

# Mazina'igan

A Chronicle of the Lake Superior Ojibwe

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## Fisher numbers dip with fur value in far north

### Researchers probe shifting demographics

By Charlie Otto Rasmussen  
Staff Writer

**Bayfield, Wis.**—Chalk it up to a sign of the times. With both supply and demand for fisher pelts on the slide, trapper Mike Gustafson hung his conibears back in storage by the second week of December. Even as sleek fisher hides matured into top winter condition, Gustafson wrote off the busted season that had only just begun.

“I’ve never had this much trouble finding fishers,” said Gustafson, who uses quick-killing steel traps called conibears to harvest fishers, raccoons and other furbearers. “I used to run half as many traps and get twice as many. Now it seems like they’ve vanished.”

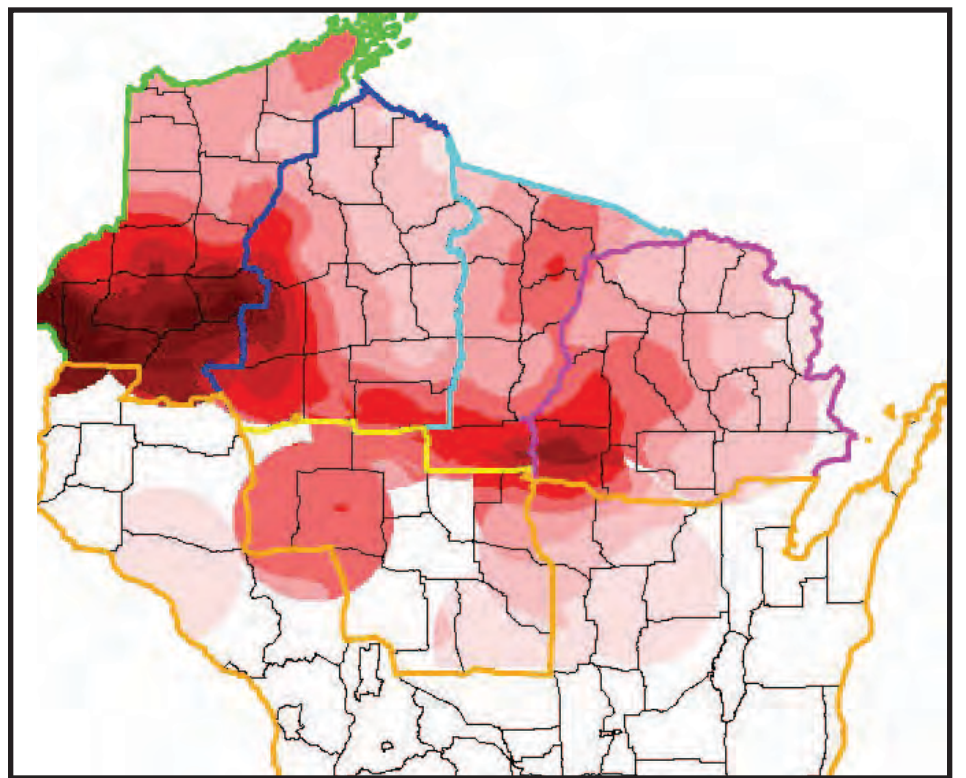
A full time Bayfield County employee and Red Cliff member, Gustafson annually tends a trap line from his Washburn workplace to home. He developed the route along winding rural roads and Bayfield County Forest two-tracks with brother-in-law Curt Basina in the mid-1990s. Success was the norm, and the pair from Red Cliff took home dozens of fishers each season, oftentimes filling much of the off-reservation tribal quota.

“In the early 90s there was a fisher in every tree. They’re so aggressive; it’s almost silly how easy they can be to trap,” said Gustafson, now a solo trapper following Basina’s retirement. Prime pelts fetched upwards to \$100 and beyond as fur processors in China, Russia and Greece snapped up hides to meet global consumer demand.

Spurred by the economic nosedive, however, the good times seem to be on hold. According to Tom Wiebke, raw fur prices have dipped an additional 40% following a poor 2008 market. The drop parallels the worldwide recession, said Wiebke, a Minnesota-based fur dealer for the last four decades. Between time and expense—notably gasoline—the incentive to trap is sharply reduced and can become a liability for household budgets. But that’s only half the story.

#### Where did the fishers go?

Gustafson has company when he says fishers just aren’t around like they used to be. Many in the trapping community affirm that it takes considerably more effort to catch fishers in traditional hot spots. The turn-of-the-century heydays have given way to a head-scratching number of empty traps. Yet wildlife biologists estimate the cur-



*Fisher distribution in Wisconsin from 2004–2006. This map was developed by combining snow-track data with fisher harvest rates to produce a prediction of the relative abundance of fishers in the state. The darker the red color, the higher the relative abundance. (Map by Jon Gilbert.)*

rent Wisconsin fisher population is near an historic high since statistics were first logged in 1984.

“We’re looking at a number of potential factors to explain the change

including disease, harvest levels and shifting population demographics,” said Jonathan Gilbert, GLIFWC Wildlife Section Leader.

(See **Fisher densities**, page 2)

## Wild and wary wolves evade Bad River survey traps: All but one

By Sue Erickson  
Staff Writer

**Odanah, Wis.**—Nii-Jii (friend), a Bad River gray wolf, probably isn’t too excited about the collar he acquired last August after being trapped on the Bad River reservation, but the Bad River Department of Natural Resources is definitely excited about the opportunity to study the movement and habits of the wolf on tribal land through use of radio telemetry.

Known as ma’iingan in Ojibwe, wolves have historically been at home on the Bad River reservation, and as Bad River Conservation Officer Matt O’Claire notes, are considered a sign of a healthy and balanced habitat.

O’Claire estimates there are two to three packs on the tribes’ land, plus some visiting wolves who come in from outside tribal boundaries, possibly following deer to wintering spots near the sloughs.

While numerous sightings have been reported on the reservation, the Bad River Department of Natural Resources (BRDNR) welcomed an opportunity to

collar and track wolves in order to obtain a more accurate picture of the wolves’ range, their habits, numbers, and health. A previous study using radio-collars on reservation wolves was done about eight years ago, but the tribe needed updated information, O’Claire said.

An opportunity arose in the summer 2008 when Bad River partnered with US Department of Agriculture/Wildlife Service (USDA/WS) and the Wisconsin Department of Natural Resources (WDNR) wolf management team to trap and collar wolves on the reservation. Even expert USDA trapper Buck Follis came out of retirement to work on the project, so the team was clearly well-stacked with trapping knowledge.

That effort ultimately landed Nii-Jii, the 70 pound, two-year old male, who is currently sporting a brand new radio collar on the rez. But getting that collar on Nii-Jii did not come without effort.

According to Dave Ruid, USDA/WS trapper, the team used signs of ma’iingan, such as tracks and scat, along with general knowledge of wolf behavior to determine where to first set traps in mid-July. The team used only #4 double long-spring traps with offset



laminated jaws, designed to prevent any injury. Eight traps were set, using a combination of flat, dirt hold and urine post sets in conjunction with commercial and home-brewed wolf lures, according to Ruid.

The team’s expectations for quick results, however, faded after checking traps for two weeks and catching only several coyotes and a bobcat. Signs of wolf presence were discernable, but no (See **Ma’iingan studied**, page 3)



# Fisher densities slide south

(Continued from page 1)

Combining two hard-data sources, Gilbert recently completed a study that sheds light on what trappers report from the field. Using state trapping harvest figures and fisher track survey transects performed by the Department of Natural Resources, Gilbert created a map illustrating population distribution across the state.

The results are fairly dramatic and may suggest a phenomenon which occurs when some wildlife species are either introduced or returned to their former range: eruptive population growth, followed by a decline and leveling-off period. This trend may be driving fisher population densities, which have largely shifted from the northern tier of Wisconsin where reintroductions took place, to middle latitudes in the state running roughly along the jagged ceded territory boundary.

“The northern forest certainly has a lot of fishers but they don’t necessarily occur in the same densities across the landscape as 10 years ago,” Gilbert said. “It may be a case where far northern areas are settling into carrying capacity levels.”

Researchers are further exploring what effect, if any, diseases like canine parvo-virus and distemper have on fisher survival.

As for Gustafson—a regional trapper education instructor—he wonders how the local fisher decline might affect the recruitment of trappers as well as the participation levels of established trappers. Because they are relatively easy to catch compared to other furbearers, fishers are considered a good introductory species to trapping.

“It hurts with people just coming up—with getting new trappers involved,” Gustafson said. “This is already such a tightly regulated activity. The tribe has very close records of how many animals are harvested. In fact it’s so close that they have a daily count. I don’t know what the answer is.”

Since the first fisher trapping season in 1985, Ojibwe treaty harvesters have consistently remained at or under their harvest quota. State harvesters exceeded seasonal harvest quotas several times but biologists do not believe those incidents caused long-term negative impacts to Wisconsin’s fisher population.

## Cold and stinky

Along with fundamentals like location and trap concealment, trappers rely on strong-smelling baits to catch furbearers. Red Cliff’s Mike Gustafson recommends using siscowet, or fat lake trout, to lure in fishers.

“The funny thing about fat trout is that it smells as soon as you pull it out of the water,” said Gustafson, son of a Lake Superior commercial fisherman. “We chunk it up, throw it in glass jars and let it sit in the sun for a couple of days. Then we put it in the freezer and pull it out as we need it.”

Gustafson said the siscowet chunks become firm, retain a strong odor but won’t completely freeze—ideal for frigid weather trapping. Make a trip to a Lake Superior commercial fishing port before next trapping season and you’ll likely find all the siscowet you need at very little cost. *COR*

# New GLIFWC officers elected



GLIFWC’s Board of Commissioners reelected its officers during a January 27 meeting in Odanah. From left: Chairman Curt Kalk (Mille Lacs), Secretary William Gene Emery (Keweenaw Bay) and Vice Chair Rose Soulier (Red Cliff).



The Voigt Intertribal Task Force elected officers February 5 in Odanah during their monthly meeting. From left: previous VTF Vice-Chairman Mic Isham (Lac Courte Oreilles) moves into the top seat, replacing longtime Chairman Tom Maulson (Lac du Flambeau). Matt O’Claire (Bad River) takes over as Vice-Chairman. (Photos by Charlie Otto Rasmussen.)



Treaty trapper Mike Gustafson holds a male fisher he caught in the Bayfield Peninsula in early December. Gustafson, a trapper education instructor and Red Cliff member, worries about the local fisher population, which seems to be experiencing a decline. (CO Rasmussen photo)

## Celebrate!!!

Join us to celebrate GLIFWC’s 25th on July 2. GLIFWC will be at Big Top Chautauqua.

5:00 p.m. feast, honor presentations & an evening show featuring Bill Miller and the Blue Canvas Orchestra  
Show starts at 7:30 p.m.

Friends, fun, food, and entertainment!

For more information contact [pio@glifwc.org](mailto:pio@glifwc.org) or call 715-682-6619

On the cover—Jerome LaBarge Sr., Lac du Flambeau, instructs David Chapman III, Lac du Flambeau, on how to construct a spear house using alder branches as a frame. The photo is one of a sequence depicting the construction process and explaining it in Ojibwemowin (Ojibwe language). See center spread, pages 12-13 for entire sequence. (Photo by Jim St. Arnold.)



