic invasive species

New method used to remove milfoil

By Dara Olson, Aquatic Invasive Species Coordinator

Odanah, Wis.—Aquatic invasive species (AIS) degrade aquatic ecosystems and treaty resources by out-competing and displacing native species. This past summer, GLIFWC staff surveyed 39 lakes in northern Wisconsin for AIS in coordination with management partners including tribal, state, county and other local partners. AIS surveys targeted lakes with significant tribal ogaa (walleye) and manoomin (wild rice) harvest, as well as large lakes with significant boat traffic or lakes close to infested waters.

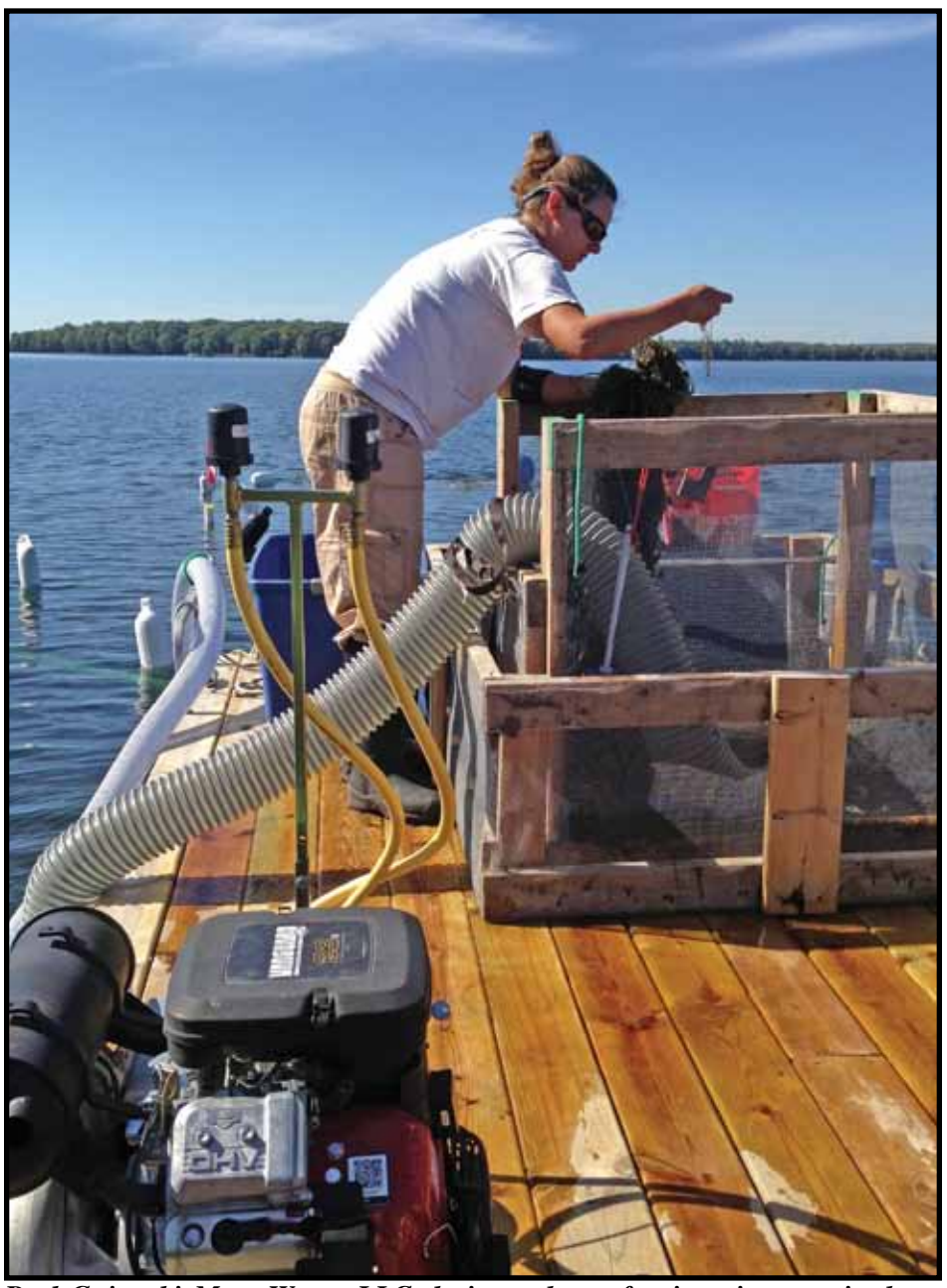
Surveys searched for unwanted aquatic invasive plants and animals along shorelines and in shallow water areas. A complete meander survey of the littoral zone (zig zag of the shallow water areas where plants have enough light to grow) was conducted. Plankton samples were taken with nets to detect harder to spot animals like spiny waterfleas and zebra mussel veligers at low levels. A total of 208 invasive species populations comprised of 24 taxa were mapped during the surveys.

Two lakes with small, pioneer infestations of Eurasian water-milfoil (EWM) were found by GLIFWC staff. Early detection of invasive species before they become large, environmentally damaging populations makes eradication feasible and reduces the need for treating with herbicide. Lost Land and Tiger Cat Flowage (both in Sawyer County) had small, isolated populations of EWM. Partnering agencies were notified of the new occurrences and a "rapid response" was organized to hand-pull EWM on both waterbodies. Follow up surveys were conducted after hand-pulling efforts and no additional plants were found. Local partners will continue to monitor these lakes annually.

Five additional lakes were surveyed that had known occurrences of both AIS and manoomin. These lakes were already being managed for AIS through various techniques including manual, chemical and draw down. Areas with manoomin and the invasives were mapped to get a better idea how these plants are spreading, interacting and to judge the effectiveness and impacts of different management efforts.

One lake with both AIS and manoomin is Lac Vieux Desert. In 2008, EWM was found in the southeast side of the lake. Hand-pulling by snorkelers had been effective in containing the EWM populations, but recently the EWM beds have been expanding and becoming too dense for these hand pulling efforts to be effective. This year an additional management tool was added, diver assisted suction harvest (DASH).

DASH uses scuba divers to hand pull the target aquatic invasive plants. The plants pulled by divers are fed into a large hose that uses a electrical pump to suck the plants up to the deck, shooting them out into a wooden frame with screens to filter out plants. After the plants drain, they are transferred to sealed boxes and moved to a designated location for disposal on land. DASH allows divers to more efficiently harvest larger, dense areas of invasive aquatic plants. DASH has been used in other parts of the country for years but is a new tool for manual control of AIS in Wisconsin. It will hopefully provide an effective, less intrusive, non toxic alternative to chemical control on smaller, isolated infestations of AIS.



Barb Gajewski, Many Waters LLC, drains and transfers invasive aquatic plants to sealed boxes for disposal. Plants harvested from Lac Vieux Desert were used as garden compost. (Photo by Dara Olson).

Eurasian water-milfoil harvested by scuba divers is sucked up the hose to the deck of the boat. (Photo by Dara Olson)

Mazina'igan readers

Remember *Mazina'igan* only comes out three times a year now. Our next issue will be early May 2014.

We wish you all a wonderful holiday season and a great new year!

GLIFWC to provide updated mercury-in-ogaa maps this spring

By Jennifer Burnett, GLIFWC Outreach Specialist

Odanah, Wis.—Spring spearing and netting of ogaa (walleye) from inland lakes is an important part of the Anishinaabe bimaadiziwin (lifeway) and izhitwaawinan (customs). By participating in these labor intensive but fun activities, tribal members reaffirm their off-reservation treaty harvest rights while providing their families with a high quality food source. Like many other fish, ogaa is a good source of lean protein, low in saturated fat, and contains other important nutrients like selenium and essential fats.

However, this izhitwaawin often comes with a concern about exposure to mercury through consumption of fish. GLIFWC's mercury maps help tribal members make informed choices that allow continued ogaa consumption while reducing their exposure to mercury. Each map includes the monthly recommended consumption of ogaa for the lakes typically harvested by a GLIFWC member tribe.

Under funding from the Great Lakes Restoration Initiative, GLIFWC updates the mercury maps regularly for its member tribes with the most up-to-date mercury data available. Maps were last updated in 2012 and will be updated again prior to the upcoming 2014 spring harvest using data collected from ogaa harvested in 2012 and 2013.

GLIFWC's mercury maps, along with informational brochures detailing ogaa consumption advice, will be available at tribal registration stations and tribal events this spring. Maps are also available for download online at ***www.glifwc.org/Mercury/mercury.html*** and be sure to follow GLIFWC's Facebook page for an announcement when the new maps are posted online this spring.

Iskigamizigan: Get ready to tap now!

By Charlie Otto Rasmussen, Staff Writer

Odanah, Wis.—Early winter is the time for whitetail hunts and firewood cuts; trapping fur and stalking hares. While you're out there, it's also a great opportunity to plan out the coming sugarbush (iskigamizigan) season. "Look for a site that will have good road access and will not create excessive disturbance. You want to keep impacts to the surrounding area limited," said Alex Wrobel, GLIFWC forest ecologist.

The ceded territory is coming off a banner year, with many maple tappers reporting record syrup production. The ultra-late spring of 2013 combined with lots of snow and favorable temperatures helped create conditions that kept the sap flowing. Wisconsin maple syrup producers reported a sweet 34:1 gallon ratio in 2013. The previous year it took on average 44 gallons of maple sap to make one gallon of syrup according to the US Department of Agriculture.

Treaty harvesters can tap maple stands in county, state and national forests through a permit system. Contact county foresters directly to learn about individual sugarbush guidelines. GLIFWC specialists are on hand to help navigate state and federal regulations.

"For tribal members interested in harvesting on the National Forests, it is best to locate an ideal site and begin the permitting process early," Wrobel said. "We'll work with you and the US Forest Service to develop a Sugarbush Site Management Plan and have you permitted for the upcoming harvest season."

Pocket a small tape measure on your next woodland outing; look for sugar or red maple trees better than ten inches in diameter (across) at chest height. The best trees have full crown branching; skip trees with dying tops or broken by wind damage. Even though maple branches are bare, red and yellow leaves carpet the ground in a potential sugarbush. Kick away ice and snow down to the leaf layer to help confirm the presence of maples. On mature sugar maples suitable for tapping, the bark generally appears to have long plates that peel along the side edge.

The maple sap season might begin as early as January—or as late as April. Contact Wrobel for more information @ 715.685.2125.

Iskigamizigan plan essentials

- Site location
- Approximate Size
- Equipment or supplies you will use for gathering (i.e., taps, buckets and bags or tubing).
- Sap processing information (i.e. if you will process the sap on the site, a description of the supplies and structures you will be using).
- Access: Roads or trails to be used to access the sugarbush, type of vehicles to be used (i.e. passenger car, ATVs or snowmobiles).
- Site Maintenance: The sugarbush operator is responsible for removing all equipment or refuse from the location.

County Sugarbushes

Establishing a tribal sugarbush on county lands can be confusing, but not impossible. Court-ordered stipulations resulting from the Voigt decision require that tribal members must comply with the conditions associated with county sugarbush permits. A Bad River member set up the first Wisconsin county sugarbush in Iron County in 2001.

From a tap, or spout, hang a modern sap bag or a good old pail. Sap collection containers must be monitored frequently at your sugarbush. At the end of the season remove all taps from trees and clean up all equipment and utensils from the iskigamizigan. (Photo by COR)

Zhingobaandag (Balsam Fir Boughs)

By Alex Wrobel
GLIFWC Forest Ecologist

"The circle is round, and we will one day return to relying on our life-ways to survive. This is why we must preserve the teachings and the resources for future generations."

—Paula Carrick

Red Cliff, Wis.—Once cold temperatures have set in and the leaves have fallen, it is time to get out and start harvesting balsam fir (*Abies Balsamea*) boughs either for your own use or to sell.

Traditionally known to the Great Lakes Ojibwe as "Nimissé" or "elder sister," the balsam fir (like the elder sister) had the highest concern for her family; she was like a second mother. The spirit of balsam fir is a pale-skinned maiden who represents illumination and enlightenment. The beautiful fragrance given off was understood to represent the tree praying for the People. If people were walking by the balsam fir when she released her fragrance, they would know that someone somewhere needed prayers. Other traditional names associated with this species are "zhingob" which represents "balsam fir" or "zhingobaandag" which specifically refers to the "fir bough" (Warber & Keewaydinoquay, 1995).

The Ojibwe people have traditionally harvested parts and products from zhingob for various kinds of utility and medicinal purposes; however, in present-day the most common product are the boughs. After two or more hard frosts have "set" the needles on the branches, zhingobaandag are ready to be harvested and used or sold for wreaths and other holiday arrangements.

Balsam bough harvesting is a tradition for most tribes across the ceded territories. The goals may be similar but the stories are always unique. Recently, I spoke with some tribal bough harvesters about their experiences and was fortunate to have been told some of these stories to share.

It's a chilly October afternoon in Red Cliff, and we are standing near a truck and trailer laden with the day's harvest of balsam boughs for JR Deragon and Marty Duffy. The two have been harvesting boughs together for upwards of 20 years on Red Cliff lands and surrounding ceded territory forests; they have become almost celebrities in the northern Wisconsin balsam bough market.

After the first couple of frosts or as soon as they are contacted by their buyer, they head to the forest to begin a new harvest season. Generally beginning near the 1st of October their season has lasted anywhere from mid-November to the 2nd week of December, often guided by the requests from the buyer.

Marty and JR scout and locate sites throughout the year allowing for more time harvesting and less time looking for good bough sites during the season. Most sites are located within a 15-20 mile radius of home as transportation is one of the primary costs associated with the harvest. For them, an ideal site contains a decent population of balsam fir trees not much taller than eight feet that have not been harvested for many years, or "sites that have been regenerating for a minimum of three years." One thing that has set them apart from other harvesters is their willingness to go slightly further from the road, deeper into the forest in search of "a better bough."

Once on location, JR and Marty have found that hand-snapping the boughs is the most efficient method of removal. "When you reach in to snap, the bough should hit you on the shoulder. This gives you more than the minimun18" length the buyers want." This method also allows for them to take the branch at the desired "pinky width" thickness, and at the same time not taking too much of a branch. If a branch is snapped too close to the trunk is it less likely to regrow than if there is a partial branch left. Partial branches will usually regenerate themselves, often into two new boughs. From a healthy tree they can harvest eight or more boughs.

The harvested boughs are tied into 60-pound bales then carried out of the forest. Through the years Marty and JR have gone through numerous modes of transport, however, this year is the standard truck and trailer. On a decent day they can haul upwards of 14 bales taking up to six hours a day in a good site.

Today, with a full load, the two have nearly two tons of boughs secured for transport to the buyer. What they have to offer is a highly desirable product for any

(See Zhingobaandag, page 19

Mille Lacs enhances woodland habitat

Worries about wiigwaas (birch) & aagimaak (ash)

By Sue Erickson, Staff Writer

Mille Lacs reservation, Minn.— Although the Mille Lacs Band of Ojibwe planted thousands of trees this spring, you will not see them in neat rows as in a tree plantation. Rather the new saplings and seedlings are interspersed in wooded areas in a manner consistent with Mother Nature's more capricious plantings. Barely visible now as young seedlings and saplings, they blend in, here and there, with the natural landscape.

"We at Mille Lacs have a big thing for reforestation," says Kelly Applegate, tribal biologist. "Our people are a woodland people. To reforest and restore our lands is just the right thing to do."

That's why 8,000 trees, all indigenous species, were planted this spring at two different 40-acre sites—part of an annual reforestation process that will be appreciated 20 to 30 years in the future.

One 40-acre planting enhances an oak savannah, habitat for white-tailed deer, wild turkey and red-headed woodpeckers. The oak plantings are scattered and widely separated as is typical of natural savannahs. Also included due to popular request were choke cherry shrubs for the benefit of humans as well as wildlife.

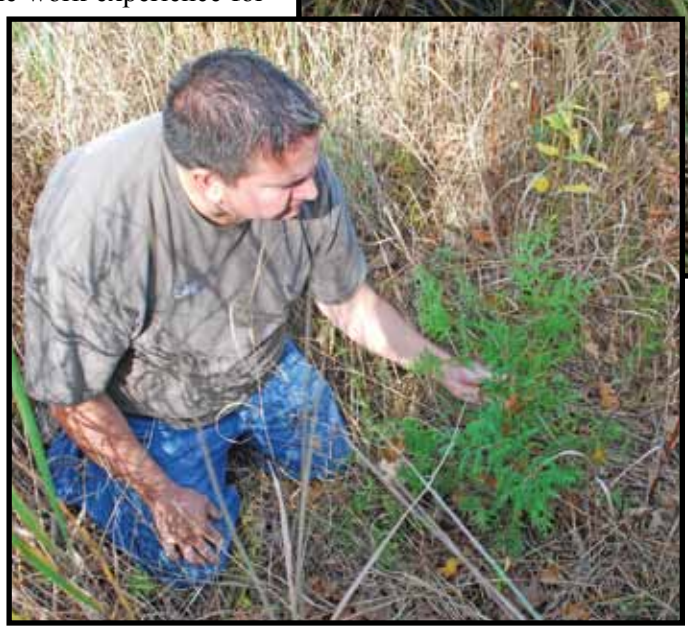
The second planting site focused on maples. While oak are expected to do well with climate change and a potentially warmer climate, there is more concern about maple, its survival in a warmer climate and the quality and quantity of sap produced, Applegate says.

Because it is an important species for the tribes, who have long depended on aninaatig (maple) for its sap to produce maple sugar and syrup, the Band planted a blend of several maple species including silver maple and sugar maple. The silver maple is a sweet sap variety with a high sugar content. In the wetter areas of the site, the roots of giizhikag (white cedars), also culturally important, were given a home.

While staff observe planting sites periodically, they are analyzed each spring for survival. A 2011 oak savannah planting site on Indian Point is doing well, with oak saplings now visible above tall grasses, and young cedars, still hidden, look bright green and healthy tucked midst swampy brush.

The springtime plantings require a major workforce effort, one which employs people from the Band's Workforce Labor Department. The work experience for crews of ten to twenty workers offer a variety of benefits, according to Applegate. They are outside working with nature, building teamwork, and the work has important cultural connections.

The Band's Biolgical Services Division works hand-in-hand with the Band Forester Dean Staples to plan and implement the reforestation projects from year to year. The plantings are also possible due to a cost share between the Band and the Natural Resources Conservation Services.



A small cedar and a young oak both appear to be doing well since they were planted in 2011 on the Mille Lacs reservation. Kelly Applegate, tribal biologist, periodically checks the status of the Band's plantings, which are part of an annual reforestation project on the reservation—a plan that intends to secure a woodland habitat for generations to come. This year about 8,000 trees were planted on two 4-acre plots. (Photos by Sue Erickson)

We can't lose the birch!!

While oak and maple are expected to flourish, the survival of birch and ash are worrisome. The threat from the emerald ash borer (EAB) has the Mille Lacs Band on alert, both watching for its presence and collecting seed from native trees which they hope to get into a national seed repository in the event EAB infests and kills their trees. They are also planning on storing some ash logs for tribal use in the future. "We have tribal members who make traditional ash baskets so we would have materials available for them in the event EAB takes out our ash trees," Applegate explains.

He is also concerned about the survival of birch under changing climatic conditions and has consulted with the Plant Materials Center in North Dakota about birch, maple and basswood. "I've warned them—we can't loose birch!!" Applegate says. He has encouraged the Center to collect seed where birch is being lost to warming climate and analyze which variety can best withstand those conditions without genetic manipulation. If one is identified, then he hopes the Band could reforest with that wiigwaas species.

Looking to the future, the Band plans to continue an annual tree planting project. In 2014 they anticipate another 20-40-acre planting.

In addition to the tribal planting projects, Forester Dean Staples and Brad Harrington, wildlife technician, coordinate an annual tree-giveaway where thousands of trees are given out to tribal members for planting on tribal lands. In this way and with continued effort, the woodland people of the Mille Lacs Band and the natural resources they cherish will always have woodlands for their home.

Mazina'igan digital flipbook

Do you receive *Mazina'igan* in the mail? Would you rather read it online? You now have this option. The online edition is a full-color flipbook that can be read or downloaded to a PDF. Flipbooks are environmentally friendly, and they save postage and printing costs. If you choose the online edition, you will be notified via email—approximately one week before the *Mazina'igan* is mailed—when it is available for viewing The email will contain a link to GLIFWC's website where you can view the flipbook. To sign up to receive the *Mazina'igan*, either electronically or a mailed subscription go to: *www.glifwc.org/publications/mazinaigan/Mazinaigan.html* and choose either new subscription or E-edition notification.

Winter in the Penokees

(Continued from page 1)

venison; when that ran low, we added more water and veggies and threw in some buffalo; when that ran low, we added more water and veggies and put in some elk," Gasper explains. He's also been enjoying small feasts of mushrooms picked in the area. He plans on trapping in the winter. With fur prices up, the opportunity to get some income looms.

But his most pressing project now is to complete his own winter wigwam, which currently has way too much ventilation. His woodstove needs to come in and the spacious frame covered with 300-foot tarps. Straw bales will add additional insulation from the outside.

Gasper expects company to keep coming through the winter months, and he will have time to chat, probably about a vision he has for a 100-acre heritage park in the Penokees that all people can enjoy and participate in; or about building a major maple sugar operation nearby beginning next spring; or about running for Iron County Board since his residency requirement is fulfilled. Or you might talk about the dangers of fiberous asbestos in some places of the Penokee rock formations; or it could be about the voices of the Spirits that speak out at night and the drums that are heard by those that listen.

Essential Ojibwemowin

***biboon*—be winter**

Lake trout used to track contaminants in Gichigami

GLIFWC participates in sample collection

By Bill Mattes, GLIFWC Great Lakes Biologist

Bete Grise, Mich.—Since 2005 the Great Lakes Section has been cooperating with the Environmental Protection Agency's Great Lakes National Program Office (EPA-GLNPO) to collect lake trout off the tip of the Keweenaw Peninsula. The lake trout are used to track contaminants in the open waters of Lake Superior and are collected in conjunction with annual fall lake trout assessments.

Collectively referred to as the Great Lakes Fish Monitoring Program (GLFMP) the EPA-GLNPO analyzes chemicals in fish samples collected throughout the Great Lakes Basin. A wide variety of organic contaminants and mercury, a metal contaminant of specific concern in the Great Lakes, have been tracked since 1977 in the Great Lakes.

The overall goals of the GLFMP include monitoring trends of bio-accumulative chemicals (contaminants that build up in the fish flesh). Over time top predator fish, like lake trout in Lake Superior, are used as bio-monitors, assessing potential human exposure to contaminants found in these fish and providing information on new compounds of concern entering the lake's ecosystem.

Bad River Fishery Technician Ed Leoso removes a lake trout from an assessment gill net set in Bete Grise Bay off the east side of Michigan's Keweenaw Peninsula. (Photo by Ben Michaels)

Downstream nets capture larval lamprey

By Bill Mattes, GLIFWC Great Lakes Biologist

Odanah, Wis.—In early October the Great Lakes Section staff began setting nets in several streams in Wisconsin and Michigan to trap and remove invasive sea lampreys. This technique involves setting fyke-nets which face upstream versus the downstream facing fyke-nets used for adult lamprey assessment and control.

This trapping is being done as part of a multi-pronged approach to controlling sea lampreys in Lake Superior. Small sea lampreys drift downstream in the fall and spring of the year when temperatures begin to change with seasonal changes from fall to winter and again from winter to spring.

Usually movement, or drifting, is associated with rainfall events. Drifting larval sea lampreys are vulnerable to being captured.

Sea lampreys have a life-cycle which involves several stages; they hatch from eggs and enter a larval stage during which they burrow into the soft bottom of streambeds and filter feed. As filter feeders it takes three years or so to grow to six inches long. Once this size they undergo a metamorphosis from filter feeder and transform into a parasite. As a parasite they move out of the stream and into the lake to feed on fish.

The key control mechanisms to keep the parasitic sea lamprey from making it to Lake Superior are lampracide application and barrier dams. Lampracide application involves chemically treating waters infested with larval sea lamprey to kill them, and barrier dams prevent adult lamprey from reaching spawning grounds. The lampracide is **(See Larval lamprey, page 10)**

As part of a multi-pronged effort to control the invasive sea lampreys in Lake Superior, GLIFWC began setting nets in several Wisconsin and Michigan rivers facing upstream in order to catch larval lampreys floating downstream. Jake Parisien, GLIFWC fisheries technician, examines a few larval lamprey caught this fall. (Photo by Charlie Otto Rasmussen)

Bile salts— sea lampreys' newest scent of seduction

East Lansing, Mich.—Bile salts scream seduction—for sea lampreys, that is.

New research at Michigan State University shows that bile salts, secreted from the liver and traditionally associated with digestive functions, are being used as pheromones by sea lampreys. The interesting twist, though, is that this scent has evolved as the invasive species' cologne of choice.

The evolution of bile salts from digestive aid to pheromone, featured in the current issue of the Proceedings of the Royal Society B, mirrors humans' adaptation of perfume.

"It's similar to how perfume has evolved in our society," said Tyler Buchinger, one of the lead authors and MSU doctoral student. "Perfume was first used to mask body odor due to a societal stigma against daily bathing. Today, in many cases, it exemplifies romance and is used to attract mates."

Bile salts, like perfumes and colognes, were not first used as sex signals. Their primary use is to process fats. Over many hundreds of years, though, they have evolved to become beacons of sexuality in addition to their digestive duties. The evolution of males emitting this pheromone appears to be a result of female lampreys' receiver bias, or their desire to mate sparked by the fragrance.

Since time travel is out of the question, Buchinger and Weiming Li, one of the lead authors and MSU professor of fisheries and wildlife, tested the evolution theory on silver lampreys, a species native to Michigan and recognized as a more-ancient species than sea lampreys.

The researchers demonstrated that sea lampreys and silver lampreys smell bile salts and acknowledge them as attractants. The difference, however, is sea lampreys become sexually active while silver lampreys do not.

In the field, sea lampreys and silver lampreys were drawn upstream by the smell of bile salts. Only the sea lampreys, though, swam in looking for love and ready to spawn.

Silver lampreys are one of four native lamprey species in Michigan; the others are the chestnut, American brook and northern brook. Knowing that a distinct scent affects an invasive species differently from the native fauna they are displacing is a research angle worth pursuing, Li said.

"This mating call is quite effective, and it has helped sea lampreys thrive," he said. "Knowing that bile salts cause sea lampreys to react differently than our native species, which have long been part of our ecosystem, could eventually lead to better ways to control sea lampreys."

Nick Johnson of the USGS Great Lakes Science Center also contributed to this research.

Li's work is funded in part by the Great Lakes Fishery Commission, National Science Foundation and MSU AgBioResearch.

(Reprinted from Michigan State University.)

Suspended gill net survey: A joint effort on Mille Lacs Lake

By GLIFWC Inland Fisheries Staff

The fall gill net assessment conducted by the Minnesota Department of Natural Resources (MnDNR) has been used as an index of walleye abundance in Mille Lacs Lake for the past 30 years. A variety of different habitat types are included in the survey, which is standardized to ensure that the same locations (52 total) are sampled with the same bottom-set graded-mesh gill nets at the same approximate time and water temperatures each year. Results from the fall gill net survey are used to monitor trends in the walleye population and are highly influential in the stock assessments models used by state and tribal biologists to develop annual harvestable surplus levels for the shared fishery.

In an effort to investigate recent declines in the number of walleye caught in the fall gill net survey, state and tribal biologists initiated a cooperative suspended gill net survey in 2012 to determine whether walleye were present in the water column at depths other than those normally sampled by the standard bottom-set nets.

The fall of 2013 marked the second year of the suspended gill net survey, which was conducted jointly by GLIFWC, tribal, and MnDNR personnel. In September of 2012, a total of 32 suspended gill nets were set in conjunction with the standard bottom-set gill nets at 22 of the deeper sampling sites in Mille Lacs Lake. A similar number of suspended nets were set at the same locations in September of 2013.

The preliminary results from this survey indicate that few walleye were suspended in the water column during the fall assessment survey in 2012 and 2013, and suggest that the observed low catches are more likely attributed to a real decline in walleye numbers rather than a change in behavior. State and tribal biologists are working together to analyze available data and identify strategies that will reverse this decline and improve the condition of this important shared fishery.

State and tribal biologists worked together this fall on a joint suspended gill net survey in Mille Lacs Lake. The study, first undertaken in 2012, samples walleye at water column depths not normally sampled. This study was also part of the fall surveys to obtain more comprehensive data on the walleye population in the lake. Pulling a net are Ben Michaels (left), GLIFWC fisheries biologist, and Greg Berg, fisheries specialist with the Minnesota Department of Natural Resources. (Photo by Jen Burnett)

GLIFWC survey crews & partners assess walleye hatch on 101 lakes

By Mark Luehring, GLIFWC Inland Fisheries Biologist

Odanah, Wis.—Shortly after ogaa (walleye) hatch in the spring, walleye fry move out to the open water zones in inland lakes and feed on plankton for a few weeks of their lives. About the time the leaves change, the small walleye have moved to near-shore habitats to feed at night on invertebrates and small fish. During this time, GLIFWC survey crews conduct electrofishing surveys to gauge the strength of the walleye year-classes on each lake. Electrofishing boats use electrical current to temporarily stun fish, so that survey crews can net them, place them in a recovery tank, collect length information, and release them. Crews target walleye under 12 inches, specifically young-of-the-year and one year-old walleye.

Biologists use the information gathered here to evaluate year-class strength and long-term trends in natural reproduction. These surveys also provide the first look at the future of the adult walleye populations. Natural reproduction varies widely by year even on lakes with large adult walleye populations, but if fall surveys show a number of years with poor or low reproduction, biologists have advance warning that the adult population may decline.

While most of the surveys focus on lakes with natural reproduction, some fall surveys are also used to assess the contribution of stocked fish to the year-class. Stocked fish can be marked with oxytetracycline (OTC), and fish can be examined for marks to determine the percentage of stocked fish in the year-class. Survey crews collected fish for OTC sampling from Lac Vieux Desert on the Wisconsin/Michigan border.