# Off-reservation model code changes announced

## *Hunting and trapping codes affected*

The Wisconsin Department of Natural Resources (WDNR) and Great Lakes Indian Fish & Wildlife Commission (GLIFWC) recently announced a number of updates to the court-approved rules that govern Ojibwe, or Chippewa Indian hunting and trapping rights in Wisconsin's Ceded Territory. For the most part, the modifications mirror similar changes in state hunting and trapping codes.

The 1991 court judgment in *Lac Courte Oreilles Indians v. State of Wis.*, most commonly known as the *Voigt* case, required the six Wisconsin Chippewa bands to establish a conservation code by which their off reservation treaty rights would be exercised. They did so by creating the Off Reservation Model Code.

WDNR staff and the GLIFWC, which represents six Wisconsin Chippewa bands, have been meeting for several years to find the areas in which both sides agree that changes to the Model Code are appropriate. Modifications reflect changes on the landscape over the last 17 years that have enhanced opportunities for both state and tribal hunters and trappers. For example, three state parks are now open to hunting that weren't at the time of the court decision, and wild turkeys are now prevalent in northern Wisconsin.

"It was an excellent collaborative process governed by our shared goal of assuring robust, diverse resources now and for future generations," said Secretary Frank. "The modifications we have agreed on better harmonize state and tribal hunting and trapping codes, and closely adhere to the spirit and agreements of the court decision," he said.

The changes, which primarily recognize amendments to state law since 1991, will be filed with the court as an amendment to the final judgment entered in 1991 and will be effective upon filing with the federal district court.

GLIFWC and DNR representatives worked closely to address the areas where changes were needed to the Off Reservation Model Code and succeeded in producing modifications outside of the court system.

"The success of this joint process can be viewed as a step forward in the way these issues are handled for all parties," said GLIFWC Executive Administrator James Zorn. "Hopefully, continued cooperative efforts between the tribes and state will serve to resolve other issues or changes that may arise in the future."

For more information contact GLIFWC's website at [www.glifwc.org](http://www.glifwc.org).

# Manoomin project update

*By Reggie Cadotte, Manoomin Project Coordinator*

**Odanah, Wis.**—Boozhoo! We Ojibwe are traditional hunters and gatherers. So over the past few months I have been gathering information about our manoomin (wild rice). Today we call this information TEK, traditional environmental knowledge.

I have been interviewing tribal elders to collect this information. During these interviews we discuss many things related to manoomin, such as historic sites no longer in use or no longer supporting manoomin, historic rice camps and activities that occurred there, physical and social threats to manoomin, areas to focus GLIFWC's re-seeding efforts, ways to improve re-seeding success rates, and general experiences with harvesting or processing manoomin.

I thoroughly enjoy listening to our tribal elders speak about their experiences and wish to extend a *chi-miigwech* (big thank you) to everyone who has donated their time and stories to the project thus far.

In addition, I have been operating a pilot project to test a model lease agreement that is designed to increase the capacity and efficiency of small, tribal member-owned wild rice processing businesses while improving the marketability of their product: finished manoomin.

This is a good project. I think today they would call it a "win-win" project. It not only helps the manoomin processors, but also brings manoomin back to the plates of tribal members.

The pilot project utilizes the model lease agreement to provide manoomin processors with packaging equipment and marketing materials in exchange for finished, packaged, and properly labeled manoomin. Once the lease agreement is fulfilled, manoomin processors then have the option of purchasing the equipment. Finished, packaged, and properly labeled manoomin collected by GLIFWC will then be re-distributed to GLIFWC member tribes' community food programs (i.e. elder feeding programs, food shelves, etc.).

If you still have manoomin available from last season and wish to participate in the pilot project, please contact me for more information at [wcadotte@glifwc.org](mailto:wcadotte@glifwc.org) or by calling 715-682-6619 ext. 103. The pilot project is a platform for a larger project scheduled to begin in April 2009.

Finally, I am preparing to conduct intergenerational workshops with tribal elders and tribal youth. These workshops are scheduled to occur during ricing season in the communities of Lac du Flambeau, Sokaogon (Mole Lake), Lac Vieux Desert, Keweenaw Bay, and Bay Mills.

Please let me know if you are interested in participating as an instructor of manoomin harvest/processing techniques at these workshops. I am also interested in talking to tribal youth program directors, tribal school teachers, and tribal elders about these upcoming workshops in the above listed communities.

These promise to be excellent learning opportunities for our tribal youth. *Miigwech!*



# Ma'ingan studied at Bad River

(Continued from page 1)

wolves were in the traps. At that point, Ruid said some of them were ready to give up the effort, but "Tribal Warden Matt O'Claire would have none of that."

Consequently, they doubled the ante to 16 traps, moving some that had no evidence of action at the first location. The traps were scattered at sites throughout the southern half of the reservation.

Another week of checking traps gained nothing. They added one more week onto the project, deciding to pull the traps on August 15, wolf or no wolf. That week wore on with no trapped wolves until D-day, August 15, rolled around. And there he was—Nii-Jii had got himself caught, caught in a trap O'Claire and Follis had moved to a more remote location than the others.

The trapped wolf was quickly sedated so the team could get a weight and do a health check. The weather was very warm, and the team worried that the wolf could become overheated, Ruid said. They took his temperature and found it several degrees above normal, so cooled him down with water. Otherwise, Nii-Jii was in good condition, no mange or signs of other disease.

Once the data was recorded, Nii-Jii was fitted with a radio-collar and micro-chipped. Then, a reversal shot was administered, and Nii-Jii quickly recovered and left the site.

"The reservation wolves are wary and very wild. They really have not had much exposure to humans at all,"

O'Claire says. "They stay very much aloof." He believes this, along with the warm weather conditions, is why the team had so little success up to August 15.

O'Claire is very appreciative of all the effort expended by the team. "These people are not only expert trappers, but they deeply care about the animals, all of nature. Both Ruid and Follis put in a lot of personal effort to make this a success," he said.

The movements of Nii-Jii are tracked through WDNR bi-weekly wolf flights. Information from the flight is forwarded to the BRDNR, O'Claire says the tribe hopes to obtain some radio telemetry equipment as well, although the flight checks are the most efficient.

Bad River DNR Director Erv Soulier views the project as a success and was pleased with the collaborative effort. "This project took some real determination, and the team stuck to it. They not only achieved their goal, but opened up some good communications between the tribe and the respective agencies."

The tribe plans on seeking a grant to continue the trapping/collaring effort next year.

Meanwhile, Nii-Jii and his cohorts appear to be doing well on the rez. O'Claire says that's because of a very healthy environment—plenty of deer, beaver, good hunting terrain.

Ma'ingan, he says, is a good indicator species as to the wellness of the habitat and maybe also of the wellness of the Indian.

# GLIFWC Lakes Committee officers



*Comprised of five GLIFWC member tribes, the Lakes Committee met January 27 in Odanah to discuss Lake Superior fisheries and associated watershed issues. From left: Terry Carrick (Bay Mills), Lakes Vice Chair William Gene Emery (Keweenaw Bay), Chairman Erv Soulier (Bad River) and Leo LaFernier (Red Cliff). Fond du Lac representative Ferdinand Martineau and Red Cliff's Cecil Peterson are missing from the photo. (Photo by Charlie Otto Rasmussen.)*

# How many bears were really in Goldilocks' house? Problems plague the WI bear count

By Jonathan Gilbert, Ph.D.  
GLIFWC Wildlife Biologist

**Odanah, Wis.**—There were once three biologists who were discussing the story “Goldilocks and the Three Bears,” and they wondered just how many bears did Goldilocks actually have in her house. (Of course, these biologists did not read the title of the story.)

Rather these biologists looked at the evidence collected in and around the house. There were 15 footprints found in the yard. Two bowls of porridge showed signs of feeding by bears. One of the three den sites (that is beds) showed signs of use.

Biologist 1 said, “There must have been a whole herd of bears! Just look at all the tracks outside the house.” Biologist 2 said, “Don’t be silly. Bears have four feet, so just a few can leave many tracks. There were two bowls of porridge eaten, therefore there must have been two bears.” “Nonsense!” says Biologist 3, “A single bear can feed at more than one bowl. Only one den site was used, thus there was only one bear.” As you can see, none of the biologists were correct.

As silly as the story is, it does point to a particular problem we are having with Wisconsin’s bear population. Just like the biologists in the story, each time we use a different method to count bears we get a different answer to the question: “Just how many bears are there in Wisconsin?”

This is how the bear population estimate for Wisconsin jumped from 15,000 in 2005 to 36,000 in 2006. The bear population did not double overnight. The method used to count them changed. And just like in the story above, both estimates may be incorrect.

Counting wildlife is never an easy undertaking. When counting wildlife, biologists always assume that some are missed, and so a complete census of the wildlife population is impossible. Biologists use several different methods to keep track of wildlife populations. Among them are population estimates based on actual counts of animals, computer models that use observed population demographics (i.e. birth and death rates), or population indexes (animal signs that may relate to population density).

OK folks, this now gets a bit technical, so bear with me. (No pun intended.)

Prior to 2006 biologists in Wisconsin used both computer models and population indexes to monitor the black bear population.

The population index used is the ‘bear bait station survey.’ Each spring baits are placed along 10 mile transects and left for one week. After a week, the baits are checked, and the number eaten by bears is recorded. The assumption is (and this was based on field research) that as the bear population increased, the number of baits eaten by bears increased. Of course, this did not show how many bears there were. The bear bait station survey only indicated if the bear population was increasing, declining or remaining the same.

The computer Bear Model was also developed to track bear populations, and this was based on demographics, like number of cubs per mother bear; reproduction frequency, or bear lifespans. This computer model tells the biologist how a population of bears will grow or decline based on the population demography. However, the answer the bear model provides to the question “How many bears there are?” depends on how many bears the model starts out with. If the model starts out with too few bears, then it may crash to zero; or, if the model starts out with too many bears, it may predict an infinite number of bears.

So, biologists have taken the bear bait station results and have matched that trend up with the computer model until the resulting estimate to the population trends like the bear bait station results. Using this method, estimates of approximately 15,000 bears in Wisconsin resulted.

However, biologists knew that there were weaknesses in some of the data used to track bear populations. They had questions about how well bear bait station transects reflected the current population. There were questions about litter size and other demographics, especially in central Wisconsin with different food resources and weather conditions. And so, a project was undertaken to complete a population estimate using marked animals.

In this project, researchers from the University of Wisconsin-Madison used what is called a mark-recapture



Photo by Charlie Otto Rasmussen.

method of estimating population size. This method calls for marking a portion of the population in one trapping bout and then ‘recapturing’ animals later in a second trapping bout.

The first trapping bout involved placing baits containing tetracycline in bear habitat throughout the state. The second trapping bout took advantage of the bear hunting season. Hunters surrendered the bear’s teeth or ribs which then could be examined for tetracycline staining. A population estimate was developed by examining how many bears marked with tetracycline were found in the harvest. The resulting estimate indicated about 36,000 bears in Wisconsin.

Where does that leave us? Just how many bears are there in Wisconsin? Well, as was stated above, the tetracycline mark-recapture population estimate applies to the year 2006. This is a good method to estimate bear populations, and so it is reasonable to think that two or three years ago we had 36,000 bears.

The more important question, however, is how are we going to continue to monitor the bear population? If the combination of bear bait stations and computerized population models provided poor estimates of population size, then are these appropriate methods to continue to monitor bear populations? If we do not use these methods, how do we do it? Both Minnesota and Michigan use the tetracycline mark-recapture method on a regular basis to track bear populations. Wisconsin has no plans to do that.