This fall, crews from GLIFWC, Bad River, Mole Lake, St. Croix, and the US Fish & Wildlife Service surveyed 105 lakes including 15 surveyed in co-operation with Wisconsin Department of Natural Resources, and Mille Lacs Lake surveyed in cooperation with the Fond du Lac Band. All lakes surveyed were in the 1837 and 1842 ceded territories, including 92 lakes in Wisconsin, seven in Michigan, and Mille Lacs Lake and Namachers Lake in Minnesota. Lakes ranged in size from 123-acre Sherman Lake to 132,516-acre Mille Lacs Lake.

Larval lamprey study

(Continued from page 9)

very effective in killing sea lampreys but it doesn't kill them all. It is for this reason that GLIFWC crews are trapping streams to further reduce the number of parasitic sea lamprey while they are still in the stream and before they make it to Lake Superior to feed on fish. Each sea lamprey can kill up to 40 pounds of fish in eighteen months as it grows from a six-inch newly transformed parasite to an adult sea lamprey.

Nets are being fished in the Bad, Potato, Marengo, and Amnicon Rivers in Wisconsin and in the Traverse River in Michigan's Upper Peninsula. To date nearly one hundred transformed sea lamprey have been removed from the streams. Netting will continue until the ice forms.

"Spear and Release" program a success

By Sue Erickson, Staff Writer

Lac Courte Oreilles Reservation, Wis.—The "Spear and Release" program at the Lac Courte Oreilles (LCO) Ojibwe School successfully concluded this fall with the release of several hundred extended growth walleye back into Lake Lac Courte Oreilles. That is the lake where three students with instructors spent the evening of May 15 spearing ogaa (walleye) last spring.

Once fish were creeled at the landing, students and teachers collected and fertilized the eggs from four female ogaa and brought them into the Lac Courte Oreilles High School Science classroom just hours after the ogaa were speared.

The delicate eggs were placed in an incubator consisting of an aquarium, a holding basket, and a water chiller that kept the temperature at a constant 38 degrees. As the study progressed, the students were tasked with measuring, collecting data and interpreting the data. Upon taking water quality samples, the students were able to make appropriate adjustments if needed.

In order to replicate the warming of a lake, the aquarium water temperature was allowed to warm by a few degrees until the eggs began to hatch. LCO Fishery Biologist Paul Christel estimated that 20,000 fry had hatched from the eggs.

The fry were released to Christel and the LCO Fish Hatchery on June 7 to be grown to fingerling size over the summer. The first week of October several hundred fingerlings averaging 7.76 inches were returned to their point of origin—Big Lake Lac Courte Oreilles.

"The Spear and Release project is part of an ongoing curriculum at the Lac Courte Oreilles K–12 schools that brings traditional Ojibwe knowledge into the mainstream classroom," states Jason Bisonette, a curriculum developer for the school. "With Ojibwe knowledge and traditions as our foundation, our students can successfully learn to walk in both worlds."

LCO Ojibwe High School students took eggs and milt from speared walleye this spring, hatched them at the high school, then gave the fry to the LCO Hatchery to rear into extended growth fingerlings (lower right). They were released back into Lake Lac Courte Oreilles this fall. (Photos by Sue Erickson and Paul Christel)

Forests under threat: highlights from GLIFWC's one-year scientific review

By Steve Garske, ANA Forest Pest Env. Grant Coordinator

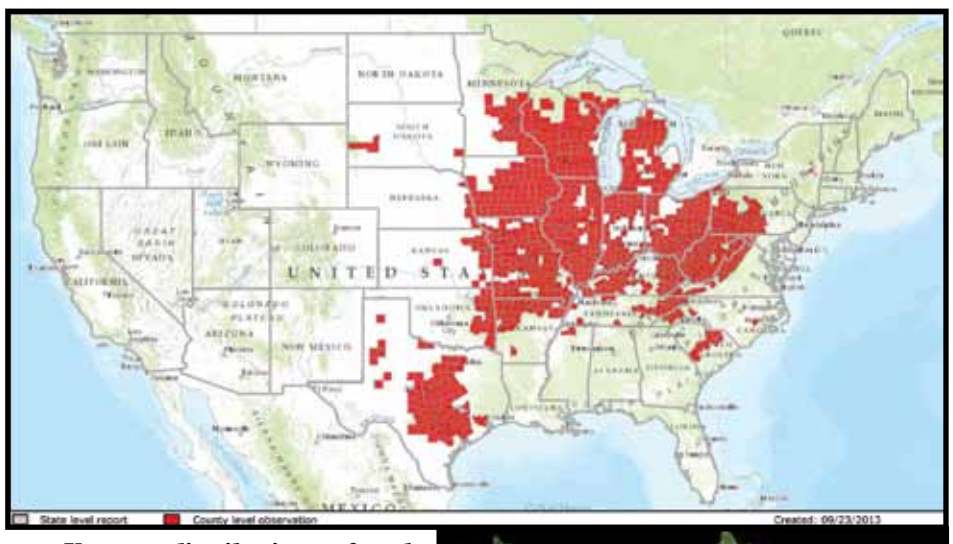
Odanah, Wis.—The forests of the ceded territory are under threat like never before. European earthworm invasions and high populations of native white-tailed deer are already inhibiting seedling establishment, especially by sugar maple and hemlock. Freed from their natural pests and diseases and often adapted to living with earthworms, introduced, invasive plants continue to invade natural habitats and displace native plants. Human population growth and the escalating demand for resources place increasing pressure on ever-shrinking forests. The warming climate will lead to greater frequency of droughts, fires, major windstorms, and outbreaks of native and introduced insects and diseases.

Eventually adult trees will be lost at a greater rate than they can be replaced. Boreal and northern hardwood forests will be pushed north, to be replaced by savannas of trees, shrubs and forbs from further south. Rapid change will allow aggressive invasive plants such as Eurasian bush honeysuckles (*Lonicera* spp.), Japanese barberry (*Berberis thunbergii*), common buckthorn *(Rhamnus cathartica*) and glossy buckthorn (*Frangula alnus*) to rapidly infiltrate natural habitats. (For more see University of Minnesota researcher Lee Felich's powerpoint at *www.slideshare.net/maeeconference/lee-frelichs-climate-change-forests-presentation*).

As part of a three-year Administration for Native Americans (ANA) forest pest grant, GLIFWC has produced a scientific report aimed at assessing one of these threats: the risk of forest pests to five groups of trees used by Ojibwe tribal members in the 1836, 1837, and 1842 ceded territories. These five tree groups are oaks, ash, maple, balsam, and birch. Because of their environmental and cultural importance, sections were also included for eastern hemlock, American beech, and white cedar.

Oaks and oak wilt

As the climate warms and late summer droughts intensify, oaks (*Quercus* spp.; collectively *Mitigomizhiig*, plural, Ojibwe) are likely to become an increasingly important component of ceded territory forests. The most destructive disease currently facing oaks in the ceded territory is oak wilt. The oak wilt fungus spreads underground through root grafts between trees, and is also carried by sap beetles from infested trees to injured, uninfested trees. Recent infestations in northern Wisconsin have been linked to landowners who damaged oaks while building vacation homes, and who also brought wilt-infested firewood from southern Wisconsin. White oaks are generally much more resistant to oak wilt than red oaks, but they can still be killed by the disease. The spread of oak wilt is very controllable, provided people do not move infested firewood to uninfested areas, and avoid pruning or otherwise damaging oaks, especially in spring and summer.



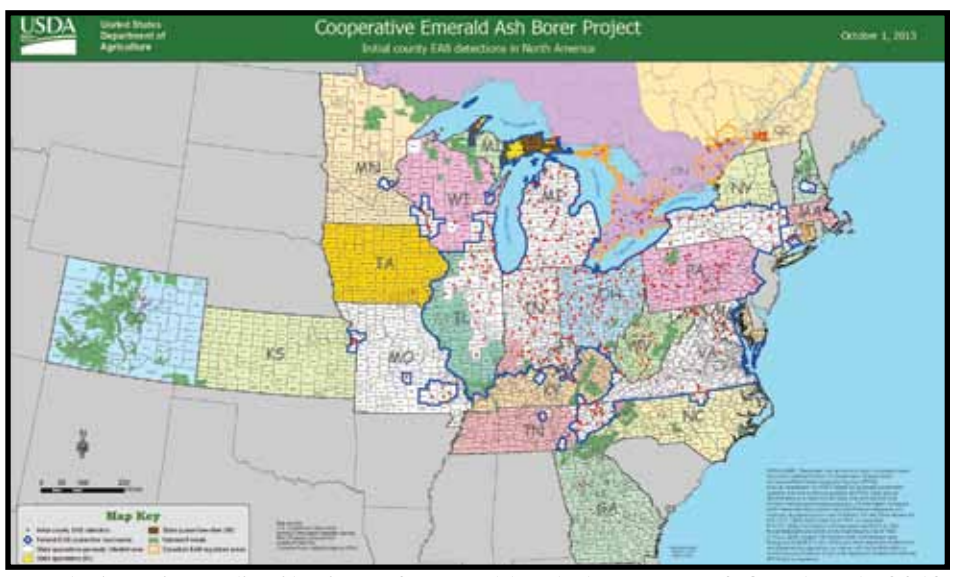
***Known distribution of oak wilt. Oak wilt was found in Rusk County, Wisconsin as well. (USDA Forest Service, Forest Health Protection and partners:* http://foresthealth.fs.usda.gov/portal/Flex/APE).**

To the right: Bur oak leaves afflicted with oak wilt. Brown areas are moist and flexible, not dry like fall leaves. Oaks infested with oak wilt often drop their leaves in summer, well before the end of the season. (Fred Baker, Utah State University, Bugwood.org)

The emerald ash borer

The emerald ash borer (EAB) is the most destructive forest pest ever introduced to North America. First detected in Detroit in 2002, the EAB is now established in 21 states and two Canadian provinces. Native to eastern Asia, this beetle has devastated ash (*Fraxinus* spp.), including white and green ash (*Aagimaakoog*) and black ash (*Baapaagimaakoog*), in southern Lower Michigan, Ohio and Indiana, killing an estimated 60 million ash trees in eastern North America so far.

Heroic efforts are being made to slow the spread of this insect and save some of eastern North America's ash trees, with very limited success. A systemic insecticide called TREE-äge (*emimectin benzoate*) appears to provide long-lasting (at least two years), highly effective protection from the EAB. This pesticide is derived from a soil bacterium and appears to be safe for people, animals, and



North American distribution of emerald ash borer, as of October 1, 2013. It is illegal to move hardwood firewood or untreated ash logs out of state-quarantined (including white areas) or federally quarantined (blue lines) areas. (*www.emeraldashborer.info/files/multistate_eabpos.pdf *)

even insects that may simply land on ash trees. Biological control efforts are also underway. Three tiny parasitoid wasps have passed testing for host-specificity by the US Department of Agriculture and are being released across the introduced range of the EAB. Additional biocontrol insects (particularly those that can better survive cold winters) are being sought in the EAB's native range.

In Upper Michigan, the Slow Ash Mortality (SLAM) project attempts to use biocontrol insects, TREE-äge treatment of a portion of the trees, girdled "trap" trees and other management tools to try and lower the EAB population enough so that native ash trees can survive on the landscape. The EAB usually only spreads about ½ mile per year on its own, so if people avoided moving ash firewood, it would be decades before the EAB could reach all the ash stands in the ceded territory. Slowing the spread of the EAB buys time for researchers to find new ways to fight this highly destructive forest pest.

The Asian longhorned beetle

Maples (*Acer* spp.) are potentially under threat from the Asian longhorned beetle (ALB). The ALB is a large wood-boring beetle from China that regularly began showing up at ports of entry in the 1990s. Like the EAB it hitches a ride in solid wood packing material. It first became established in the New York City area in 1997. Subsequent infestations showed up in Chicago (1998), New Jersey (2002) and Toronto (2003). While these earlier infestations have been eradicated, federal, state and local agencies are still fighting ALB infestations in New York, suburban Massachusetts and semi-rural southern Ohio. Unlike earlier infestations, which occurred in urban areas, the Massachusetts and Ohio infestations have spread into natural forests.

In its native range the ALB attacks a wide variety of trees, including maple, horse chestnut, elm, birch, aspen and willow. In North America though, the ALB has so far almost exclusively attacked maple trees, including red maple and silver maple (*Zhiishiigimewanzhiig*), sugar maple (*Ininaatigoog*), box elder (*Aajaagobiimagoon*) and the introduced Norway maple. The larvae of the ALB burrow through the wood, leaving tunnels and exit holes the diameter of a dime, and weakening the trees to the point of collapse.

Unlike the EAB, the ALB is a large, showy beetle. The adults normally do not fly any farther than they have to in order to find a suitable tree, often infesting the same tree from which they emerged. Eradication efforts have been costly in terms of time, effort, trees and money, but fortunately have been successful.

Adult Asian longhorned beetle. (Joe Boggs, Bugwood.org)

The native pine sawyer is sometimes confused with the ALB. This beetle attacks only dead and dying balsam fir and other conifers (Joseph Berger, Bugwood.org)

The balsam and hemlock wooly adelgids

In New England and the Appalachian region balsam fir (*Abies balsamea; Zhingobiig*) and hemlock (*Tsuga canadensis; Gaagaagimizhiin*) are under attack by the balsam and hemlock woolly adelgid, respectively. These introduced aphid (plant lice) relatives build to huge numbers, extracting stored food reserves from their respective hosts and basically starving them. While the cold winter temperatures traditionally experienced in the ceded territory may rid the forests of a large portion of these insects in some years, their ability to survive under the

(See Forests under threat, page 19)

Concerns over potential impact of GTac mine in Penokees grow

Asbestos enters the mining picture in the Penokee Hills

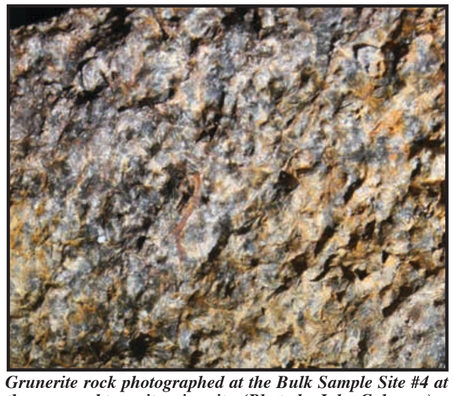
By Sue Erickson, Staff Writer

The confirmed presence of asbestiform grunerite in bedrock adds to a list of concerns about Gogebic Taconite's (GTac) proposed mine that stretches along four miles atop the Penokee Hills in the ceded territory of northern Wisconsin.

The potential of grunerite fibers entering the air or water during mining operations raises another red flag because mining or processing asbestos minerals can liberate isolated fibers or fiber bundles into the air and exposure to asbestos can pose the risk of developing mesothelioma, a form of lung cancer, or other forms of cancer in humans as well as wildlife.

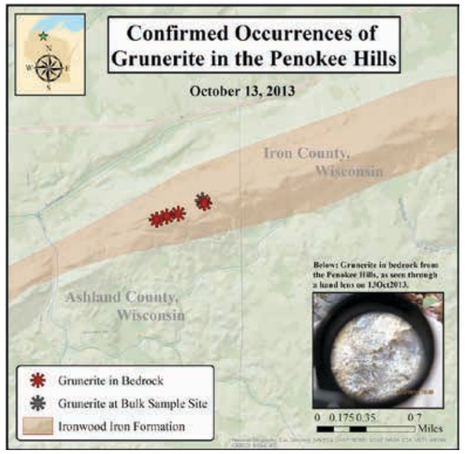
The occurrence of the grunerite in the Penokees has actually been documented for sometime, according to GLIFWC Environmental Section Leader Dr. John Coleman. However, a sample found by a Wisconsin Department of Natural Resources (WDNR) geologist at the Bulk Sample Site 4 (BSS4) this spring stimulated more interest in the extent of the grunerite occurrence in the mine site's bedrock.