So, just where does that leave us? We have a three-year-old population estimate. We continue to harvest bears at relatively high rates. We have a computer model that is ‘tweaked’ to approximate the current population estimate. We continue to have questions about the reliability of bear bait station results. We have no plans to continue with tetracycline population estimates.

I’m not sure where we are, but it is not a comfortable place.

## Forest service delays special forest product rule

**Washington, DC**—Secretary of Agriculture Tom Vilsack recently announced the delay of implementing the Sale and Disposal of Special Forest Products and Forest Botanical Products Final Rule until March 30, 2009. An additional 30-day comment period ended March 2.

“In keeping with President Obama’s recent pledge for a more transparent and inclusive government that works for the people, this extension will afford the public an opportunity to participate in the rulemaking process,” he said. “This rule is especially important to American Indians and Alaska Natives and we want to make sure that they, and other stakeholders, have an opportunity to have their voices heard.”

The rule establishes regulations for the sustainable free use, commercial harvest and sale of special forest products and forest botanical products from National Forest Service lands.

“The Forest Service is committed to our responsibilities to our tribal partners and the sustainability of our nation’s forests and grasslands,” said Forest Service Chief Abigail Kimbell. “With that in mind, we are looking forward to additional comment on the rule.”

Special forest products include, but are not limited to, firewood, post and poles, wildflowers, mushrooms, grasses, seeds, nuts, cones, berries and Christmas trees. Forest botanical products are naturally occurring special forest products but generally do not include trees or portions of trees.

## Wisconsin & Minnesota 1837 & 1842 treaty deer harvest

Registration Station	Antlered	Antlerless	Totals
Bad River	72	52	124
Fond du Lac	29	15	44
Lac Courte Oreilles	166	210	376
Lac Vieux Desert	0	1	1
Lac du Flambeau	98	195	293
Mille Lacs	36	38	74
Mole Lake	60	95	155
Red Cliff	69	90	159
St. Croix	186	222	408
<b>Totals</b>	<b>716</b>	<b>918</b>	<b>1,634</b>



# Adikamig: A success story

## A healthy, abundant food source

By Bill Mattes, GLIFWC  
Great Lakes Biologist

Odanah, Wis.—Adikamig (lake whitefish) has been an important fish to the treaty commercial fishery of Gichigami (Lake Superior) ever since courts re-affirmed treaty rights to fish in the big lake in the 1970's and 1980's.

The Jondreau and Fox decisions in Michigan and the Gurnoe decision in Wisconsin all reaffirmed that the tribes retained the right to harvest for both commercial and subsistence purposes in the land-cession Treaties of 1836, 1842 and 1854 with the U.S. government.

Today, lake whitefish are the primary fish sought by the treaty commercial

fishery (see photo). They are valued for their flavorful, white meat and nutritional value. Known to be very clean, or low in contaminants, they are an excellent source of omega-3 oil.

These large, scaled fish prefer cold water and are very abundant in the Great Lakes, where they feed on bottom dwelling creatures. Whitefish spawn in November, and their young hatch out in April after incubating at an optimum temperature of 33 degrees F.

The young form schools in near-shore sandy beach areas in June and July where they feed on plankton in the warmer waters along with other juvenile fish such as suckers and smelt, the later of which sometimes feeds on the small

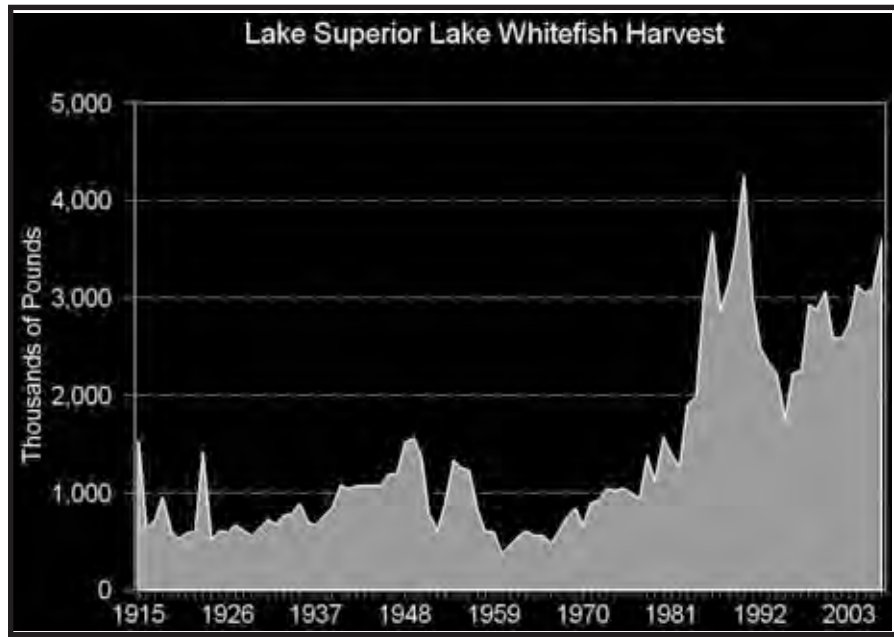
whitefish. As adults, lake whitefish form large schools.

Lake whitefish are a success story. The whitefish fishery in Lake Superior was devastated during the early 1950's as a result of the parasitic sea lamprey coupled with an intensive commercial fishery which reduced Lake Superior's whitefish harvest 17 percent a year from 1955 to 1960.

With the advent of sea lamprey control and regulated commercial fishing, whitefish have made a dramatic come-

back. In 2007, for example, 3.6 million pounds of whitefish were harvested from Lake Superior where harvests for the past 20 years have surpassed those of the mid to late 1900's (see graph).

Lake whitefish can be purchased from local grocery stores and various outlets around Lake Superior. For information on where whitefish can be purchased near you, visit the Lake Superior Tribal Fisheries web site at: [www.lakesuperiorwhitefish.com/Purchase.html](http://www.lakesuperiorwhitefish.com/Purchase.html).



GLIFWC's Great Lakes Section studies spawning aggregations of adult whitefish and juvenile whitefish through November gill net surveys of known spawning grounds and beach seine surveys of sandy beaches near the spawning grounds. (Photos by Bill Mattes.)

# Indicators show Gichigami warming

By Bill Mattes, GLIFWC  
Great Lakes Biologist

Odanah, Wis.—This winter may have many wondering what the hubbub over global climate change is all about. December was snowy, and January was cold. But, in the words of Mark Twain—"Climate is what we expect, and weather is what we get." This winter we've had our fair share of "winter weather."

When it comes to climate change, it's the big picture that needs to be considered. Take Lake Superior for example. Over the past thirty years the trend has been toward increasing air and water temperatures as measured by a buoy placed mid-lake during the open water season (see graph).

Over the past thirty years, surface water temperature during summer months has risen nearly 4½ degrees Fahrenheit (2½ degrees Celsius), and air temperature over the water has risen more than 3½ degrees F (20° C).

In addition, winter ice cover has been decreasing. You'd think with all the cold this winter Lake Superior would have plenty of ice—not so. In fact, Environment Canada's Canadian Ice Service reports that ice cover over much of Lake Superior is below normal in the near-shore areas of the lake.

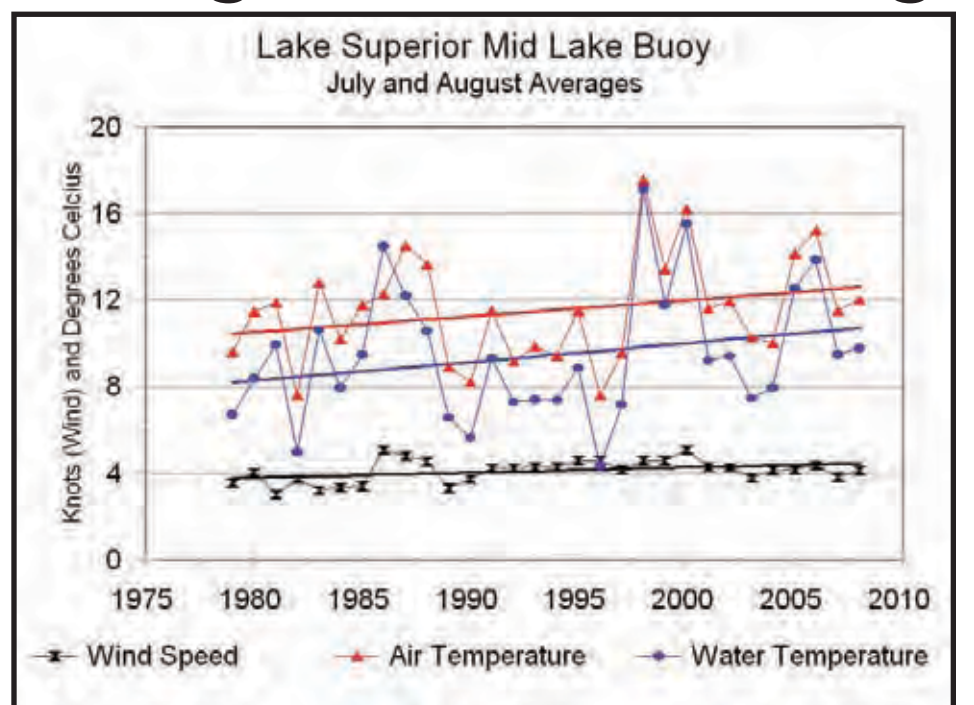
This is likely due to the surface water being warmer heading into winter

and increased wind over the lake during winter, which keeps the ice from forming or piles it up along the shores when it does form.

This was the case during the last weekend of January, when winds peaked at over 50 mph across Lake Superior. The lake was almost 60% ice-covered until the wind pushed the ice onto shorelines and opened up a fair amount of the lake along the north shore of Minnesota and east of the Keweenaw Peninsula, Michigan. Open water could even be found east of Madeline Island over to Saxon Harbor, Wisconsin in the days following the January 30th wind event.

Winter ice cover is important because it protects the lake from water loss due to evaporation. Lake Superior has the largest surface area of any fresh water lake in the world at 31,820 square miles, that is 383 miles east to west and 160 miles north to south.

Over one-and-a-half feet of water is lost to evaporation from the lake's surface every year. Much of this is offset by rain and snow falling over the lake, but when evaporation outpaces the rain/snow fall, the lake level drops. In the winter, cold dry air filters in from the north, and if the lake's water is exposed, as it is in the absence of ice cover, it heads into the air. If you're along the open water shoreline, you can see this as sea smoke, or if the wind is blowing strong enough, it collects overland and



Lake Superior's average water temperature, air temperature, and wind speed as measured mid-lake during July and August from 1979 to 2008. (Data courtesy of [www.ndbc.noaa.gov](http://www.ndbc.noaa.gov).)

falls as lake effect snow, which everyone living along the south shore knows and loves.

This was the case a year ago when Lake Superior dropped to near record lows. The lake did not freeze, and this, coupled with little snow and rain, led to the near historic low water levels. Currently the big lake is about five

inches higher than it was a year ago, thanks in part to those December snow storms. However, the lake level is still over five inches below the long term average.

The lake level, like the weather, will vary greatly from year to year, but the overall trend has been toward a lower and warmer Lake Superior.



# 2009 Lake Mille Lacs netting guide

Planning a fishing trip to Lake Mille Lacs this spring? Whether this is your maiden voyage or it's been a few years, there are some basic netting requirements you'll need to brush up on.

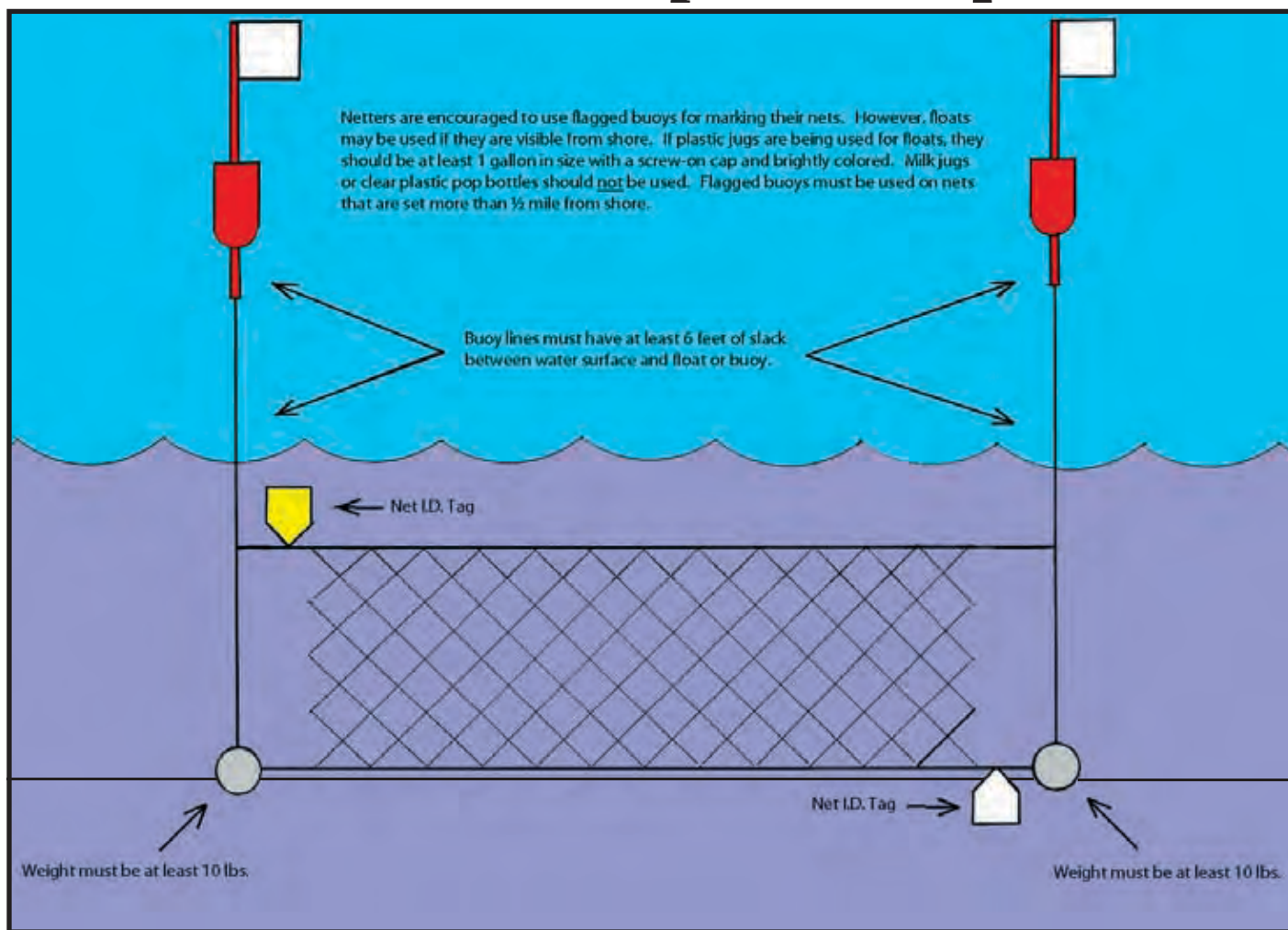
In addition, netters should be aware of the permit requirements, which will appear on each permit. These requirements are intended to help avoid potential net losses from weather-related events. The following check list and diagram highlight key netting provisions for fishermen at Mille Lacs.

- ☑ Every net is required to have two identically numbered ID tags attached. One affixed to the top line, the second to the bottom line at the opposite end of the net.
- ☑ Weights or anchors used to set nets should weigh at least 10 pounds.
- ☑ If ice is present anywhere on the lake, prepare to provide a telephone number to harvest monitoring crews so you can be reached. Permittees have the ultimate responsibility for their nets.



Lifting a net at Mille Lacs Lake. (Photo by Sue Erickson.)

## Common net set with permit requirements

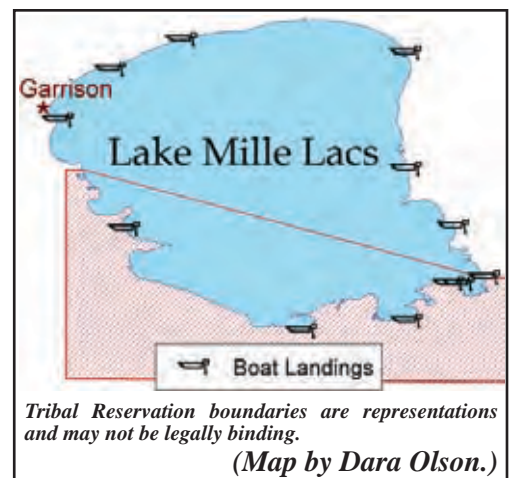


*\*Note: This is a general illustration of permit requirements for buoy lines, weights, and net I.D. tags. It is not intended to represent all the different ways that nets may be set. (Graphic by Joe Dan Rose & Lee Cloud.)*

### Did you know?

Every year visiting tribal netters spend thousands of dollars at local businesses around Mille Lacs including restaurants, gas stations and hotels.

Some hotels accept cleaned fish carcasses for those who wish to fillet their catch on-site. Be sure to ask when making your reservation.



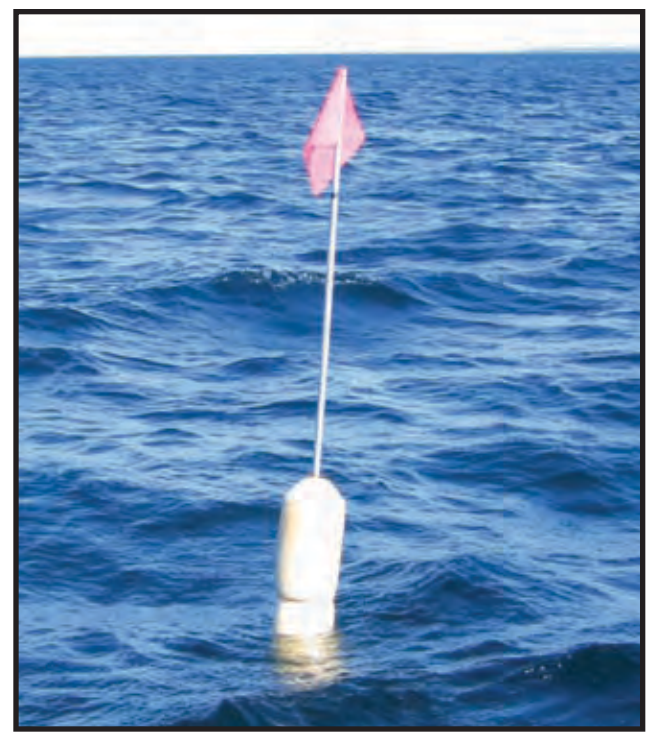
## Marking offshore nets



Milk jugs and pop bottles should not be used. (Photo by Melissa Rasmussen.)



Plastic jugs may be used for floats on sets within 1/2 mile of shore. They should be at least one gallon in size with a screw-on cap. (Photo by Charlie Otto Rasmussen.)



For net sets beyond 1/2 mile from shore, flagged buoys are required. Buoy lines must have at least six feet of slack between water surface and float or buoy. (Photo by Dan North.)



# Battling the lamprey

## *New techniques to be tested*

By Bill Mattes, GLIFWC  
Great Lakes Biologist

**Odanah, Wis.**—The time is nearing when sea lamprey return to spawn in the Bad River and other streams along the shores of Gichigami. Fishery managers are hopeful that this year will continue the trend toward fewer sea lampreys.

In 2008, managers estimated that about 28,000 sea lampreys returned to spawn. That number is the lowest recorded in 20 years, and a 45% decrease from 2007 (see graph).

In 2007, the Great Lakes Fishery Commission and its U.S. lamprey control agent, the U.S. Fish and Wildlife Service's (USFWS) Sea Lamprey Control Program, conducted lampricide applications in 17 U.S. streams. This included a treatment in the Bad River system in late-September.

Lampricide has been successfully used to kill larval lamprey before they transform into parasites which attach to and feed on Great Lakes fish. Each parasitic lamprey can kill more than 15 fish in its quest to reach adulthood.

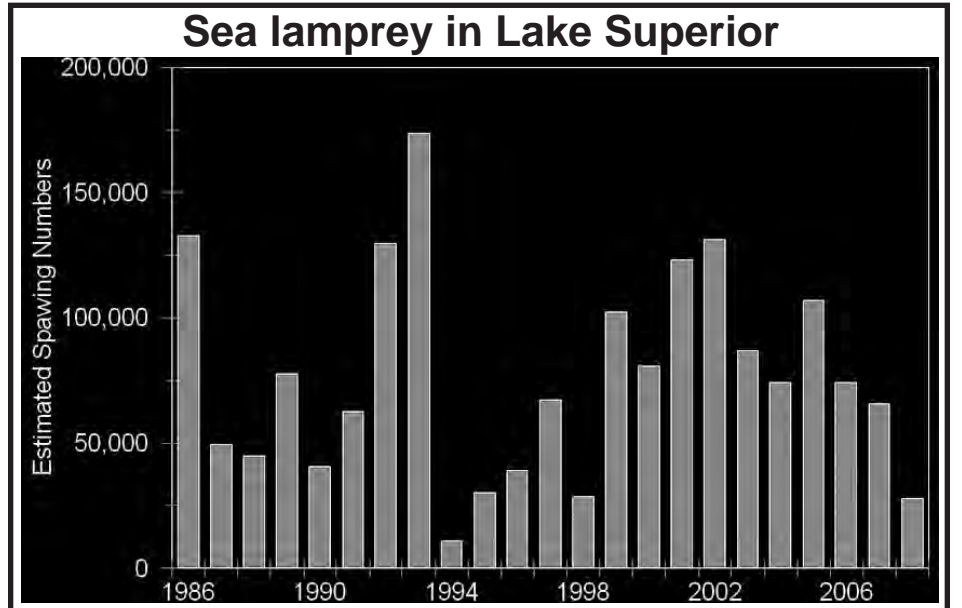
GLIFWC staff, led by Great Lakes Fishery Technician Mike Plucinski, have been trapping adult lampreys from the Bad River since 1986 in a cooperative arrangement with the Bad River Natural Resources Department and the USFWS Sea Lamprey Control Program.

Once trapped a small portion of the captured lamprey are marked and released to mix with the non-trapped

lampreys and be recaptured. This is part of the mark-recapture population estimate (see photo), which is done lake-wide to allow managers to estimate the total number of spawning lampreys in the lake.

Male lampreys are kept in a holding cage in the river. Once more than 100 are captured, they are transported from the Bad River Falls area to an awaiting trailer-mounted live well where USFWS personnel transport them to a sterilization facility in lower Michigan. Once sterilized, the male lampreys are released into the St. Mary's River as part of an integrated sea lamprey management program. The sterile male lampreys compete with non-sterile males, which reduces the number of viable eggs.