In mid-October Northland College Geologist Tom Fitz was part of a team that found asbestiform grunerite within bedrock outcroppings in four locations in the Ironwood iron formation on the western end of GTac's proposed mine. The outcrops extend .29 miles west of BSS4, according to Fitz, but it is yet unknown if it also reaches east of the BSS4 site. (see map) More needs to researched, he says, to determine further locations and concentrations of grunerite.



Grunerite rock photographed at the Bulk Sample Site #4 at the proposed taconite mine site. (Photo by John Coleman)

Fitz says not all grunerite is considered dangerous, so the issue of size and shape becomes important. If it is long, narrow and needle-like, it is considered a more dangerous form. In regard to what he observed, Fitz says "It is clear that it is long and slender and gives us reason to think it could be dangerous. We need to know more."



Map by Cyrus Hester, Bad River environmental specialist.

The potential of released asbestos fibers was one of many concerns expressed by the Bad River Band of Ojibwe, in comments regarding GTac's bulk sampling permit. In an October 22 letter to the WDNR, Bad River Environmental Specialist Cyrus Hester urged that GTac document the amount and extent of asbestos and "provide sufficient evidence that the bulk sampling operations at sites 3A and 4 will not exceed the permissible exposure limits for airborne asbestos fibers established by the Mine Safety and Health Administration."

Penokee Hills Summit educates and activates

By Sue Erickson, Staff Writer

Upson, Wis.—Ojibwe treaty rights was one of several key topics at the Penokee Hills Educational Summit on September 21-22. The two-day event was appropriately housed at the Whitecap Resort, Upson, Wisconsin, snuggled in a forested Penokee hillside splashed with the autumnal reds, yellows and oranges of the changing season.

The purpose of the two-day summit was to educate about the potential impact of a proposed open-pit iron mine poised at the top of the Penokee Hills, a purpose achieved through speakers, informative materials and displays. Four panels covered the topics of environmental and legislative history, treaty rights, protecting the water, and the local economy.

Since the Penokee Hills lie adjacent to the Bad River Reservation and are in the Ojibwe ceded territories, historical presence of the tribes in the Hills and the tribes' treaty rights to hunt, fish and gather in the ceded territory were a critical part of the discussion.

Dr. Larry Nesper, UW-Madison professor of anthropology and Native American studies, provided a synopsis of Ojibwe treaty rights. Nesper emphasized that the United States Constitution explicitly recognizes tribes as political entities and also in Article VI recognizes treaties as the "Supreme law of the land." This, according to Nesper, means "treaties supersede state law."

By retaining their treaty rights, the tribes essentially indicated their intent to stay on the land and maintain their lifeways, Nesper said.

Nesper also drew attention to the Trust Doctrine, a federal obligation to act in the interest of the tribes. This obligation to the tribes was taken on, he said, because tribal sovereignty was constrained in the treaties by allowing tribes to sell land only to the federal government. The Trust Doctrine, adopted around 160 years ago by the federal government, was intended to protect the tribes from intrusion by immigrants. Today, it still serves to protect land, culture and properties.

Nesper also noted that when tribal issues come to court, such as treaty related issues, the law needs to interpret treaties as the Indians understood them at the time. When it comes to mining, what the tribes understood of mining at the time of the treaties is quite different from the type of mining now being proposed.

The issue of allotments is another interesting topic touched on by both Nesper and Paul DeMain, Lac Courte Oreilles Harvest Education Project spokesperson. At the time of the treaties, the tribes negotiated numerous 80-acre allotments. Some of those allotments may have been in the Penokee Hills. Unfortunately, over the years many of the allotments were lost through scams, and there is little evidence of title, according to DeMain. However, tribal presence is known through ancient trails and artifacts.

Larry Balber, Historic Preservation Office for the Red Cliff Band, provided a synopsis of treaties signed by the Ojibwe beginning with the Treaty of Greenville in 1796. He also focused on the role of Chief Buffalo who carried a Pipe to Washington DC to stop a Presidential Removal Order that would move the Ojibwe bands to territorial Minnesota. Buffalo's journey resulted in the Removal Order being terminated and the 1854 Treaty, which created permanent reservations for many of the bands. In the treaties, the Ojibwe settled in order to share the lands and resources, not to be confined just to the reservations, Balber noted.

He also commented on the recent return of the Chief Buffalo's Pipe to the Red Cliff Tribe over a hundred years after the journey. "What does that Pipe mean for the next 140 years?" he asked.

On another note, Duke Welter, Western Great Lakes conservation coordinator for Trout Unlimited, talked about his involvement in struggles to save habitat in the past. His message echoed many of those related by Ada Deer, former Assistant Secretary of the Interior, who talked about organizing effectively to create change.

Both Welter and Deer saw diverse interests coming together towards one cause as empowering; however, Welter cautioned that the messages be clear and disciplined. "Get your message together—one that resonates with your audience. Refine your message…Don't have damaging throw-away comments."

Planning to stay the winter at the LCO Harvest, Educational and Learning Camp in the Penokee Hills, Camp Director Mel Gasper relishes his time at the campsite so far and fully intends to enjoy a Penokee winter. He and four others will keep the coffee brewing and soup simmering for visitors. (SE)

Deer reminded people of their personal power to achieve goals and warned perseverance was necessary through the long processes that are part of creating change. "You have to be there; know the process and pay attention. You need a hawk," she said. She recommended forming coalitions, using social media and PR events, mobilizing the tourism industry, and using federal relationships and agencies such as the Environmental Protection Agency, the Army Corps of Engineers and the Bureau of Indian Affairs.

The summit was sponsored by the Penokee Hills Education Project and Lac Courte Oreilles Harvest Education Project (formerly Harvest Camp).

Mining News Briefs

The new Senate Bill 349 to limit local control on air and water quality

Wisconsin—Senate Bill 349, authored by Sen. Tom Tiffany, R-Hazelhurst, and Rep. Joan Ballweg, R-Markesan, would restrict local control over mining operations. According to a report in the October 25 edition of the Cap Times, the bill "would retroactively nullify licensing agreements between towns, cities and counties and frac sand companies to monitor silica dust levels on or near the border of their property. The measure would also prevent municipalities and counties from imposing any regulations on air and water for any industry, not just frac sand mining, moving forward."

One Appeal on Eagle Mine permit rejected

Michigan—A federal court of appeals rejected an appeal by the Huron Mountain Club (HMC) which challenged the state permit that allows for the use of sulfide mining to extract copper and nickel at the Eagle Mine site in the Upper Peninsula of Michigan.

According to Jessica Koski, Keweenaw Bay mining technical assistant, in May 2012, HMC sued the U.S. Army Corps of Engineers for failing to require federal permits for construction of the mine tunnel beneath the Salmon Trout River. HMC's claims were rejected and HMC appealed to the 6th Circuit Court of Appeals in which arguments were heard in August 2013 and now recently rejected.

The mine is owned by the Canadian firm Lundin Mining Corporation, which intends to begin production in about a year.

KBIC appeal on Eagle mine permit lingers over a year

Mich.—No movement is apparent in the Michigan Court of Appeals on Keweenaw Bay Indian Community's (KBIC) challenge to the state issuance of a groundwater discharge permit for the Eagle Mine. According to Jessica Koski, KBIC mining technical assistant, in December 2007, the Michigan Department of Environmental Quality (MDEQ) approved a series of permits for the Eagle Mine. Shortly thereafter, KBIC along with the National Wildlife Federation, Huron Mountain Club, and Yellow Dog Watershed Preserve filed a contested case appealing the issuance of the mining permit and a groundwater discharge permit.

In August 2009, an administrative law judge affirmed the permits, with an exception recommending the avoidance of direct impacts to Eagle Rock (a place of spiritual and cultural significance to the KBIC). However, the MDEQ subsequently ignored this recommendation under the perspective that places of worship must have a built structure.

In March 2010, plaintiffs (KBIC and its partner organizations) filed an appeal, and in November 2011 an Ingham County Circuit Court judge ruled that the mining and groundwater discharge permits were lawful. In December 2011, the plaintiffs then filed a motion with the Michigan Court of Appeals. In April 2012, the Court of Appeals agreed to hear the case. Briefs have been filed, but no hearing date has been scheduled yet.

One more appeal by Huron Mountain Club

Mich.—In October 2013 Huron Mountain Club filed an additional suit against the Michigan Department of Environmental Quality for approving a revised air quality permit for the Eagle Mine.

Humboldt Mill in Michigan under investigation by EPA

Mich.—The Humboldt Mill site is currently under investigation by the U.S. Environmental Protection Agency as a potential Superfund Site eligible for listing on the National Priorities List due to historical mining waste and contamination affecting nearby wetlands and the middle branch of the Escanaba River. It is uncertain how this investigation and EPA findings may be considered or influence current and future permits and operations at the site.

In January 2010, Rio Tinto received permits to refurbish and operate the Humboldt Mill. On July 17, 2013 Rio Tinto sold the Eagle Mine and Humboldt Mill to Lundin Mining Corporation of Toronto, Canada. The new company has continued construction at the mine and primarily at the mill, and plans to start production by the end of 2014 or early 2015. (Information from Jessica Koski, KBIC mining technical assistant)

10th Anniversary of the Crandon Mine purchase

On October 26 the Sokaogon/Mole Lake Band and their supporters celebrated the 10th anniversary of the purchase of the proposed sulfide ore Crandon Mine site. Approximately 80 people gathered at Mole Lake to discuss the events that lead up to the purchase of the mine by the tribes in 2003 and to discuss responses to future mining initiatives in the ceded territories. Speakers covered topics such as the history leading up to the mine purchase, the role of non-tribal supporters in the struggle, and the importance of treaty rights. The day was punctuated by a feast and a trip to the proposed mine site. Larry Nesper received recognition from Mole Lake's Tina VanZile for his contributions to documentation of Mole Lake's cultural heritage. (Photo by John Coleman)

Honoring the River: How hard rock mining impacts tribal communities

The National Wildlife Federation (NWF) released a report detailing the disastrous impact hard rock mining has had on tribal communities historically. Many tribes have been left with poisoned rivers, contaminated sacred sites and continued pollution from old and abandoned mines. In the report NWF recommends action to help prevent further problems as new mines are being proposed near tribal lands. "Some of the environmental impacts, like acid mine drainage, will last into perpetuity," the report states.

In particular the report pushes for actions to close two loopholes in the Clean Water Act (CWA), loopholes which allow the dumping of untreated tailings and other waste into wetlands, streams and lakes: "More specifically, agency regulations currently allow mines to treat waters as 'waste treatment systems,' which are not protected by the CWA, and to treat mining waste as 'fill material,' which is not subject to normal pollution standards."

The report is endorsed by five GLIFWC member bands: Bad River, Lac du Flambeau, Red Cliff, Keweenaw Bay and Sokaogon/Mole Lake.

Check out the report at: *www.nwf.org/News-and-Magazines/Media-Center/News-by-Topic/Wildlife/2013/04-25-13-Honoring-the-River-Press-Release.aspx*

Onji-Akiing once again shows us the way

By Heather Naigus, GLIFWC Eastern District Warden

Sidnaw, Mich.—The fifth annual GLIFWC/United States Forest Service (USFS) cultural summer camp program, Onji-Akiing/From the Earth, brought together over 80 Native American youth and staff to gather in the heart of the Ottawa National Forest for a week of treaty rights education, natural career exploration, and honoring indigenous traditions. It was easy to see the joy, respect, and depth of connection to Native American spirituality that was deepened at this year's camp program.

Campers celebrated their rich heritage with adventure-based learning activities that centered on the Medicine Wheel in which the mental, physical, emotional, and spiritual aspects of living are explored. Not only did kids experience canoeing, fishing, archery, swimming and the team-building low ropes course, they also got to step into the lives of several natural resources professionals who traveled from far places to share their cultural, collegiate, and outdoor knowledge.

GLIFWC Great Lakes Biologist Bill Mattes instructed campers in performing fish population studies and fish dissection. GLIFWC Botanist Steve Garske took kids through the woods to learn first-hand about forest pest invaders. Youth also participated in pre-colonial cooking with the GLIFWC Administration for Native Americans (ANA) Mino Wiisinidaa (Lets Eat Good) Traditional Foods Program staff that promoted healthy harvesting and happy tummies.

David Michener, associate curator at University of Michigan, traveled over 500 miles to lead kids through "interviewing plants." Michener, who is working on an indigenous garden project at the university stated, "Respecting plants teaches us to respect each other. It is all about integrity. I am happy to be involved with this camp because these plants are alive and returned to people they know, their relatives."

Nikke Crowe, Fond du Lac Tribal College education program coordinator, shared cultural wisdom about wild edibles and plant medicines with the campers. Crowe, a firm believer in traditional ecological knowledge, taught kids how to establish healthy relationships with their plant relatives. She had the kids harvest different flora and process them into a natural bug repellant. "This stuff really works; it's so cool," exclaimed 12-year old Lac Vieux Desert member, Mabel LaBine.

USFS staff also reinforced environmental stewardship to Mother Earth through hands-on activities and held a Natural Resource Career Fair that offered personal experience in working, playing and caring for the outdoors. This fair included several colleges and tribal professionals from around the Great Lakes.

The high ropes course, beading, and warrior games (games used traditionally to teach young ones to become good protectors of their homelands) were among the favorite activities at camp. Campers also learned the value of respect and "giving back" through a service-learning project. Most importantly, everyone had a fun time building relationships with the earth, each other and themselves.

With the largest youth attendance to date, summer camp was a huge success in promoting healthy lifestyles, building leadership, and providing a fun learning experience!

This camp is designed to empower the lives and strengthen the paths of Native American youth today through cultural activities and wisdom. Onji-Akiing works to provide the tools that youth need in order to enrich their lives, their culture, and the communities they live in.

"Our first year campers are now Junior Councilors, several of which are going onto college," said GLIFWC Chief of Enforcement Fred Maulson. "They've utilized their camp experience to help on a career path into the future."

If you are interested in information on the 2014 Onji-Akiing Camp Program, please contact Heather Naigus, Outreach Officer, Law Enforcement at *hnaigus@glifwc.org* or visit ***www.glifwc.org***.

Outdoor skills and adventure blend with learning and cultural activities to compose Camp Onji–Akiing. Growing in popularity, the fifth annual Onji-Akiing/From the Earth camp drew 80 Native American youth and staff in 2013. The camp represents a collaborative effort between the US Forest Service and GLIFWC. (Photo submitted)

"We are related to the trees and the animals. I am glad I came here to remember that."
—11 year old LVD member

Jay Malchow, Leech Lake staff, is smudged by Henri Valliere who opened the day with a smudging ceremony at Onji-Akiing Camp last summer. (Photo by Heather Naigus)

Fun Guy hangs with FunGi

By Asa Naigus
Youth Writer

Keweenaw Bay Indian Community, Mich.—On my ditch day from school, I got to be a part of the Kinomaage Harvesters Workshop, where I got up close and personal with mushrooms, aka fungi! I traveled to the Keweenaw Bay Indian Community (KBIC) in Baraga, Michigan and learned about different kinds of fungi and their importance to Native American people. The KBIC Natural Resources Department and the Cedar Tree Institute brought Native American fungi experts from all around Michigan to help us all learn.