In 2009, a new technique for integrated sea lamprey management will be field tested. A pheromone has been isolated by researchers at Michigan State University with funding support from the Great Lakes Fishery Commission and the National Science Foundation. A synthetic chemical version of the male sex pheromone, which male lampreys use to attract female lampreys to nest sites during the spawning season, has been successfully synthesized. It is hoped that this year field trials will start whereby the synthetic pheromone will be released into streams under controlled field conditions to determine its effectiveness in drawing female lampreys into traps placed in streams. To read more visit MSU News at <http://news.msu.edu:80/story/5845/>.



Estimated number of spawning sea lamprey in all Lake Superior streams from 1986 to 2008.



A Pacific lamprey attaches itself to the rocky streambed to rest on its migration up the Columbia River.



Great Lakes Fishery Technician, Mike Plucinski (right) holds an adult spawning lamprey while Sam Wiggins, Lac Courte Oreilles Community College (LCOOCC) intern, clips the lamprey prior to handing it off to Megan Malovec, Northland College intern, to be released. (Photo by Matt Nagel LCOOCC intern.)



## Saving the lamprey

### *Northwest tribes mount effort to restore lamprey population*

**Portland, Oregon**—Giving credence to the adage that “one man’s junk is another man’s jewel,” some of the Northwest tribes are actively working on rehabilitating the Pacific sea lamprey population in regional river systems.

In the Northwest, sea lampreys were a significant part of some tribes’ traditional diet, cherished along with the mighty salmon and served at tribal feasts and celebrations.

However, the lamprey population has dwindled to alarmingly low numbers, according to a report in the Columbia River Inter-Tribal Fish Commission’s (CRITFC) publication **Wana Chinook Tymoo**, 2009 Winter edition.

They report that within the last 100 years the population returning to the lower Columbia River has been reduced from millions to only a few thousand. They attribute the decline to a number

of factors, including water pollution, lack of proper screen at dam sites, and most predominantly, the lack of passage at dam sites.

CRITFC reports that both the Umatilla Tribes and the Nez Perce Tribe have begun programs to literally transport the lamprey from downstream locations to upstream areas where spawning can take place.

The translocation of adults is considered an interim, emergency effort to maintain at least minimal lamprey population, which the tribes fear may be facing extinction.

CRITFC member tribes have drafted a comprehensive lamprey restoration plan and currently report that the Columbia Basin Fish Accords will provide funds over the next ten years for a lamprey restoration and protection program. (SE)

(See Taking care of our Elders, page 17)

### Did you know lampreys are not eels?

Sometimes lampreys are called lamprey eels, but they are not eels at all. It is a common misnomer. While both the American eel and the sea lamprey have snake-like bodies, eels and lampreys are totally different species.

Thought to be about 450 million years old, the Pacific sea lamprey is a prehistoric fish. In comparison the American eel dates back about 5-7 million years—a mere infant in time in comparison to the lamprey! The eel does not have the disc-shaped sucking mouth of the lamprey, rather has a jawed mouth and a small pointed head.

The lamprey is boneless, it’s body supported by cartilage; whereas the eel has a bone skeleton. The lamprey is bluish-black in color, and the American eel is brown on the back with a yellow underbelly. The adult lamprey is parasitic, feeding on larger fish and marine mammals. Eels are carnivores, not parasitic, and eat insects, fish, worms, crabs, frogs and dead animal matter.

(Information from Wana Chinook Tymoo, Winter 2009)



# Mending Migizi

## *The dangers of lead to birds, waterfowl and wildlife*

*By Lori Thomas, Reporter/Photographer  
Potawatomi Traveling Times*

**Crandon, Wis.**—Clarence Daniels, Forest County Potawatomi (FCP) tribal member, was returning from Wausau late Monday afternoon, December 22, 2008. As he drove his pickup truck down the twist and turns of Highway 55 from Pickerel, he noticed something moving on the road just ahead of him. He pulled off to the side of the road near the Hills Still restaurant, and noticed the movement was an eagle trying to pick up flight, but with no success.

As the eagle struggled to get across the road, a large semi drove past. Daniels knew that if the semi had come any sooner, the eagle wouldn't have made it across. He watched as the eagle struggled to walk, almost as if he were injured. He knew that he needed to help the bird, but had no idea how.

He started to follow the eagle as it tried to make its way back into the deep snow, away from the cars and trucks that zipped back and forth along the highway.

Of course, if the eagle wasn't injured, Daniels thought, he'd take flight and hurry away from all that was unfamiliar back to his home. But this poor eagle couldn't even fly. Daniels didn't have a plan on how to remove this eagle from harm's way; all he knew was that he needed to get him somewhere safe, away from the traffic on Highway 55!

As he approached the eagle, he knew that it would put up some type of defense; and that, the eagle did. Daniels tried to grab him the first time, and the eagle snapped at his arm, leaving a mark.

Daniels wasn't giving up. He knew eventually the eagle would forgive him for taking him away from his familiar surroundings. As he grabbed him, the bird became still, and Daniels cradled the eagle as if he was a newborn baby.

He brought him back to his truck where he wrapped him up in a blanket. Daniels decided to call the Forest County Potawatomi security office and speak with the director, Sam Alloway. He thought Alloway may be able to advise him on what to do with the hurt eagle. As Daniels placed the eagle in his truck, he talked to the eagle, telling him he would be ok and that he would get him some help.

He drove his pickup truck towards Crandon and started making phone calls. Handling an eagle, even a sick one, is not an easy process, but the eagle sat in the passenger side, not once trying to escape. Eagles have a sense about them when they know they are in good hands.

Arriving at the security office, Daniels brought the eagle inside as Alloway worked the phones to locate someone that could truly help the eagle. The quest for help led him to Marge Gibson, founder and director of Raptor Education Group, Inc. (REGI) located in Antigo, Wisconsin.

Gibson and a member of her staff arrived at FCP security office shortly. Without any hesitation she took one look at the eagle and said, "He looks like he is suffering from lead poisoning."

She quickly did an examination of the bird as to check for other possible injuries. She could tell that he was a little underweight for a male bird of his size but would soon have more answers. Once at the sanctuary, they took blood tests and underwent an exam similar to what humans would encounter in emergency room, including IVs and X-rays.

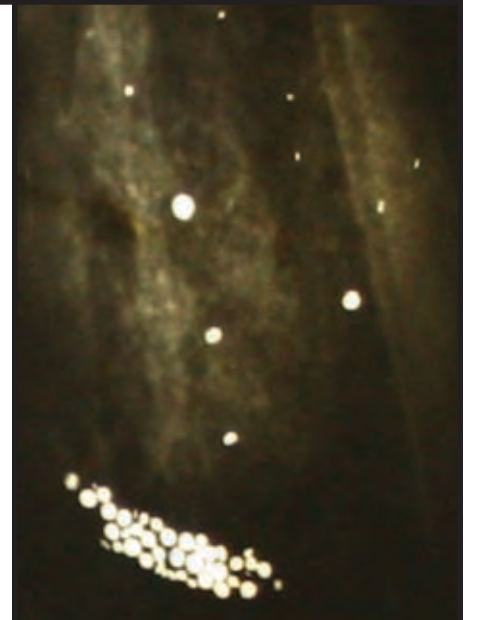
Gibson confirmed that the eagle was definitely suffering from lead poisoning, something that would have killed him if Daniels did not find and rescue him the previous day, she said.

Later that day, I decided to send Gibson an e-mail. I was curious, as were Daniels and Alloway, to find out what would happen to the eagle from Highway 55. Gibson reply indicted the eagle's condition was serious. He was definitely suffering from lead poisoning and was weighing in at 5.1 pounds, less than half of what he should weigh. (Imagine a 120-pound human dropping to 60-pounds!).



*Marge Gibson, Raptor Education Group, Inc. Director talks to the eagle to let him know everything will be okay.*

**Inset photo: This X-ray shows numerous amounts of pellets the eagle swallowed. (Photos submitted.)**



In her reply Gibson stated, "His blood lead was very high and he is currently under treatment for lead poisoning. The eagle will receive the same treatment that human patients get when suffering from lead poison. The shots he will receive twice a day are of Calcium Versenate. This chelates the lead from the bird's blood. Since lead is stored in the bone of the bird, we will be giving him several rounds of treatment before the lead clears from the bone and blood.

"He is very anemic with a hematocrit of 30 percent. A normal level for a bald eagle is about 48 percent. The good news is his total protein is within normal range. That is a good indication that he will recover and be able to be released back into the wild again. He would have to undergo rehabilitation as in exercise reconditioning once the lead poison is cured. Due to starvation, the bird has very little flight muscles and will have to develop those in our large flight building before being released," stated Gibson.

**(See The dangers of lead poisoning, page 22)**



*The green droppings that determine if a bird has lead poisoning are shown on this trumpeter swan. The swans are the largest waterfowl birds of the northwest and remain on the endangered species list at this time.*

## Lead & Wildlife

Main sources for wildlife lead poisoning are from hunting, recreational shooting and fishing sinkers such as:

- Spent lead shot
- Bullet fragments
- Fishing sinkers

Lead particles are ingested and gradually erode in the digestive system.

### The results of lead ingestion:

- Enters bloodstream
- Causes lead poisoning
- Lowered food intake
- Weakness
- Weight loss
- Drooping wings
- Inability to fly
- Green watery diarrhea
- Makes the animal more susceptible to disease or predation.

As few as five ingested pellets can kill a duck or goose.

Lead poisoning is difficult to treat once the case is advanced and it's hard to remove lead from the body of an animal.





# Walking the green road

## LCO sustainability fair details roadmap to future

By Charlie Otto Rasmussen  
Staff Writer

**Reserve, Wis.**—Like it or not, the world is being reorganized on a grand scale. While some forces, like climate change, machinate beyond our immediate grasp, a lot of the work lies in human hands.

“We are going to have to make some major adjustments in order to meet our needs,” said Steve Kozak, Renewable Energy Instructor at Lac Courte Oreilles (LCO) Ojibwe Community College. “Our current way of life is in a sunset phase.”

As the movement away from fossil fuels like oil accelerates, primary energy reserves are destined to include a combination of solar, wind and hydrological sources, Kozak explained. Lesser-known natural energy candidates like tidal and wave power also have potential to help meet global demands.

Kozak was among four featured speakers at LCO College’s inaugural Sustainable Living Fair, which focused on renewable energy, food systems, transportation and green (resource-efficient) building.

The February 6 event drew a cross-section of area residents plus around 270 students from the K-12 LCO Ojibwe School. Private sector and government agency exhibitors lined campus hallways with displays and information on how to “go green.”

“It’s all about building awareness and focusing on solutions,” said Amber Marlow, LCO Sustainable Living Institute co-director and an event planner. “Sometimes people see these issues as being too big for one person to make a difference. But each small step by individuals has a big impact and can reduce our footprint on the earth. It’s a learning process.”

As organizers experienced first-hand, some elements of sustainable living can require a bit of detective work. The plan to provision the noon luncheon with local-



LCO Ojibwe Community College Instructor Steve Kozak explains how world energy production and use will transform in the coming years. Kozak was one of four speakers the Sustainable Living Fair. (COR)



Samantha Quagon makes it clear what she thinks about using burn barrels for household waste. An eighth-grader at LCO Ojibwe School, Quagon was among approximately 270 K-12 students that attended the tribal community college’s Sustainable Living Fair on February 6. (COR)

ly produced food seemed straight forward enough. For a handful of pretty basic items however, it took extensive networking to get the goods into the college kitchen.

“It was a difficult task to find all this food locally,” Marlow said. “We were calling farmers looking for all the things we needed. It turned out to be a real eye opener.”

When the menu was complete, the most traditional foods—and perhaps most healthful to natives—were the easiest to acquire. Nearby waters yielded walleye for fish chowder soup; the local woods offered up venison, and a marsh near Stone Lake produced the cranberries served at lunch. Farther out from the on-reservation campus, potatoes, carrots, milk and butter were located. Farm-raised turkey proved more elusive, and planners settled for birds originating near the Twin Cities.

The challenges of obtaining local provisions underscores the nature of today’s global economy that features food imported from hundreds to thousands of miles away. While transportation costs and associated environmental impacts makes long distance sourcing undesirable, sustainability educators additionally stress that such a vast food system carries with it significant reliability issues.

Expanding existing community gardens is vital to improving food security, Marlow said. While Ojibwe communities around the region have launched gardening programs over the last decade—in part, to improve native diets and fight disease—many experience relatively modest levels of participation.

“Our community gardens really need more involvement from people,” Marlow said. “And land use planning should incorporate more gardens for the future. The amount of open space suitable for growing crops decreases all the time.”

With support from the National Sciences Foundation, LCO Sustainable Living Institute program staff are charting outreach efforts for the coming year and making plans for next winter’s fair. For more information contact Marlow at (715) 634-4790.

# Getting it all together

## Website will present a composite of information

By Sue Erickson  
Staff Writer

**Odanah, Wis.**—Developing an informational tool is the goal of the new Environmental Regulatory grant awarded to GLIFWC by the Administration of Native Americans (ANA).

The three-year project aims at developing an interactive website that would provide staff, and potentially other users, information about areas in the ceded territories that are critical to GLIFWC member tribes. Quick and easy access to a spectrum of information should slice-off hours of research time for many staff projects.

As Dara Olson, data specialist, describes it, she is layering information already gathered—some by fish assessment crews, some by wild rice or waterfowl surveys, some from other agencies—and will place that information on a map identifying tribally important ricing lakes or walleye lakes, for example.

Traditional ecological knowledge (TEK) will also be incorporated into the database. This is information based on user knowledge from folks that have been on certain lakes or in certain areas over the years who know, for instance, where spawning beds are for different species, or where wild rice beds once were. Essentially, a person going to the

new website should be able to quickly see that a certain lake is a significant wild rice lake, an important fishing lake or provides waterfowl habitat. It will also show if invasive species are present or if there is a FERC licensed dam. Diverse information about sites will be incorporated.

By having this information together at one site, staff who may be commenting on permit applications for development can quickly tell if the permit relates to areas critical to the tribes rather than contacting three or four other staff to gather the same information. It will be a substantial time-saver. While some of the information may be sensitive, Olson believes much of the database can be available for public use as well.

The first year of the grant will focus on the Minnesota 1837 ceded territory. Year two will target Wisconsin’s 1837 and 1842 ceded lands, and year three will move to Michigan’s 1842 and 1836 treaty ceded territory.

While the focus seems to be primarily aquatic at the start, Olson says the intent of the project is to build a foundation upon which terrestrial information, such as important plants and wildlife that tribes seek to harvest or protect, can be added later.

GIS mapping tools incorporating Free Open Source software are being used to develop the site.

## WATCH for Aquatic Invasive species!

It’s spring and our lakes and rivers will soon be free of ice. Time to launch boats and go fishing. Be alert to the presence of invasive species in ceded territory lakes and help prevent their spread.

Remember to **Clean Your Boats and Equipment** before transport!

Check out GLIFWC’s Invasive Species website to learn more. Go to [www.glifwc.org](http://www.glifwc.org); click on Biological Services; then click on Invasive Species.



# GLIFWC enforcement increases patrol effort on the Big Water

*Monitoring brings public education opportunities*

*By Sue Erickson, Staff Writer*

**Odanah, Wis.**—GLIFWC Wardens Dan North and Heather Naigus were out-and-about in the Marquette and Black River Harbor areas of Michigan this fall, contacting tribal commercial fishermen as well members of the non-Indian communities.

The increased contact effort took place both on and off water and offered some excellent opportunities for basic treaty rights education along the way, according to GLIFWC Chief of Enforcement Fred Maulson.

Officer North, GLIFWC Lac Vieux Desert area warden, and Officer Naigus, GLIFWC Marquette area, took to the water in an 18' patrol boat this fall to monitor treaty commercial fishing activities, spending about 25 percent of their patrol time on the water, according to North. In some instances, the two also worked closely with GLIFWC biological staff, assisting with onshore net assessments and monitoring.

About five tribal commercial fishing families net in the Marquette area and several tribal families fish commercially near Houghton, Michigan and Black River Harbor.

For both North and Naigus the patrol provided an opportunity to become better acquainted with tribal commercial fishing families and increase the visibility of GLIFWC enforcement efforts.

"It's important for everyone, tribal members as well as the general public, to realize that tribal commercial fishing is regulated under a model code and that it's being enforced," North says. "On patrol, we were able to make our presence as enforcement officers known and answer a lot of questions along the way, especially when we were on the landings. It's been a great opportunity for public education." In addition to handing out business cards to interested sport fishermen, the team provided contact information to the harbormasters from ports used by tribal fishermen.

Depending on the season, on-water patrol can entail checking for nets in closed areas, checking for proper buoy placement, distances from the shoreline of net sets, and monitoring catch at the landing.

The team has also begun working with the Michigan Department of Natural Resources (MIDNR) Commercial Fishing Division. Since first meeting in September 2008, the GLIFWC wardens and MIDNR officers have been comparing notes and sharing datum. Some group on-water patrols, or ride-alongs, are in the plans for the upcoming season, where GLIFWC wardens will accompany MIDNR enforcement officials and vice versa.

North feels the increased presence of enforcement has been viewed positively by all and looks forward to helping maintain viable treaty fishing as well as sport fishing opportunities on the Big Lake.

# Summer camp opportunities for tribal youth

*Camps target middle schoolers as future leaders*

*By Sue Erickson, Staff Writer*

**Odanah, Wis.**—"We need to encourage our kids in the fields of science and also in outdoor skills," says GLIFWC Enforcement Chief Fred Maulson.

"They need to be motivated to get off the couch, away from the tvs, cell-phones, video games, whatever and get active, learn about our outdoor world and prepare to be the professionals we will need in the future. We need competent adults, leaders and people capable of working as a team. This is what these camps are all about."

To help achieve more youth involvement in science-related and outdoor activities, GLIFWC is working with two summer camps that present great opportunities for middle-school age tribal youth at Camp Nesbit in Northern Michigan. The camps are sponsored primarily by the Nah Tah Wahsh Public School Academy at the Hannahville Indian Community.

The first camp, Indian Youth Science, Technology, Engineering and Math (STEM) Program runs from June 8-19 and combines Camp Nesbit's living experience with learning at the Northern Michigan University campus in Marquette, Mich. The camp is designed to address students' mental, physical, emotional, and spiritual needs.

Student experiences will run the gamut of learning in the NMU science and technology labs to living experiences at the Camp's site in the Ottawa National Forest (ONF) where physical exercise, social skills, community responsibility, and spiritual wellness are emphasized.

Students will work with GLIFWC staff at the Camp and some of the activities will include a group obstacle course, a high ropes course and cooperative games.

Applicants for the STEM camp must be in the seventh or eighth grades.

The second camp, based on the National Indian Youth Leadership Project model, targets 40 students currently in the fifth or sixth grade. It runs from June 21-26 and is also based at the Camp Nesbit site in the ONF.

The six-day camp also focuses on social skills, problem solving, communication, physical exercise, and spiritual growth. The Camp's emblem is the traditional Medicine Wheel.

For more detailed information and applications for either of the camps contact Richard Sgarlotti, Camp Director, Nah Tah Washsh Public School Academy at the Hannahville Indian Community, Wilson, Michigan. Phone 906-466-2952, extension 124 or e-mail: [rich.sgarlotti@hannahvilleschool.net](mailto:rich.sgarlotti@hannahvilleschool.net).

# 2009 GLIFWC enforcement safety classes

Class	Dates	Tribe	Contact
Snowmobile Safety	March 13-14	Bad River	Vern Stone (715) 292-8862
ATV Safety	March 15-16	Bad River	Vern Stone (715) 292-8862
Boating Safety	June 12-13	Bad River	Vern Stone (715) 292-8862
Hunter Education	August 5-8	Bad River	Vern Stone (715) 292-8862
Boating Safety*	May 20-23	Lac Courte Oreilles	Mike Popovich (715) 292-7535
ATV/Snowmobile Safety*	June 18-20	Lac Courte Oreilles	Mike Popovich (715) 292-7535
Hunter Education*	July 22-25	Lac Courte Oreilles	Mike Popovich (715) 292-7535
Boating Safety	March 23-26	Lac du Flambeau	Emily Miller (715) 892-6789
Hunter Education	August 17, 24-25	Lac du Flambeau	Emily Miller (715) 892-6789
ATV Safety	June 25-26	Mille Lacs	Jim Mattson (320) 360-1357
Hunter Education	July 29-31	Mille Lacs	Jim Mattson (320) 360-1357
ATV/Snowmobile Safety	March 23-26	Mole Lake	Roger McGeshick (715) 889-3200
Boating Safety	May 18-21	Mole Lake	Roger McGeshick (715) 889-3200
Hunter Education	June 8-16	Mole Lake	Roger McGeshick (715) 889-3200
Boating Safety	June 17-19	Red Cliff	Mike Soulier (715) 292-5320
ATV/Snowmobile Safety	June 24-26	Red Cliff	Mike Soulier (715) 292-5320
Hunter Education	July 13-15	Red Cliff	Mike Soulier (715) 292-5320
*	*	St. Croix	Matt Bark (715) 292-3738

\*Safety classes will be held in conjunction with the Tribal Police Department. Contact your local GLIFWC warden for additional information.

# GLIFWC warden deployed to Middle East

Leaving for overseas, likely Iraq or Afghanistan, GLIFWC Warden Adam McGeshick deployed with his infantry unit 32D MP Company in January for the Middle East.



McGeshick, a GLIFWC's warden in the Lac du Flambeau area, will be returning in the spring of 2010. He has been employed by GLIFWC for nearly two years, and his position will be open for him when he returns, according to GLIFWC Enforcement Chief Fred Maulson.

As a member of the National Guard for three and one-half years, McGeshick serves in the capacity of military police.

GLIFWC wishes him well and looks forward to a safe return.



# GLIFWC wardens complete first level fire fighting training

By Sue Erickson, Staff Writer

**Odanah, Wis.**—Eleven GLIFWC wardens received their incident qualifications after completing forty hours of training in basic wild land fire fighting at the Great Lakes Agency, Bureau of Indian Affairs, Ashland, Wisconsin in January.

Led by Joyce Zifko, Great Lakes Agency fire management officer, the qualification will enable GLIFWC officers to respond to calls for assistance in the event of an incident such as a wildfire, not only in this region, but nationally.

The training qualifies individuals to serve in a security capacity at an incident site, such as a California wildfire, says GLIFWC Enforcement Chief Fred Maulson. This does not include actually fighting the fire, but working in a “behind the scene” capacity, like maintaining security at a fire fighting camp, which can accommodate thousands of people.