The Algonkian word for mushroom is puhpohwee, which is a fun word to say. This word is not a noun but an action word, meaning to pop up and then go back down, or rejuvenate. This word is similar to the Anishinaabe word for muskrat, which also "pops up" in water.

I don't really like to eat mushrooms, but my mom does so I learned about types that she can eat. One was the little garlic that is used to flavor garlic fry bread. I think I might try this someday. It is fun to run around the woods and find cool colored mushrooms. There are also so many other uses for mushrooms.

For one, Anishinaabe people used a certain type of mushroom to brush their hair and their horse's hair. It is called the oak comb, or mishimij binakwan, and has large pore openings on its underside that resemble a maze puzzle. Maybe I can find my mom one for Christmas.

Shelf mushrooms, when picked fresh, make a great canvas for art work and there are lots of them in the forest.

Asa Naigus, 9 years old. (Photo by Heather Naigus)

I used a matchstick to draw on the top side of the mushroom. After I finished my picture, I put it in a black plastic bag to harden and soon, my shelf mushroom will be on my shelf!

I also learned about skatogon that can be used as a cauterizer or fire starter. My favorite was the puff ball because when I squeezed it, a green magic dust cloud came out. Some puffballs you can eat, but they have to be white inside, not green.

I am honored to have learned about the spiritual kinship that humans have with mushrooms. They provide food, medicine, and art, besides helping the trees and the woods to survive. Just be careful before you put one in your mouth. They can be quite sneaky and get you sick if you don't make friends with the right one.

Ishpaagoonikaa (Deep Snow Camp)

Lac du Flambeau, WI
February 8 & 9, 2014
Grades 5-8

GLIFWC's third annual Cultural Winter Camp Program, Ishpaagoonikaa (Deep Snow Camp), will be held in Lac du Flambeau this year on Feb.8-9. Youth in 5th – 8th grades, are encouraged to apply for this weekend of Native American treaty rights exploration.

Activities include shelter building, ice spearing, fire-making, trapping, winter survival, snowshoe making/hiking, animal snowpack survival, environmental stewardship, etc. This year, we will feature the Native American game of Snow Snake. Campers will craft their own and learn to play.

Please feel free to contact Heather Naigus, Outreach Officer, L.E. at 906-458-3778 or *hnaigus@glifwc.org*. Applications must be received by Jan.1, 2014.

Full Name: _____

Date of Birth:

Grade in school: _____

Email address:_____

Cellphone: (_____) _____

Facebook? _____yes _____no

School attending: _____

Tribe Affiliation: _____

Parent/Guardian name: _____

Parent/Guardian telephone: (home)_____ (cell)_____

Parent/Guardian email address: _____

Students are asked to write a statement in support of this application. Student's statement: **Why I should be selected to attend Winter Camp and what I hope to learn:**

Application Deadline: Jan. 1, 2014

Camp Schedule (Central Time Zone)

Saturday, February 8	11:00 PM	Opening Ceremony
	12:00 PM	Lunch
	1:00 PM	Cooperative Games
	2:00 PM	Outdoor Activities
	5:00 PM	Return to Recreation Center-Clan Work
	6:00 PM	Dinner
	7:00 PM	Cultural Crafting/ Winter Camp Theater
	10:30 PM	Lights out
Sunday, February 9	8:00 AM	Breakfast
	9:00 AM	Outdoor Activities
	12:00 PM	Lunch
	1:00 PM	Closing Circle
	1:30 PM	Buses Depart—Baama Pii

For more information contact Heather Naigus: (906) 458-3778 or *hnaigus@glifwc.org*. Send electronic application to: *hnaigus@glifwc.org*. Send by mail: Heather Naigus, 253 Silver Creek Rd., Marquette, MI 49855 or GLIFWC c/o Heather Naigus, P.O. Box 9, Odanah, WI, 54861.

Fur identification was part of the Winter 2012 camp activities. (Photo by Heather Naigus)

Wardens stress winter safety

By Rebecca Olson, GLIFWC Eastern District Warden

As a conservation officer for GLIFWC, I patrol the northern regions of Michigan and Wisconsin on snowmobile each winter. I think of my sled as a work horse allowing me to cut trail through the forest, aiding stranded snowmobilers, checking on ice fishing and trapping activities, and assisting other agencies. In other words, my sled allows me to do my job more efficiently with access to areas of the ceded territory covered by snow and ice, while having fun!

Snowmobiling is part of our daily winter living in the ceded territories, just like eating hearty foods and shoveling the driveway. By February, most of the lakes and trails have enough snow pack to entice area snowmobilers. In Wisconsin alone, there are approximately 200,000 registered snowmobiles and 25,000 miles of groomed trails. In Michigan, as many as 150 grooming tractors are hard at work smoothing and reducing hazards on the 6,200-mile trail system. And the headquarters of Arctic Cat and Polaris can be found in Minnesota. Whether for recreation, work or transportation, snowmobiling remains a popular wintertime activity up here in the Ojibwe ceded territory area.

GLIFWC Warden Rebecca Olson on her "work horse," used to check ice fishing and winter trapping activities in the ceded territories. (Staff photo)

With numerous snowmobile fatalities each year in Wisconsin alone, adopting safe snowmobiling practices is crucial for personal safety and the safety of others. The fact that modern snowmobiles are capable of extreme speed, along with countless obstacles, means snowmobile operation presents certain risks that we might not normally think about. In order to prevent accidents, protect resources, and promote fun in the outdoors for generations to come, I want to stress the importance of snowmobile safety. There are a few safety tips everyone can easily adopt.

Never riding alone is a safe and simple principle to follow. With at least two sleds, if one becomes disabled you have another to ride and get help.

Pack a "Survival Bag." Items I make sure to pack included extra spark plugs, a belt, spare key, tow strap, oil and owner's manual for the machine. Drinking water, snacks, cellphone, ice picks, life jacket, spare clothes, socks and gloves, a pocket tool, hand warmers, lighter and a first aid kit are also items that would be welcomed in an emergency situation.

In subzero temperatures on remote trails and frozen waters, not dressing properly can make for a miserable experience at best. Most of us up here in the north understand how to dress for the cold but wearing a life jacket when riding on frozen lakes and rivers can also save your life. Current personal floatation devices (PFD's) are becoming less bulky, so when chasing the next great fishing spot think about throwing one on over your outer clothing. It could save your life!

Some other safety tips for responsible snowmobile operation include staying on the trails, staying to the right side of the trail, avoiding alcohol, slowing down, and the most obvious, completing a snowmobile safety certification course.

GLIFWC offers this course, which emphasizes safe and responsible snowmobile operation. Please contact your local GLIFWC conservation officer to find out when and where classes are held in your area. See you out on the trails!

For more information contact GLIFWC Outreach Officer Heather Naigus at *hnaigus@glifwc.org* or 906-458-3778.

GLIFWC wardens retrieve lost nets from Lake Superior

By Sue Erickson, Staff Writer

Bete Grise, Mich.—Responding to reports from sport fishermen who have encountered ghost nets in the Michigan waters of Lake Superior, GLIFWC wardens investigate and retrieve lost nets.

Relying on GPS coordinates provided by the person who reported a net, wardens search for the net using a dragline over the given coordinates. The reports have occurred primarily in the Marquette area or around the Keweenaw Peninsula.

In 2013 investigations of seven reports yielded four nets, with a total of 5,000 feet of net removed. The nets are estimated to be about two to three years old, according to GLIFWC Chief of Enforcement Fred Maulson. Maulson says the nets contained few fish which were predominantly suckers.

GLIFWC Wardens Dan North, Steve Amsler and Matt Kniskern participated in the search and retrieval efforts this year. The incidents of lost nets are currently under investigation.

Maulson encourages both tribal and non-tribal fishermen to report lost nets along with location information. GLIFWC will continue to make every effort to retrieve ghost nets. Lost net reports can be called into GLIFWC at (715) 682-6619. GLIFWC is establishing a reporting system on the GLIFWC website at *www.glifwc.org* which should be operational by the end of the year.

GLIFWC Warden Dan North hauls up a ghost net aboard GLIFWC enforcement vessel, the Mizhakwad. (Photo by Matt Kniskern)

Inset photo: GLIFWC Wardens Matt Kniskern (pictured) and Steve Amsler also participated in net retrievals in the Michigan waters of Lake Superior. Nets are located using a dragline over the GPS coordinates. (Photo by Dan North)

GLIFWC Enforcement assists Menominee with drug bust security

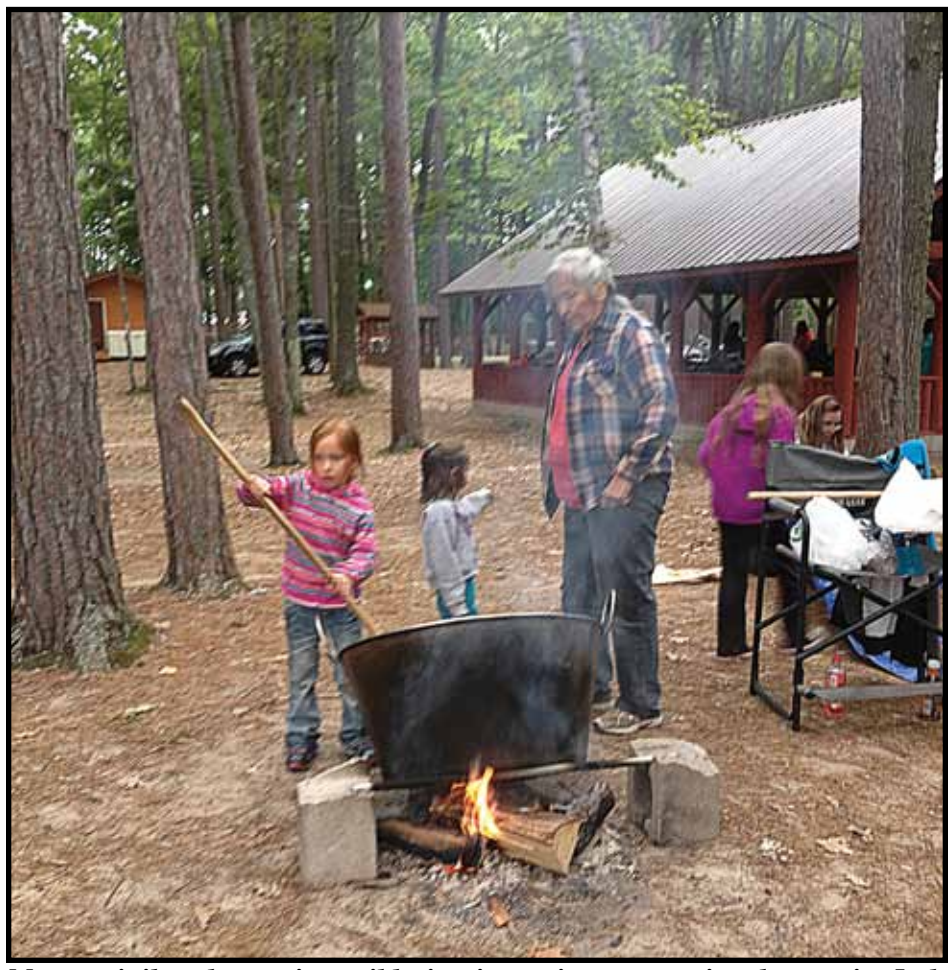
Following an investigation and bust of a marijuana grow site on the Menominee reservation this summer, six GLIFWC officers assisted with security during the clean-up at the site within the Menominee forest.

About 900 marijuana plants worth an estimated $1.35 million were destroyed after sufficient evidence had been gathered at the site for legal proceedings, according to GLIFWC Enforcement Chief Fred Maulson.

GLIFWC works in association with the Native American Gang Task Force, which had been asked by Menominee to assist with the operation that resulted in one arrest and one deportation of a Mexican national.

During a mid-August site destruction, GLIFWC officers secured the site while Menominee Forestry detail pulled and burned the remaining plants.

—Sue Erickson



Manoominike—harvesting wild rice is an intergenerational pursuit. Judy Smith, a watchful elder observes as Breanna Jondreau learns to parch rice at the 2013 Wild Rice Camp sponsored by the Keweenaw Bay Indian Community. Besides learning the basics of processing rice from Lac Vieux Desert's Roger LaBine, the two-day camp included making rice knockers and push poles, plus instruction on using push poles. GLIFWC wardens assisted LaBine in teaching canoe safety prior to participants heading out to the rice fields. Day two included parching, construction and use of a jigging pit, winnowing, and finally, cleaning and sorting the finished manoomin. (Photo by Heather Naigus)

Clip & Save ✂

2013/2014 GLIFWC enforcement youth activities/education

Class	Date	Place	Contact
ATV Safety	November 29-30, 2013	Mille Lacs	Robin Arunagiri 715.889.0734
Snowmobile	December 6-7, 2013	Mille Lacs	Robin Arunagiri 715.889.0734
ATV/ Snowmobile	Dec. 7-8, 2013	St. Croix	Brad Kacizak 715.562.0030
ATV/ Snowmobile	Dec. 14-15, 2013	Lac Courte Oreilles	Mike Popovich 715.292.7535 Lauren Tuori 715.292.8343
Snowmobile	February 4, 7-8, 2014	Red Cliff	Mike Soulier 715.209.0093 Jim Stone 715.292.3234
Learn to trap	February 22-23, 2014	Lac Courte Oreilles	Mike Popovich 715.292.7535 Lauren Tuori 715.292.8343
Boater Safety	May 10-11, 2014	Lac Courte Oreilles	Mike Popovich 715.292.7535 Lauren Tuori 715.292.8343
Boater Safety	May 19 & 21-23, 2014	St. Croix	Brad Kacizak 715.562.0030
ATV Safety	June 9, 12, 2014	Red Cliff	Mike Soulier 715.209.0093 Jim Stone 715.292.3234
Take a kid fishing	August 2014	Mille Lacs	Robin Arunagiri 715.889.0734
Hunter Safety	August 18-19, 2014	Red Cliff	Mike Soulier 715.209.0093 Jim Stone 715.292.3234
Hunter Safety	September 5-6, 2014	Mille Lacs	Robin Arunagiri 715.889.0734
Hunter Safety	September 8, 10, 12, 15, 17 & 19, 2014	St Croix	Brad Kacizak 715.562.0030
Hunter Safety	Sept. 27-28, 2014	Lac Courte Oreilles	Mike Popovich 715.292.7535 Lauren Tuori 715.292.8343
ATV/ Snowmobile	October 6, 8, 9, & 10, 2014	St. Croix	Brad Kacizak 715.562.0030
ATV/ Snowmobile	December 6-7, 2014	Lac Courte Oreilles	Mike Popovich 715.292.7535 Lauren Tuori 715.292.8343

All dates are tentative and subject to change. For updated information on these events and others please be sure to check our website at ***www.glifwc.org***, visit us on **Facebook** or call your nearest GLIFWC warden.