Completion of a Pack Test, or the S-130 course, which will take place this spring, will then qualify individuals as fire fighters, according to Zifko. The Pack Test requires participants to carry a 140-pound back pack while walking 3 miles in 45 minutes.

The January session included comprehensive coverage of wildfire behavior in a classroom setting, operation of the command center, and understanding the impact of weather on the wildfire. The training also incorporated one day of hands-on experience, giving participants training on such things as getting into a fire shelter within 60 seconds and working a fire line.



The Great Lakes Agency of the Bureau of Indian Affairs presented a forty-hour wild fire fighting training at the Agency office in Ashland, Wisconsin this winter. Eleven GLIFWC officers attended the training, which qualified them to serve in a security capacity at a wildfire site. (Photo by Fred Maulson.)

# GLIFWC wardens benefit from intensive snowmobile training

By Sue Erickson  
Staff Writer

**Lac du Flambeau, Wis.**—GLIFWC wardens rounded out the month of January with a comprehensive three-day snowmobile safety training program presented by the Snowmobile Safety Institute (SSI). Led by SSI Instructor Gary Foreman along with two other staff, the training at the Lac du Flambeau reservation fully explored the potentials of the snowmobiles while on patrol.

Sponsored by GLIFWC, the training was open to sheriff’s departments in the region as well, providing good opportunity for interaction between agency personnel during the three days.

The goal of the training was to help maximize use of issued equipment, according to GLIFWC Enforcement Chief Fred Maulson, who views the three days as the most comprehensive training in equipment use that the Enforcement Division has experienced to date.

While snowmobile maintenance was one aspect of the training, a major emphasis was on tactical use of the machine, like how to ride aggressively while on patrol, various dismounts, sliding stops, and where to place the machine when apprehending an offender. It also covered use of a weapon while patrolling on snowmobile.

“Snowmobiles give our wardens much greater access to areas where treaty harvest is actually taking place than do

our trucks. We need to be able to use them to their full potential to increase our own patrol effectiveness,” says Maulson. “But officers need to feel comfortable handling the machines.”

Therefore, hands-on practice, along with mock enforcement scenarios played a big part in the training. Scenarios mimicked potential incidents where two officers would encounter a violator,

giving participants an opportunity to practice using the machines in a variety of circumstances.

Maulson already has noted the benefits from the training as many GLIFWC wardens are putting more patrol time on their snowmobiles, consequently increasing the range of their patrols in the winter months.



GLIFWC’s wardens completed a three-day snowmobile safety training at Lac du Flambeau in January. Gary Foreman, Snowmobile Safety Institute instructor, presented the training. The comprehensive training explored the various uses of snowmobiles on patrol as well as potential situations, including the use of weapons, when aboard a snowmobile. (Photos by Fred Maulson.)

# Akwa'waawin – Spearing through the ice

## Inaadiziwin: The Way of Life

This layout was provided compliments of the Administration for Native Americans (ANA) Language Grant. Project Coordinator Jim St. Arnold and Language Specialist Wesley Ballinger are preparing similar storyboards about the various traditional Ojibwe gathering practices using sentences and phrases in Ojibwemowin to describe them. This storyboard about spearing through the ice will be part of the larger project called *Inaadiziwin: The Way of Life*, which will ultimately be available on an interactive CD. *Mazina'igan* says chi-miigwech for the story and the photos they have shared with us.

A previous ANA language grant produced two interactive CDs: *Gidakiimaan (Our Earth)* along with an atlas, giving place names in the ceded territories in Ojibwemowin, and *Indinawemaaganidog (All My Relations)* which names the various species in Ojibwemowin. Both of these CDs present Ojibwemowin on a one-word basis while the current project is presenting phrases and sentences. To order either of the above mention CDs or the atlas see page 23.

Photos by Jim St. Arnold.



**Jerry obakwega'aan wadoop.**  
*Jerry is chopping off a piece of alder.*

**Anishinaabeg adagisinaawaan wadoopiin ji-onaakosidoowaad.**  
*The people are gathering the alder to set up a frame.*



**Dwaa'ige a'aw inini.**  
*The man is making a hole in the ice.*

**Weweni igo! Gego dwaashingen.**  
*Be careful! Don't fall through the ice.*



**Anit aatwaakosin oginaatigwananing.**  
*The spear is leaning against the poles.*

**Okeyaw abi imaa besho aniting.**  
*The decoy is there near the spear.*



**Zhingobaandagog abiwag giiwitaa-dwaa'igan**  
*The fir boughs are around the hole in the ice.*

**Onoonde-gwaaba'aan iniw mikwaman.**  
*He needs to scoop up the ice.*



**Jerry bimaadagaako**  
*Jerry is walking along on the ice.*

**Wii-akwa'waa noongoom Jerry.**  
*Jerry will be spearing through the ice today.*



**Jerry odakobidoonan wadoopiin.**  
*Jerry is tying together the alders.*

**Eshkan badakide mikwaming.**  
*The chisel is sticking in the ice.*

**Pictured constructing the spearfishing tepee are Jerome LaBarge Sr. and David Chapman III, both from Lac du Flambeau. Pictured in the last photo are Adrienne and Travis Williams also from Lac du Flambeau.**



**Obadagwana'aan oginaatigwanan.**  
*He is covering the poles.*

**Ogii-ozhtood mikwamigoog.**  
*He built a spearing house.*



**Howah! Nitaa-akwa'waawag ingwi oshki-Anishinaabeg.**  
*Wow! Those young people are good at spearing through the ice.*

**Mino gizhigad akwa'waawaad.**  
*It is a good day when they spear through the ice.*



# Beauty is ecosystem deep

## Enjoy the glory of a native landscape

By GLIFWC Staff

**Odanah, WI**—If you're like many people, some of your most vivid and beautiful memories are of the natural world. Perhaps it's memories of summer evenings spent fishing on a northern Wisconsin lake, watching the sun slowly set into the distance. Or maybe it's a canoe trip down a wild river, running the rapids as the surrounding forest glides by. Or a trip out west, and the sight of an unbroken conifer forest extending to the horizon. Or... you can probably fill in the details. Given the sense of enjoyment most people feel at such natural beauty, and their desire to be surrounded by nature, it may seem a little baffling that many of these same people put so much effort into trying to control, alter, simplify and even eliminate their natural surroundings at home.

The typical residential landscape requires expensive inputs of fertilizers and sprays, plenty of water, and constant work to maintain. In the US, an estimated 40 million lawn mowers consume 200 million gallons of gasoline per year.

The large quantities of water needed to maintain vegetation that is inappropriate for the climate and soil has put municipalities into direct competition with agricultural interests and with the natural environment for dwindling water supplies, particularly in the western US.

Almost 40% of pesticides used in this country are applied to lawns and gardens. Much of these fertilizer and pesticide residues end up in our groundwater and in our lakes and streams (not to mention our own bodies). Some of this fertilizer and pesticide runoff eventually makes its way to the oceans, creating low-oxygen "dead zones" devoid of fish and other life.

Artificial landscapes often incorporate some highly aggressive invasive species as well. Japanese barberry, Eurasian bush honeysuckles, glossy and common buckthorn, and other aggressive introductions have escaped to wreak havoc in our remaining natural communities. Meanwhile, the native plants and animals that once lived there are gone and all but forgotten.

Fortunately there is an alternative approach. Natural landscaping uses native plants that are adapted to the soil, moisture (dry or wet) and other environmental conditions of a site, saving time and money while adding variety and beauty to the landscape. As the benefits of natural landscaping and native plants become more well-known, more and more people are turning to native plants to beautify their surroundings and to restore the environment.

(See Sources for native plants, page 19)



*Wild columbine (Aquilegia canadensis) is one of our choicest wildflowers. It's easy to grow from seed and a favorite of hummingbirds. Plant in moist, well-drained soil, in partial shade to full sun.*



*Hairbell (Campanula rotundifolia) is a great plant for dry, sunny sites.*



*While basically a wetland plant, blue flag iris (Iris versicolor) will do reasonably well in moist flowerbeds as well. The showy flowers are as attractive to swallowtail butterflies as they are to people!*



*For sheer beauty, Turk's cap lily (Lilium michiganense) is hard to beat. This plant does well on moist to wet soil, in light shade or full sun.*



*Fireweed (Epilobium angustifolium) is an absolutely gorgeous native perennial that has inexplicably been all but ignored by gardeners.*



*Bloodroot (Sanguinaria canadensis) is one of the first plants to flower in the spring.*

### GLIFWC Staff photos



# Spring almost here!

## *Bad River gitigaaning works to restore a tradition of agriculture*

By GLIFWC Staff

**Odanah, Wis.**—With the return of spring comes the reawakening of the earth. Robins, sparrows, chipmunks, and other creatures not seen since fall seem to reappear out of nowhere. Plants awaken, carpeting the earth with lush green growth. The longer, warmer days seem to almost irresistibly draw people to plant something. Whether we are young or old, rich or poor, city or country dweller, many of us once again feel the almost magical urge to garden.

### Changes in agriculture not always for the better

For thousands of years, the people of North America relied on gardening as well as abundant wild foods for sustenance. The Mandan, Hidatsa, Arikara, and other Great Plains tribes are well-known for their extensive agricultural systems based on the “three sisters”—corn, beans, and squash (including pumpkins). Other tribes including the Ojibwe relied more heavily on wild foods, but grew some food as well.

With European settlement all of this changed, as native peoples were confined to reservations, and forced to rely on government surplus commodities like flour, sugar, and domesticated meats. This change in diet and lifestyle took its toll not only on these people’s cultural and spiritual health, but on their physical health as well. During this time gardening became a way for many to provide additional food for their families.

Up until the early 1900s the economies of most societies (including the United States) were based on agriculture. Most food continued to be produced locally and organically by family farmers well into the 1900s. But by the end of World War II things began to change rapidly. The introduction of pesticides (derived from nerve gas agents developed during the war), the rising costs of machinery and supplies, and the consolidation of seed companies, commodity buyers, and finally family farms into huge conglomerates all began to take their toll on local agriculture.

### Industrial agriculture unsustainable

Today most food is grown on huge, highly specialized farms that require massive inputs of fossil fuels, pesticides and synthetic fertilizers, nearly all derived from oil and natural gas. Synthetic fertilizers replace only a few plant nutrients (nitrogen, phosphorus and potassium), so the soil is essentially “mined” of organic matter and the nearly 20 micronutrients plants need to survive. This form of agriculture is a major cause of erosion, deforestation and loss of natural habitats.

## Genetically engineered crops provide dubious benefits

Genetically modified crops and other organisms (GMOs) are becoming increasingly prevalent in corporate agriculture. Few people realize that 45% of corn and 85% of soybeans now grown in the US are genetically engineered. According to the nonprofit Center for Food Safety, 70-75 percent of processed foods on supermarket shelves, from soda to soup to crackers to condiments, contain genetically engineered ingredients.

According to the Union of Concerned Scientists, genetically engineered crops present numerous risks to human health and the environment, while providing little if any benefit. Genetically engineered traits intended to increase the insect resistance and virus tolerance of crops have been ineffective, as insects and pathogens evolve resistance to these traits nearly as fast as they are developed.

Herbicide resistance is also proving to be a failed strategy, resulting in increased herbicide application, increased cost to the farmer, more environmental contamination, higher levels of residues on food, and rapid evolution of weed strains that are resistant to herbicides!