GLIFWC in the Hoopa Valley

Lieutenant Eddie Guyer (center) shared cultural information with GLIFWC Officer Heather Naigus (left) and GLIFWC Enforcement Chief Fred Maulson during a tour of the Hoopa Valley Indian Community while they were on wild fire duty in California's Humboldt County last summer. (Photo submitted)

Humboldt County, Calif.—During the 2013 wildland fire season, GLIFWC law enforcement officers were once again called to help provide security as summer fires raged in northern California. The Corral Complex Fire brought four GLIFWC officers to Humboldt County where they partnered with the Hoopa Valley Indian Community to provide protection for its members. During their three-week stint of fire duty, GLIFWC officers were also treated to a taste of Hoopa culture.

"We are happy to have GLIFWC on our land. They are great at understanding our people and our ways. They work well with our community while we battle the threat of this fire," stated Hoopa Valley Police Lieutenant and member, Eddie Guyer. The fire blazed through 12,500 acres before it was extinguished.

The security detail had GLIFWC Officer Heather Naigus managing a security staff of 45. The large detail was required due to sensitive areas involving marijuana grows and drug cartel activity, adding another form of danger beyond the fire itself.

Off-duty Guyer invited Chief Fred Maulson and Naigus to tour their traditional grounds and the "Little Houses" where spiritual ceremonies are held. Pictures were allowed of the outside of Little Houses but not of the inside or the Brush Dance Pit. He also shared stories about Hoopa traditions.

Located in a valley surrounded by the Klamath Mountains in Humboldt County, the Hoopa Valley Indian Tribe is one of the only area tribes not relocated. They do not hold powwows but still practice the traditional dance ceremonies from their ancestors. One such ceremony was taking place at the time of the fire, called the "Ceremony of the White Deer Skin Dance."

This ceremony, held once every two years, is danced for the renewal of the Earth and features a Boat Dance. The men of the community dance in dugout redwood canoes while floating down the Trinity River that runs through the valley, stopping at seven different camps along the way. GLIFWC officers were invited to witness this special event, not normally viewed by non-residents of Hoopa Valley.

Guyer also enlightened GLIFWC Officers on the Hoopa belief of the "old man on the mountain," commonly called Bigfoot by others. "We believe in him but we don't look at him. If you do, it is said you will go crazy," Guyer explained.

Another belief of the Hoopa Valley Tribe involves the "Little People" who cared for their mountains. Guyer explained how they would take care of human visitors on the mountain if tobacco or candy was left for them. Naigus made sure that all her security staff working on the mountain brought along candy to put out.

GLIFWC Law Enforcement is thankful to the Hoopa Valley Indian Community for their hospitality and for sharing their culture. Chi-Miigwech!

—GLIFWC staff

GLIFWC enforcement benefits from DOJ grants

Odanah, Wis.—GLIFWC's Enforcement Division got a healthy boost to its program with a grant award from the Department of Justice this fall. "We have received several of these grants in the past," states GLIFWC's Chief of Enforcement Fred Maulson. "They have helped us tremendously, especially in the areas of technology, equipment procurement and advanced training to monitor off-reservation harvesting in the ceded territories."

Fred Maulson.

GLIFWC was among numerous recipients of federal grants from the Department of Justice's Coordinated Tribal Assistance Solicitation (CTAS) for tribal-specific grant programs. Tribes in the Western District of Wisconsin were awarded $2.8 million in assistance for tribal prevention and law enforcement efforts as well as services to victims and youth programs.

A total of $90 million was awarded nationally to 110 American Indian tribes, Alaska Native villages, tribal consortia and tribal designated non-profits.

GLIFWC's Enforcement Division received $348,095 for public safety and Community Oriented Policing (COPS) activities.

Maulson says the current grant will help support a position for a youth outreach officer, winter survival training, and equipment upgrades such as thermo-imaging cameras, night vision gear, as well as some needed ATV, snowmobile, and inland boat replacements.

The new position for youth outreach officer is designed specifically to reach Native youth from member tribes who live on or off their reservations and involve them in outdoor hunting, fishing and gathering activities. "Essentially we teach Native kids about their treaty rights as well as introduce them to the skills they need to exercise those rights in the future," Maulson says.

Maulson expects to invite counterparts from state and county enforcement to participate when the winter survival training takes place. It is part of a spirit of cooperation. "When our enforcement capabilities are enhanced, surrounding communities also benefit. GLIFWC officers participate in numerous enforcement activities with other agencies, such as search and rescue, coldwater rescue, and drug busts," he says.

Other grant recipients included GLIFWC member tribes: Lac Courte Oreilles; Lac du Flambeau, Red Cliff and St. Croix for their COPS programs.

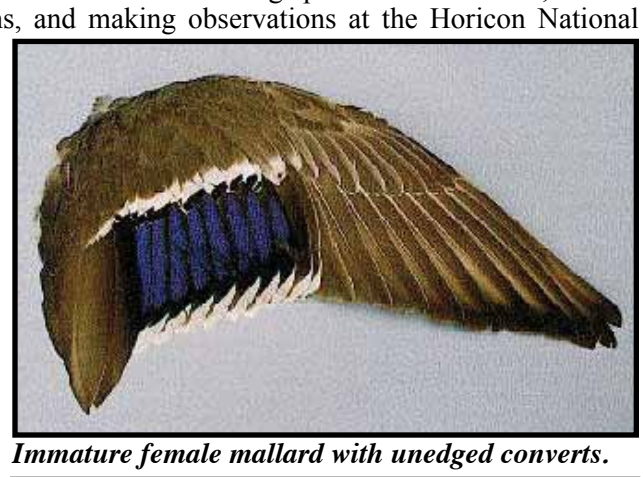
—Sue Erickson

Waterfowl school teaches bird i.d.

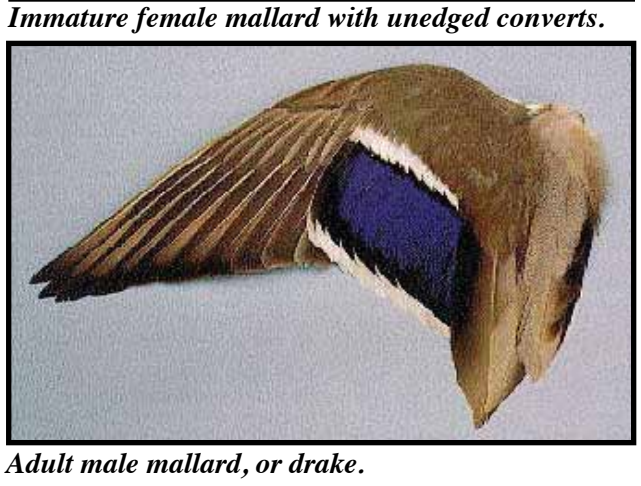
Also builds relationships

By Terry Carrick, GLIFWC Eastern District Warden

Mayville, Wis.—Did you know that migratory birds are one of the least sought after resources by tribal members in the ceded territory? Yet it is one of the most plentiful we have available to us. This October, I attended Wisconsin Department of Natural Resources Waterfowl School, also known as "Duck School," in Mayville, Wisconsin with a class of new Wisconsin state game warden recruits. There were several wardens from all across the state learning species identification, federal migratory bird regulations, and making observations at the Horicon National Wildlife Refuge (NWR).



Immature female mallard with unedged converts.



Adult male mallard, or drake.

Species identification involved information on nine different puddle ducks, ones which prefer to tip in the water with tail in the air and eat vegetation, and fifteen different diver ducks that will dive for food which may include fish. Identification was taught primarily with just the wing of the bird, which is required (wing or head) to be attached to the bird during transportation.

A good tip for a harvester to keep in mind is that although the drake of most species is more colorful than the hen, early in the season he may not have his full coloring, making it hard to identify the sex. A good example is the mallard, which is found throughout the ceded territory. If the drake has not matured in coloring, one can look at the wing for identification. The pictures above show the blue-colored area in the lower middle of the wing, called the speculum. The white lines above the blue on a drake will stop near the end of the blue feathers; on the hen, the white will extend beyond the blue and into the next set of feathers, or tertials.

Throughout the week, we made several trips to the Horicon NWR where thousands of birds were present to practice on-the-wing (flying) identification. Scenarios were set up for the last day of training. However, tornado warnings the night before, coupled with heavy morning rain, cut the day short, and recruits were only able to participate in a few sessions.

I have been involved with this recruit class on and off for the last few months and have gotten to know several of these new wardens. During our time together, they showed interest in understanding treaty rights. We as harvesters may someday meet these wardens out in the woods, and I feel confident this group will treat tribal members and non-members alike with respect and fairness.

In nature's classroom

Kids learn language, Ojibwe arts and skills

Watersmeet, Mich.—Lac Vieux Desert's (LVD) Summer Culture Camp opened with a prayer and a talk in our Ojibwe language as migizi seemed to "sit in mid-air" and watch what we were doing. Beginning Monday August 21st and ending on August 23rd, LVD youth and families engaged in a three-day camp where they could speak and learn Ojibwe language as well as other cultural and traditional art forms. Drawing 44 participants together, the event took place at the Old Indian Village in Watersmeet, Michigan, the original homelands and location of our Old Village.

All presenters—Leon Valliere, Wayne Valliere and Greg Johnson, all from Lac du Flambeau—incorporated Ojibwemowin into every presentation. Participants were blessed with learning these traditional arts from local talented and accomplished Native American artists. Workshops included:

Leon Valliere—Ojibwe language & deer hide tanning
Greg Johnson—Birch bark baskets
Wayne Valliere—Buckskin tobacco pouches /bone choker necklaces
Wayne Valliere—Traditional games
Waabanookwe and Ken LaRock—Canning venison

At a feast on the first day, Ojibwe language instructor/speaker Leon Valliere gave the talk for the food and for the day's camp in our language, but then explained to the participants what he said, so they could understand.

Wayne Valliere made tobacco pouches and bone choker necklaces while telling Ojibwe stories during the classes. He also hosted an array of traditional games for the children and youth, with the children really enjoying the spear throwing game.

Greg Johnson instructed the birch bark basket and birch bark medallion classes. To see the smiles on the faces of those who finished a medallion that they designed and etched was priceless!

Angel Snow, Lac Vieux Desert, displays a medallion she etched at the camp with the help of instructor Greg Johnson. (Photo by giiwe Martin)

Leon Valliere tanned two hides with the participants and smoked the hides after the process was completed. The youth were very eager to learn this, as well as several older community participants who remembered watching their grandparents tanning hides when they were little.

Waabanookwe LaRock, Lac Vieux Desert Ojibwe and Ken LaRock, Lac Courte Oreilles Ojibwe, processed, cut up, and canned 106 quarts of waawaashkeshi. Each participant was treated with a quart of venison to take home and share with family.

The participants were truly blessed with this beautiful setting at Ketegitigaaning lakeside, and there seemed to always be a constant presence of migizi. Another wonderful thing was that cell phones didn't work out there. We were away from many of modern technology's gadgets with very few distractions, which makes the interactions so meaningful.

Camp coordinator giiwe Martin explained why it is so important to host these camps in a natural setting. While the children are learning things about their Ojibwe culture, the teaching method which is "a normal way of life" for the Anishinaabe people, is all hands-on. There are no books, or paper handouts, or slide presentations or internet. It is in our veins to learn these things in our natural surroundings, and the participants are more inclined to feel comfortable out in nature. Far from the methods of a classroom setting as we know it today, and much more conducive to learning, we are blessed to be outside and surrounded with nature—all gifts from the Creator.

The need to revive and strengthen knowledge of the Ojibwe language and culture is critical today, as our children are not learning these things in the classroom, unless of course they are lucky enough to attend schools where these things are being taught on a regular basis. The presenters, elders, and families at the Camp, formed relationships that will last long after the camp days are gone.

When asked, a youth participant told the provider: "I never did any of these types of activity before, and I am really having fun! When is the next camp? I made myself a tobacco pouch, and I learned what it is used for. I will use the one I made every day. I was taught what the tobacco was for in the pouch and the significance of this medicine that we were given. All of these things are new to me."

Reflecting on the camp's experience, giiwe Martin commented, "It's a very crucial point in time right now, as our elders are leaving and the knowledge they carry, goes with them. I always ask myself: Will the younger generation learn these things before it is too late? Will they learn the stories and teachings that are to be passed down orally? Will they know enough to keep our ceremonies alive? These are the fundamentals of our Ojibwe identity that we cannot afford to lose. The answer is: it is by and through these very things we are doing, such as these camps and our language programs, and with help from our elders that—yes they will. That is an awesome feeling. Knowing you are playing a small part in keeping your traditions alive is what makes me happy."

The Ojibwe language "can't be taught in a day or a week," as explained by the Ojibwe Language Instructor Leon Valliere, but he stresses the importance to the participants to use the words that they do know every single day. Learn one word at a time, and then maybe 10. You will be increasing your base in small ways, but you must work hard to learn more and become speakers. It takes dedication and hard work to learn our language.

While this camp is behind us, we are looking forward to our Winter Camp that will pick up where this one left off.

—Submitted article

Phragmites in manoomin waters a concern

(Continued from page 1)

and rhizomes, and not by seed. However the presence of several small phragmites populations on land in the vicintiy of WWTPs using reed bed technology strongly suggests that viable seeds are moving off-site via wind, contaminated equipment, and ATVs using adjacent trails. Recent studies have demonstrated that seed viability is directly related to soil nutrients. Sewage sludge would qualify as a "high" nutrient substrate and thus, a high rate of seed viability would be expected from phragmites growing in these sites.

There are currently 17 WWTPs in Wisconsin that utilize reed bed technology and two more communities are considering their use (Abbotsford and the Village of Ridgeway). The permit conditions for the use of reed beds was initially developed to prevent the spread of roots and rhizomes from WWTPs. In light of recent findings, state permit guidance is being revised by WDNR to address the spread of seeds as well as roots and rhizomes.

The Red Cliff community is already reviewing ways to mitigate seed dispersal and/or alternative technology to replace the use of reed beds at their wastewater facility. Similar discussions have started with the Bayfield County Aquatic Invasive Species (AIS) committee to address concerns at the Washburn and Bayfield wastewater treatment facilities.

In addition to the threats posed to Chequamegon Bay, inland waters could also be at risk. Manoomin waters are of special concern because phragmites thrives in the same wet, mucky habitats where manoomin abounds. GLIFWC staff will be prioritizing the detection of phragmites in future AIS surveys.

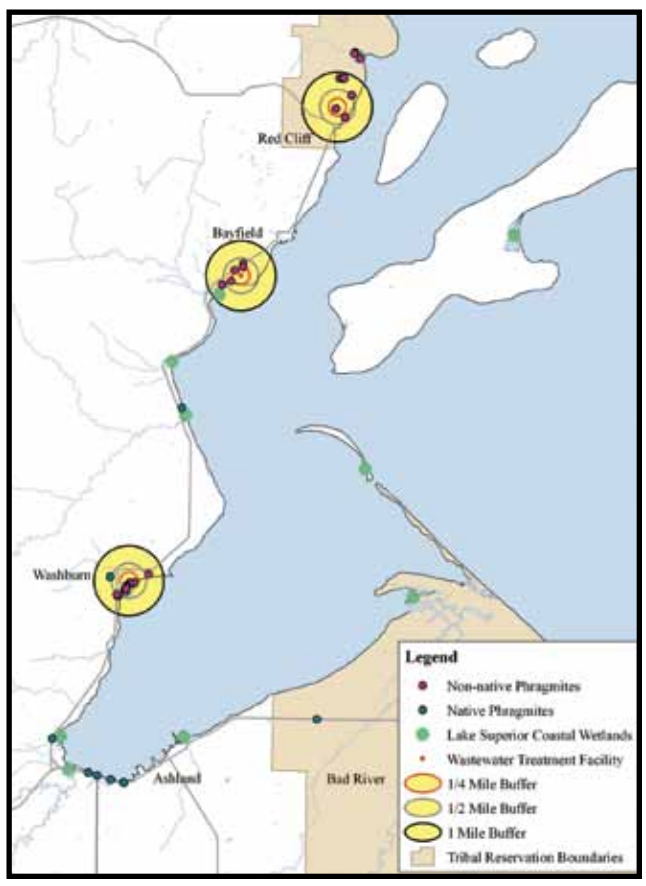
Until recently, the native and non-native phragmites were considered one species. As a result, much of the existing data on phragmites distribution is not clear about which subspecies is actually present.

GLIFWC staff have begun working with WDNR and county AIS coordinators to ground-truth these sites to determine if they are the native or non-native subspecies and coordinate appropriate management responses.

The following web sites provide additional information to identify and distinguish between the native and non-native subspecies of phragmites, as well as natural history and management information:

http://greatlakesphragmites.net/
http://mnfi.anr.msu.edu/phragmites/native-or-not.cfm
http://dnr.wi.gov/topic/invasives/fact/phragmites.html

Phragmites locations can be reported to Miles Falck at GLIFWC (715) 682-6619 extension 2124 or *miles@glifwc.org*.



Distribution of non-native phragmites and wastewater treatment facilities using reed bed technology to dewater sewage sludge around Chequamegon Bay in northern Wisconsin. (Map by Dara Olson)

Forests under threat

(Continued from page 11)
snow and rapidly multiply in the spring means that if and when they arrive, they will always be a threat to these two conifers.

The states of Michigan and Wisconsin (hemlock barely reaches Minnesota, where it is very rare) both have quarantines on the movement of infested hemlock nursery trees, boughs, logs and other materials into the state, and Michigan is preparing to implement a quarantine on fir tree materials from infested areas as well. Public cooperation is critical to keeping the ceded territory free of these destructive pests.

The benefits of public awareness and early detection were illustrated when the hemlock woolly adelgid (HWA) recently showed up at several sites in Lower Michigan. The adelgid arrived on infested nursery trees that had been shipped from the eastern US. One infestation was caught by a Michigan nursery inspector, and several others were reported by local citizens. Prompt action was taken, and Michigan officials now believe these infestations have been eradicated.

Swelling ("gouting") and needle loss caused by the balsam woolly adelgid. The insects secrete waxy filaments resembling cotton. (Ladd Livingston, Idaho Department of Lands, Bugwood.org)

Beech scale and beech bark disease

Another aphid relative, the beech scale, has now invaded Michigan and Wisconsin. Spread of this European insect has been linked to the movement of firewood by campers. The beech scale pierces the outer bark of American beech (*Fagus grandifolia; Azhaawemizhiig*) to feed on the sap, slightly damaging the bark in the process. This allows entry by one or more fungi that cause beech bark disease. Beech bark disease kills the trunks. In response the roots send up numerous suckers, creating "beech thickets." The beech bark scale has now spread almost as far west as the range of American beech, in central Upper Michigan and eastern Wisconsin.

The good news is that about 1-2% of the beech trees appear to have significant resistance to the beech scale infestation, and a small percentage of them may

Beech bark scale distribution in the US. Several fungi that cause beech disease are widely established in eastern North America. (US Forest Service, Forest Health Protection and partners:* http://foresthealth.fs.usda.gov/portal/Flex/APE*)

be completely immune. Thus the American beech is down but definitely not out. Forestry practices can play a major role in promoting the eventual recovery of beech, by leaving resistant trees in the woods.

Birch decline

Birch decline is of great concern to tribal members, in part because of the great importance of birch trees and birch bark to Ojibwe culture. Changes in land use practices and forest management appear to be primarily responsible for the decrease in white birch (*Betula papyrifera; wiigwaasatig*) in the ceded territory. These changes include fire suppression and excessive logging of birch. White birch is a fairly short-lived tree, and stands that were initiated 60-75 years ago may decline simply due to old age. White birch is also sensitive to elevated soil temperatures and drought, conditions that a warming climate will only make worse.

White birch and most other native birch species are hosts for a close relative of the EAB called the bronze birch borer. This native insect only attacks stressed and dying birch, so while it may contribute to birch decline it is rarely the primary cause. It attacks and kills healthy Eurasian birch species, though, so the European Union is writing regulations to try and prevent it from being imported into Europe.

The native bronze birch borer (a close relative of the EAB) generally only uses stressed and dying birch trees.

The cedar longhorned beetle

The small Japanese cedar longhorned beetle (JCLB) first appeared on the Atlantic coast of the US in 1997. It is well-established in several coastal states, and will likely continue to spread. It is a pest or scavenger of conifers in the family Cupressaceae, which in the ceded territory includes northern white cedar (*Thuja occidentalis; giizhikaandag*), common juniper (*Juniperus communis*) and eastern red cedar (*J. virginiana*).

Several studies have found that except for stressed nursery and landscape white cedar, the JCLB has only been found to emerge from dying or dead wood of suitable species in North America. It does not use any other North American conifers. While it appears that the JCLB will not become a serious pest of juniper and cedar in the ceded territory, it would be wise to follow the same precautions recommended to avoid the spread of other forest pests.

Adult JCLBs are 1/4 to 1/2 inch (6-14 mm) long. They emerge in early spring to start a new generation. (Connecticut Agricultural Experiment Station, Bugwood.org)

Where the forest pest project is headed from here

The scientific review of the threat posed by introduced forest pests is the first of three reports to be produced during the course of this project. By next October, GLIFWC will have completed a risk assessment integrating Traditional Ecological Knowledge (TEK) on ash use and ash quality needed for baskets, wood fuel harvest patterns, and traditional tribal management and use of balsam, birch, maple, oak and perhaps other species as well.

The main take-home message is that it is far easier to keep non-native forest pests from becoming established than to deal with them after they are here. People brought most of these pests here from overseas, and now ways must be found to reduce their effects. How fast they spread and how much damage they do depends in large part on whether or not people keep their eyes peeled for these pests, observe quarantines banning or restricting the movement of infested wood, boughs and other plant material out of infested areas, and obtain firewood close to where they burn it.

Zhingobaandag continued

(Continued from page 7)
buyer; however, it is only economical to travel to the closest location. This has been and continues to be the greatest challenge for bough pickers everywhere, getting your product to the buyer while still making a profit. For Marty and JR, they have been developing their buyer/seller relationship for years through providing a high quality product in a timely fashion. "When we pull up, they will move us to the front of the line, they will buy at a higher and more constant price from us, they call us first when the season opens and call us to go out longer if their order isn't filled." This is just one example of the relationships they have built and maintained over their many years.

As an essential supplement to the harvesters' income, they can't imagine having a year without a bough season and they rely on the balsam resource. Along with income the boughs provide, Marty and JR have both said that their years of harvesting have provided them with a lifetime of experiences and stories only the forest can provide.

They have been approached by bears, wolves and other wildlife but they say "there has never been a sense of threat, and there has never been a problem." The two have so much experience and knowledge to share, they are hoping to one day pass these traditions on to the next generation.

Paula Carrick learned balsam bough harvesting from her mother, Agnes Carrick, a Bay Mills tribal member and a mother of 14. Agnes was an active gatherer of many forest products throughout her lifetime; she used the forests and wild plants as a source of income, family quality time and education to pass along traditions through firsthand teachings. Among the various wild plants she harvested in the early winter months, balsam boughs were essential.

As a child, Paula remembers days spent with her family in the woods to harvest balsam boughs. They were taught, first and foremost to respect the tree. They sought out the mature balsam trees to harvest, and from different areas each season. By allowing at least two years between harvesting the same tree "you give the tree a chance to regenerate."

Paula says it was always fun to have the family together and in the woods sharing stories and memories, but balsam harvesting is also a lot of work. Boughs removed from trees were stacked, bound and tossed over the shoulder and removed from the woods.

Agnes would use the boughs to make some wreaths, but the majority were tied with twine and sold in 20 pound bundles. The income from selling wreaths and boughs would supplement the family budget in various ways throughout the year.

Three years ago, Agnes walked on as a grandmother to 64, a great grandmother to 104 and a great great grandmother to one. Her teachings are being carried on through the family who will still harvest boughs and create unique holiday wreaths.

When asked about the traditions and teachings future harvesters, Paula again expressed how important it is to teach respect for the resources we have, do not over-harvest it and do not harm it.

AKWA`WAAWAG

Makwa miinawaa Waagosh

Niiyo 2013

Boozhoo Waagosh, aaniin gaa-izhichigeyan?

Ingii-aabajitoon mitigo-gijigoozens da-akwa`waayaan

Gidaa-waawiindamaw ina da-akwa`waayaan?

Ayaangwaamizin azhigwa mookodaasoyan. Giinaa i`iw mookomaan!

niminwendaan mookodaasoyaan.

Nigiizhiitaa!

Gaawiin mashi, gidaa-wawezhitoon i`iw mitigo-gijigoozens.

Gidaa-onaabandaan wayaagwaakwak wiigobaatigoons, ishkwaa-biindaakoojigeyan.

Nashke! miikawaadad nimitigo-gijigoozens, akwa`waadaa.

Mitigo-gijigoozens wezhinigaademagad da-izhinaagwak dibishkoo asaawe.

Gaawiin mashi gigashkitoosiimin da-akwa`waayang.

Aabajitoon o`o eshka da-bawane`igeyan.

Howa! ginitaawichige.

Inga-badagwana`aanan iniw wadoopiinsan.

inga-mashkawapijige.

gigii-ozhitoomin akwa`waawigamigoons.

Noongom gidakamawaanaan maashkinoozhe.

Niminwendaan akwa`waayaan.

Wesley Ross Ballinger 2013

For more help with Ojibwemowin: http://ojibwe.lib.umn.edu

Biboong—When it is Winter

"Biboong, Manidoo-Giizisoons idash Gichi-Manidoo-Giizis idash Namebini-Giizis ongow giizisoon izhinikaazowag. Biboong, niwii-kopigozimin megwaayaak. Giikiiyosewag, ininiwag. Gii-aagimikewag gaye. Gakina gegoo gii-nitaawigwaasowag ingiw ikwewag. Gii-mazinigwaasowag. Gii-tibaajimowag idash gii-aadizookewag. Gii-zhooshkwajiwewag ingiw abinoojiiyag. Gii-kagwejikanidiwag gii-aagimosewaad. Geyaabi naasaab niwiikwajitoomin noongom. Gichi-Miigwech!"

("When it is winter, Little Spirit-Moon (December) and Great-Spirit-Moon (January) and Sucker-Moon (February) these moons/months they are called. When it is winter, we did move inland in the woods. They hunted, the men. They made snowshoes also. Everything they knew how to sew, those women. They did beading/embroidering. They told stories and they told sacred stories. They went sliding those children. They raced each other when they snowshoed. Still yet the same, we try to do things today. Great-thank-you!")

Bezhig—1

OJIBWEMOWIN (Ojibwe Language)

Double vowel system of writing Ojibwemowin.
—Long vowels: AA, E, II, OO
W<u>aa</u>booz—as in f<u>a</u>ther
Miigw<u>e</u>ch—as in j<u>ay</u>
Aan<u>ii</u>n—as in s<u>ee</u>n
M<u>oo</u>z—as in m<u>oo</u>n

—Short Vowels: A, I, O
D<u>a</u>sh—as in <u>a</u>bout
<u>I</u>ng<u>i</u>w—as in t<u>i</u>n
Niizh<u>o</u>—as in <u>o</u>nly

—A glottal stop is a voiceless nasal sound as in A'aw.

—Respectfully enlist an elder for help in pronunciation and dialect differences.

4 Verbs

Root Verb & **They**
VAI—verb, animate, intransitive.
Root command:
Waabi!—S/he sees.
Waabi**wag**.—**They** see.
VAI/He/She verb takes no object.
VTI—verb, transitive, inanimate.
Root: Waabandan!—See it!
Owaabanda**anaawaa(n)**.—**They** see **it (them)**.
Owaabanda**anaawaan** iniw apabiwin**an**.
They see **em** those chair**s**.
VTA-verb, transitive, animate. Root:
Waabam!—See him/her!
Owaabam**aawaan** i'iw amik**wan**.—
They see h/h that beaver.

Niizh—2

Circle the 10 underlined Ojibwe words in the letter maze. (Translations below)

A. <u>Gisinaa</u> agwajiing. Gichi-noodin <u>gaye</u> dash ningiikajimin

B. Gii-kimiwan <u>bijiinaago</u>. Gii-soogipon awasonaago miinawaa.

C. Zaaga'iganing <u>gashkadin</u>. Gii-maajaawag ingiw <u>zhiishiibag</u>.

D. Ani-biboong, <u>manisewag</u>. Mishiiwaati goon omanisaadaanaawaan.

E. Omanisawaawaan nimishoomis <u>waasa</u> <u>iwidi</u> megwaayaak.

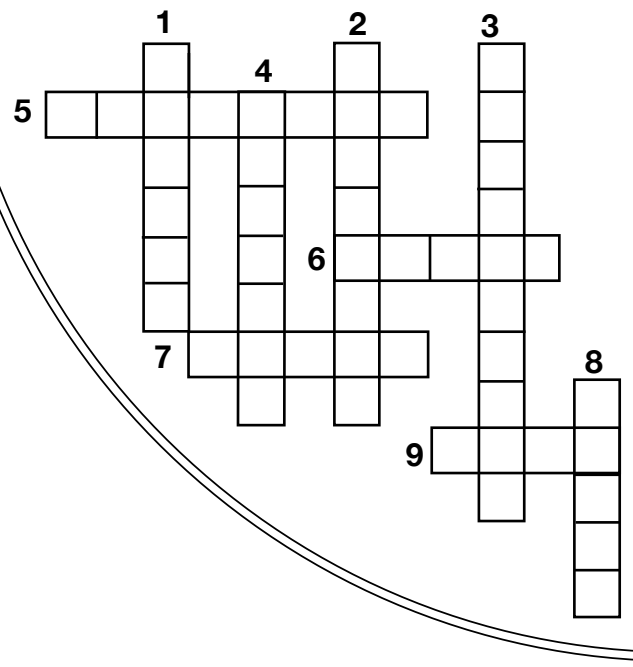
F. Ozhichigewag. Odoozhitoonaawaa waakaa'igan. Odoozhitawaawaan dewe'iganan.

G. <u>Baanimaa</u> wii-piindigenisewag <u>idash</u> wii-boodawewag.

O	I	A	G								
H	W	A	A	S	A						
A	I	Z	S	I	E	S					
‘	D	N	H	S	A	D	I				
T	I	N	K	A	‘	A	G	S			
K	O	I	A	N	A	J	S	A	I		
E	I	O	D	N	W	H	B	H	Y	G	
B	I	J	I	I	N	A	A	G	O	E	N
M	I	S	N	B	A	A	N	I	M	A	A
J	I	B	M	A	N	I	S	E	W	A	G
G	Z	H	I	I	S	H	I	I	B	A	G

Niswi—3

IKIDOWIN ODAMINOWIN (word play)



Down:
1. It is winter.
2. later
3. outside
4. women
8. something

Across:
5. men
6. S/he goes.
7. Basket, box
9. also

Online Resources
ojibwe.lib.umn.edu
www.umich.edu/~ojibwe/
www.glifwc.org/

Niiwin—4

Verb Inflections cont.- B-form/Conjuncts

VAI root dakobijige.—S/he ties/binds.
Aaniin dekobijige**waad** jiimaaning?
What are **they** tying on the canoe?
VTI root dakobidoon! Tie it!
Aandi dekobidoo**waad** i'iw makak?
Where are **they tying it** that box?
VTA root dakobizh!
Aandi dekobizh**igowaad** ingiw zenibaayag?
Where are **they tying them** those ribbons?
Who, what, where, why—type questions use b-form grammar.

-waad
o- -aawaan
o- -aawaa
-wag
-igowaad

Goojitoon! Try it!
Translation below.

1. Aandi waa-izhaa_____ waabang?

2. Wiidookaage_____ idash zhoomiingweni____.

3. Aaniindi gaa-biin_____ iniw amikoonsan?

4. Ikwewag _____gii-waabandaan_____ i'iw makizin nibaawigamigong bijiinaago.

5. Nimaamaa dash nindede _____wii-waabam_____ i'iw makwan waazhaang waabang.

Translations:

Niizh—2 **A.** It is cold outside. It is very-windy also and we are cold. **B.** It did-rain yesterday. It did-snow the day before yesterday again/also. **C.** On the lake it is freezing over. They did leave those ducks. **D.** As winter approaches they cut firewood. Dry wood pieces they cut them for firewood. **E.** They cut firewood for him, my grandpa far off over there in the woods. F. They make things. They build it a house. They build him/her a drum. **G.** Later they will bring the firewood inside and they will build a fire.

Niswi—3 ***Down:*** **1.** biboon **2.** baanimaa **3.** megwaayaak **4.** Ikwewag **8.** gegoo ***Across:*** **5.** Ininiwag **6.** Izhaa **7.** makak **9.** gaye

Niiwin-4 **1.** Where will-**they** be going tomorrow? (**-waad**). **2. They** help and **they** smile. (**-wag**). **3.** Where did-**they** bring **them** those baby beavers? (**igowaad**). **4.** The women **they** did-see **it** that shoe in the sleeping room/bedroom yesterday. **(o- -aawaa)**. **5.** My mother and my father **they** want to-see **him/her** that bear in the den tomorrow. **(o- -aawaan)**

There are various Ojibwe dialects; check for correct usage in your area. Note that the English translation will lose its natural flow as in any world language translation. This may be reproduced for classroom use only. All other uses by author's written permission.
Some spellings and translations from <u>The Concise Dictionary of Minnesota Ojibwe</u> by John D. Nichols and Earl Nyholm. All inquiries can be made to **MAZINA'IGAN**, P.O. Box 9, Odanah, WI 54861 <u>lynn@glifwc.org</u>.

Living traditional life, quest for self-determination is international

Visitors from Japan and Peru counsel with Tribes, GLIFWC staff

By Charlie Otto Rasmussen, Staff Writer

Mole Lake, Wis.—The connection registered all along the u-shaped table through knowing smiles and grim-faced nods. The 10-person Voigt Intertribal Task Force—most witness to the troubled decades of a generation ago—listened closely to the fortunes of traditional hunters in Japan: the Matagi and Ainu people.

"The national government imposes unilateral regulations which often does not work well with traditional hunters," said Mistu Takahashi, University of Toyoma Professor of Law. "They can receive fines and there are forfeitures. It's a big problem."

For the Task Force representatives and others in the room, it was a page torn from Great Lakes Ojibwe history books. "If you're under the jurisdiction of the state, they want you to follow their hunting and fishing rules," said Fred Dakota, Keweenaw Bay Indian Community. "It's only recently that we've gained our rights again."

Mitsu and his three companions—professionals in culture and wildlife management—traveled to northern Wisconsin in early October to better understand the treaty rights experience of Ojibwe people. It's the second trip for Mitsu in three years to meet with GLIFWC representatives and staff. New visitors included Dr. Gohei Ueda, Dr. Ippei Ebihara and Prof. Hiromi Taguchi, an experienced trapper, bear hunter and anthropologist. Japan is home to both black and brown bears, wild boar and sika deer.

Hiromi said a salient point of disconnect is that the Japanese government views hunting as a sport and a privilege. The Ainu and Matagi, who reside in northernmost Japan, approach hunting as a ceremonial right, part of a lifeway rooted centuries before the rise of modern Japan.

"In traditional hunting communities there are ceremonies especially when you shoot big game like bear. There is a ceremony sending the bear's spirit to the Mountain God and asking her for the bear to come back again," said Hiromi through Mitsu, who served as interpreter for the group. "Traditional people in Japan use sake as you use tobacco during ceremonies." Saké is commonly known as rice wine.

A number of Ainu have challenged the government in court to recover their ancestral land including fishing and hunting grounds, but have been unsuccessful in swaying the government judiciary, Mitsu said. The price Ainu pay for following ancient harvest guidelines can be high and include jail time.

"Basically, our gun control regulation is very, very strict. Once you get caught in violation [of national game laws], you're never going to be able to get a gun again," Mitsu said.

While the Ainu, remain in a difficult position, Mitsu said there are a few positive developments that offer observers some hope. The Japanese government passed a resolution to discontinue assimilation policies (think early 20th Century boarding schools in America) and now recognize Ainu culture as distinct from the rest of Japan. Hiromi continues work at organizing an annual summit of traditional hunters to strategize and pool resources in support of the Ainu lifeway.

"The numbers of traditional hunters are not that many. In former days there used to be a family lineage of hunters. The true old religion is kept in some of these rural villages but it's dying out," Mitsu said.

Ceremonial bear festivals held by the Matagi and Ainu people of Japan are directed to the Mountain God, thanking her for successful hunting and asking that harvested bears come back again. Japanese federal laws structured around sport hunting are often at odds with the harvest guidelines of traditional hunters. (Photo by Mitsu Takahashi)

Japanese anthropologist Hiromi Taguchi presents a gift of saké—commonly known as rice wine—to Mic Isham at the October 10 Voigt Intertribal Task Force (VITF) in Mole Lake, Wis. Said Mitsuhiko Takahashi (left): "Traditional people in Japan use saké as you use tobacco during ceremonies." Also pictured on far left, VITF Chairman Tom Maulson. (Photo by Charlie Otto Rasmussen)

First people of Peru return

During another international visit October 4, GLIFWC staff held discussions with Peru natives on how to build natural resources management capacity, drawing from both science and culture. Indigenous Peruvians, including Amazon Bands, continue to seek a stronger voice in forest, fisheries and wildlife management within their homelands. At GLIFWC offices, the delegation learned about how tribes and tribal organizations work with state and federal authorities to co-manage wildlife, forest resources, and fisheries.

It is the second delegation from Peru to tour Wisconsin reservations, including Menominee, Red Cliff, Bad River, under a program sponsored by the US Forest Service International Division. Peru contains the second largest area of Amazon rainforest and hosts more than 23,000 species of plants and animals.

The well-being of Gichigami's biodiversity scrutinized

Detailed assessments provide significant data

By Jen Vanator, GLIFWC Great Lakes Program Coord.

With reservation and ceded-territory lands located throughout the Lake Superior basin, Tribal governments and First Nations are key managers of Lake Superior, playing wide and active roles in binational coordination and management. Within this framework, staff from GLIFWC act as co-chair of the Habitat and Wildlife Committees, taking a leading role in the development of both the Assessment and the Strategy.

The Habitat and Wildlife Committees of the Lake Superior Workgroup of the Binational Program to Restore and Protect Lake Superior, in coordination with the Nature Conservancy of Canada, recently completed the two-volume, "A Biodiversity Conservation Assessment for Lake Superior."

Volume I provides an assessment of biodiversity throughout the open waters of Lake Superior and its islands, coastal areas, and the watersheds of tributaries—the current status of biodiversity targets, potential threats to biodiversity, and the strength of each threat. Volume II provides the same assessment broken down into 20 regional summaries to allow a more focused analysis.

The biodiversity assessment is the first step in the Committees' work to develop a new Lake Superior Biodiversity Conservation Strategy. Once completed, this Conservation Strategy will fulfill an obligation of the new Great Lakes Water Quality Agreement ("GLWQA"), and provide environmental managers with an important tool to guide management decisions regarding biodiversity conservation. The GLWQA requires that the Strategy be completed by February of 2015.

The federal governments of the United States and Canada, along with Tribal, State and local governments, have partnered together in efforts to conserve and restore Lake Superior's biodiversity for over twenty years. Protecting and restoring biodiversity is important to the overall health of Lake Superior—each species in the basin plays an important role in keeping the ecosystem running smoothly. Biodiversity is even more important in the face of climate change and increasingly frequent large-scale weather events. A healthy and diverse ecosystem is more able to adapt to and recover from such events.

Both volumes of the biodiversity assessment can be found on the Nature Conservancy of Canada's website: *www.natureconservancy.ca/en/*.

Tribal chefs compete "Chopped" style with traditional foods

By GLIFWC Staff

Lac Courte Oreilles, Wis.— GLIFWC's Administration for Native Americans (ANA) "Mino Wiisinidaa!" nutrition project staff ended their second grant year involving cooking demonstrations with a high-energy event on September 26 at Lac Courte Oreilles (LCO) High School. Hosted by the LCO Ojibwa College, project staff provided all traditional Anishinaabe foods for an event inspired by the Food Network television show "Chopped."

The first year of cooking demonstrations included six GLIFWC member tribes in Minnesota and Wisconsin. "The demonstrations illustrate how easy it is to include traditional Anishinaabe foods in an everyday setting at home. It also gives people a chance to taste the food and see how delicious it is," says LaTisha Coffin, ANA project coordinator.

"It's been a very rewarding experience to help tribal people rediscover how healthy and nutritious traditional foods are, especially tribal youth," she comments.

As of October 1, the "Mino Wiisinidaa!" project staff began working with the remaining five GLIFWC member tribes: Keweenaw Bay, Bay Mills, Lac Vieux Desert, Lac du Flambeau, and Mole Lake.

This unique LCO College "Chopped" event challenged three chef-teams to create appetizers, entrees, and desserts out of all traditional Anishinaabe foods. Each team had two chefs.

Team 1 included Shannon Nelson and Dawn Quaderer; Team 2 included Billy and Louise Rider; and Team 3 included Kathie Kerkel and Todd Brier. Each team participated in all three rounds and judges chose winners after the dessert round.

Mystery baskets for each round:

Appetizer round:

- Wild Onions/ Ramp Bulb
- Frozen Cranberries
- Turkey Breast
- Cornmeal
- Dried Sweet Fern

LCO College "Chopped" teams included: Right to left: Team 1—Dawn Quaderer and Shannon Nelson. Team 3—Kathie Kerkel and Todd Brier (Front). Team 2—Louise Rider and Billy Rider. (Photo by LaTisha Coffin)

Entrée Round:

- Venison Loin
- Lake Superior Trout
- Frozen Blueberries
- Soaked Wild Rice
- Mushrooms

Dessert Round:

- Pie Pumpkin
- Wild Rice Flour
- Walnuts
- Maple Syrup
- Wintergreen

Winners
Third Place: Team 2
—Billy and Louise Rider

Second Place: Team 1
—Shannon Nelson and Dawn Quaderer
First Place: Team 3
—Kathie Kerkel and Todd Brier

Some of Team 3's dishes included seared venison loin with a blueberry and white balsamic reduction in the Entrée Round, and a wild rice flour pancake in the Dessert Round.

The "Mino Wiisinidaa!" team is looking forward to fun and flavor with their second year of on-reservation cooking demos. Look for a cooking demonstration in your community!

The project also always welcomes recipes using traditional Anishinaabe ingredients.

Melanie Quaderer holds daughter, Lily Gallegos, who was sampling some of the plates from the entrée round of the "Chopped" event. (Photo by LaTisha Coffin)

Tribes receive 400 copies of Dibaajimowinan

GLIFWC's Administration for Native Americans (ANA) language grant came to an end with the distribution of 400 copies of* Dibaajimowinan: Anishinaabe Stories of Culture and Respect *to GLIFWC's member tribes.* Dibaajimowinan *presents the stories in both the Ojibwe and English language and also includes an MP3 formatted language CD. Receiving books on behalf of the Bay Mills Indian Community: Paula Carrick, tribal history department; Michelle Teeple, Bay Mills Community College; Bucko Teeple, Executive Council; and Lisa Oga, history department assistant. (Photo by Wesley Ballinger)

Recipe contributed from the Mino Wiisinidaa! (Let's Eat Good) Project

Mole Lake Lobster

Original concept from Franny Van Zile and Fred Ackley, Jr., Mole Lake

Prep Time: 15 minutes
Cook Time: 2 minutes
Total Time: 17 minutes

Serving Size: 4 ounces
Yield: 11

Nutrition Facts

Serv. Size 4 ounces (113.4g)
Servings 11.11889
Calories 160
Fat Cal 60
* Percent Daily Values are based on a 2,000 calorie diet

Amount/Serving	% Daily Value*
Total Fat 7g	11%
Sat. Fat 1g	6%
Trans Fat 0g	
Cholest. 75mg	24%
Sodium 1310mg	55%
Total Carb. <1g	0%
Protein 23g	47%
Vitamin A 8% •	Vitamin C 8%
Calcium 4% •	Iron 4%

Calories per gram
Fat 9 · Carbohydrate 4 · Protein 4

Exchanges: Meat-Lean - 3.50

Ingredients

3 pounds	**whitefish**, cleaned, skinned
1 tablespoon	sweet paprika, ground
2 tablespoons	lemon juice (about 1 medium lemon)
2 tablespoons	**sunflower seed** oil
2 tablespoons	**salt**
2 teaspoons	black pepper, ground

Directions

1. Cut fish into 2-ounce portions, about 4 pieces per fillet.
2. In a small bowl, mix together paprika, lemon juice, and sunflower seed oil.
3. Season both sides of each piece of fish with salt and pepper, then liberally brush with the paprika mixture, making sure to cover every part of the fish.
4. Let whitefish rest in marinade for 5 minutes.
5. Heat a medium, non-stick sauté pan over medium-high heat.
6. Place fish portions skin side up and cook for 1 minute, then gently flip and cook fish for an additional minute or until interior is opaque, but moist.

Bold = Indigenous foods

Chef Notes:

- Whitefish *(Coregonus clupeaformis)* with mild, sweet flavor is unlike any other. Only found in the Great Lakes region it is a prized catch. If you don't have access to whitefish try this recipe with any mild flavor fish, just adjust cooking time accordingly.
- Do not over-crowd the pan—cook just 4 portions of fish at a time and work in batches.
- Strapped for time? This recipe can be done in the microwave. Place marinated fish on a microwave-proof plate in a single layer. Cook fish on high heat for 1 minute or until cooked through and opaque but still moist.

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For more information see GLIFWC's website: **www.glifwc.org** and our Facebook page.