And contrary to the claims of agribusiness, genetic engineering has also failed to increase yields beyond those of traditionally-bred crops. This is because traits that might increase production, such as ability to resist excessive heat and drought, or the ability to fix atmospheric nitrogen (already done naturally by beans, peas and other legumes, as well as some wild plants, with the help of certain bacteria), are dependent not just one gene, but numerous genes interacting with one another in complex ways.

Of great concern is the desire of certain biotech companies to genetically engineer crops with “terminator” genes, which would prevent these crops from producing viable seed unless proprietary chemicals were applied. Farmers would be forced to buy seeds and chemicals from these companies every year, rather than saving their own seeds. So far a United Nations moratorium has kept biotech companies from attempting to deploy “terminator” technology, but “terminator” research continues.



*Gitigaaning Project coordinator Becky Lemieux (middle front, with white shirt and gloves) and Bad River Summer Youth and Vista volunteers next to the medicinal garden they helped complete in Odanah. (Photo courtesy Bad River Gitigaaning Project.)*

Globalization, the rising cost of energy, and the diversion of corn, soybeans and other food crops for energy production is wreaking havoc with the world’s food systems, already under stress from pollution, rampant development, and the rapidly increasing human population. While the current global financial crisis has temporarily reduced demand, and lowered energy and food prices, those prices are guaranteed to rise again.

Today it is not unusual for food to be shipped halfway around the world before reaching its destination. Much of this food is produced by large multinational corporations, who take full advantage of the lack of environmental and labor laws (or weak enforcement of those laws) in many countries. It is then heavily packaged and shipped for hundreds or thousands of miles, contributing significantly to global warming. Because it uses resources faster than they can be replaced by nature, industrial agriculture is by definition unsustainable.

### Home-grown food can be part of the solution

Today there are more reasons than ever to grow a garden. To start with, no commercial grower can grow vegetables as cheaply as you can in your own garden. For example, a pack of ‘provider’ bush snap beans containing 180 seeds and costing \$1.30 will sow a 25 foot row (Fedco Seed Catalog, Waterville, Maine). Bush beans produce an average of 0.5 pounds per foot, or 12.5 pounds for a 25 foot row, according to a UW Extension publication. That translates to 5.2 cents for a pound of beans! Fertilizer and other costs may lower this return a little, but a pack of garden seeds is still about the best investment you can make.

Homegrown food is more nutritious than industrially-grown food. And traditional, heirloom varieties are often tastier and more nutritious than commercial varieties. That’s because many modern varieties were developed to survive mechanized harvesting and long-distance shipping, with taste and nutrition being an afterthought. It is also easier to make good food choices when nutritious food is available straight from the garden.

Gardens can be very land and energy-efficient. One study found that small family-owned farms in the US produced twice as much food per unit area as large industrial farms, and that well-tended home gardens produced twice as much as small farms! This is because small-scale farms can do a better job of caring for the land and the crops than huge industrial farms can. Gardeners can go even further, adding compost, fertilizer and water exactly when it’s needed, and tending each plant individually. Can backyard gardens make a difference? During both World Wars, Americans spontaneously planted “Victory Gardens.” During WWII, at the height of the gardening movement, 20 million Victory Gardens were producing roughly 40 percent of America’s vegetables.

Finally, gardening is invaluable in teaching children where food really comes from (it’s not the grocery store!). There is nothing quite like gardening to teach children that all life is interconnected, and that we all depend on a healthy earth for our own health and survival.

Of course there are also drawbacks to having a garden. You’ll have to spend a fair amount of time working in the garden, especially during spring planting and the fall harvest. The birds will be singing, the sun will be shining, and you’ll feel the cool breeze in your face. But these are burdens every gardener must bear!

Eating a more natural diet with fresh whole foods can dramatically improve the health of entire communities. The “modern” diet of highly-processed, high-calorie foods with little nutritional value has led to various health problems, including high (See *Making the old ways new again*, page 19)



# Ceded territories mining update

By John Coleman, GLIFWC Environmental Section Ldr.

**Madison, Wis.**—GLIFWC staff continue to monitor and evaluate issues related to existing or proposed mines in Michigan, Minnesota and Wisconsin. Exploration and permitting appears to be expanding in Michigan and Minnesota despite the economic downturn. In mid-January, staff gave a presentation to the Lake Superior Binational Program on mining activity in the region. Staff made a similar presentation at the mining conference at Fond Du Lac in late November. The following provides an update on some of these projects.

## Yellow Dog (Eagle) Mine— Upper Peninsula, Michigan

The Michigan DEQ has issued permits for this mine, and those permits have been contested by four groups including the Keweenaw Bay Indian Community. The contested case hearing on the mine and groundwater permits has ended and the parties have filed their Proposed Findings of Fact and Conclusions of Law. It is unclear when the Administrative Law Judge (ALJ) overseeing the case will submit his recommendations to the DEQ Director, who has the final decision to affirm, deny or modify the permits.

Should the ALJ recommend affirming the permits, Kennecott Minerals must still acquire an Underground Injection Control (UIC) permit from the Environmental Protection Agency (EPA) for its proposed discharge of water into the ground during the mine project. The EPA is currently conducting a review of the UIC permit application that Kennecott has submitted and is consulting with KBIC to determine what effects the project might have on cultural resources. The development of the Kennecott Eagle project on the Yellow Dog Plains was recently put on hold by the parent company but they are continuing to pursue state and federal permits so that they can reactivate the project quickly when the economy improves.

In a related development, Kennecott recently submitted a Michigan mining application to start ore processing and tailings disposal at the old Humboldt Mine site near Champion on Hwy. 41. In mid-January the state of Michigan found the permit application to be complete and began the application review process. A public hearing was held February 18th and comments to the Michigan DEQ on the permit application are due by March 20th.

## Flambeau Mine—Ladysmith, Wisconsin

In October, Kennecott Minerals (Flambeau Mining Co.) submitted a report on sampling it conducted in 2008 as required by the settlement of a reclamation contested case that was held in 2007. Water and soils sampling showed that the reclamation and remediation conducted since 1998 has resolved most of the contamination problems at the site but that some soil and water contamination remains. Based on the sampling, Kennecott proposed and conducted additional remediation of contaminated soil. The hope is that this remediation will finally eliminate the elevated metals that have been found in a local stream leaving the mine site.

## PolyMet Mine—near Babbitt, Minnesota

This is a large (200-300 million tons of ore) sulfide mine that would be the first sulfide mine to be permitted in Minnesota. The state of Minnesota and the Army Corps of Engineers are the lead agencies in the development of an Environmental Impact Statement on the project. The Forest Service, Fond du Lac tribe and Bois Forte tribe are cooperating agencies. The EIS process began in 2005 but has been delayed because of inadequate information and analysis. GLIFWC and other tribal staff are involved in frequent conference calls and meetings with state and federal regulators to discuss technical issues that need to be resolved in order to write the EIS. An early draft of the EIS for internal review by the regulatory, cooperating agencies, and tribes was released a few days before Christmas. Comments were



*Wild rice lakes as well as other important water bodies and resources can be impacted by mining projects, both during and following mining operations. Because of this, GLIFWC staff monitor ongoing as well as proposed mining projects which might impact member tribes' natural resources. (COR)*

submitted at the end of January and further discussion among cooperating agencies is occurring. Several issues, such as predicted tailings basin failure and contamination of ground and surface waters remain problems for the project. For tribal members, an additional concern is that there could be a loss of access to several thousand acres of public lands within the 1854 Ceded Territories.

Tribal and GLIFWC staff are concerned that the information and analysis available for predicting the impacts of the mine is inadequate. In mid January, staff met with the U.S. Geological Survey, the Army Corps of Engineers, U.S. Forest Service, the U.S. EPA, and the Minnesota DNR to discuss the PolyMet project and raise concerns about the quality of early drafts of the EIS and the feasibility of the project.

## Minntac Iron Mine—near Mt. Iron, Minnesota

This mine, operated by U.S. Steel, continues to operate but is acquiring new water discharge permits for its tailings basins. Through discussions among state regulators, tribal staff, U.S. Steel and the EPA, a plan was developed to significantly reduce the pollutants in the discharge water. The company recently proposed to collect and treat the water seeping from its tailings basins so that water reaching nearby rice lakes would meet the strict Minnesota water quality standards for wild rice waters. If the proposed solution is fully implemented and performs as anticipated, this will be a vast improvement in discharge water quality and hopefully will enable rice beds in the adjacent lakes to recover.

## Mesabi Nugget Iron Mine— near Aurora/Hoyt Lakes, Minnesota

Mesabi Nugget is proposing expansion of their iron mining and processing facility. Initial steps in an EIS investigation and analysis have begun and tribal and GLIFWC staff have attended early meetings. In mid-January a meeting was held with the EIS lead agencies (Army Corps and Minnesota DNR) to discuss tribal cultural resources and resources of cultural importance that may be impacted by the Mesabi Nugget project. Additional meeting on technical issues such as hydrology and existing contamination are being held on an ongoing basis.



*Apologies for omissions from the article on the Lac Vieux Desert wild rice camp by giüwegiizhigookway Martin in the Winter 2008-2009 edition of Mazina'igan. Charlie Fox, Mole Lake/Sokaogon residing at LVD, shown at the right, was a co-presenter along with Roger LaBine, camp director and coordinator. Charlie takes great pride in the knowledge he possesses regarding the Ojibwe way of life. He taught the participants how to make push poles, as well as make rice sticks, and helped with other aspects of the camp. He spent the entire two weeks leading up to the camp gathering materials and tools, as well as preparing the work area for the participants. (Photo by giüwegiizhigookway Martin.)*



*Helping out Grandpa, Charlie Fox, at the Lac Vieux Desert rice camp last fall was Dayton Hartzog. Charlie is always willing and eager to help out with activities within the community and believes these things need to be taught to our young ones so that they may pass this on to the next generation. The camp was a success thanks to the help of all presenters. (Photo by giüwegiizhigookway Martin.)*



# Feature film series about the 1864 Sand Creek Massacre

*Surviving Cheyenne & Arapaho descendents share their stories*

Sand Creek, where is that you may ask? If you drive about 180 miles southeast from Denver, Colorado almost to the Kansas border, you'll stumble upon a scrubby but vast patch of grass, trees, and dust. There's a nearly dried up creek bed snaking its way through the fields, too. You might be so inclined to take a moment to read the memorial stone with the symbol of a Native Indian wearing a feather headdress.

*"Sand Creek Battle Ground  
Nov. 29 & 30, 1864."*

But was Sand Creek a battle or rather a cruel and ugly massacre?

In 1864, Sand Creek was also the place where Black Kettle, Cheyenne chief, and Left Hand, Arapaho chief, camped with their people. They had done so in good faith and peace to avoid any further war with the U.S. government and European and American settlers. On November 29th, U.S. Army Colonel Chivington and his troops from the First and Third Colorado cavalries attacked the camp.

Chief Black Kettle's tipi was adorned with an American flag that had been given to him a year prior during a visit to President Abraham Lincoln in Washington D.C. A white flag of surrender flew below the stars and stripes. Although Chief Black Kettle had done nothing to provoke the attack, he assured his frightened people just as President Lincoln had that so long as the soldiers saw those flags, no one would be harmed. The women, the children, the elderly sheltered underneath the safety of the American flag. Yet, the cavalries charged with their rifles and fired. Over 400 Cheyenne and Arapaho people had been massacred that day at Sand Creek. Many of the desecrated and mutilated bodies were left just as they fell.

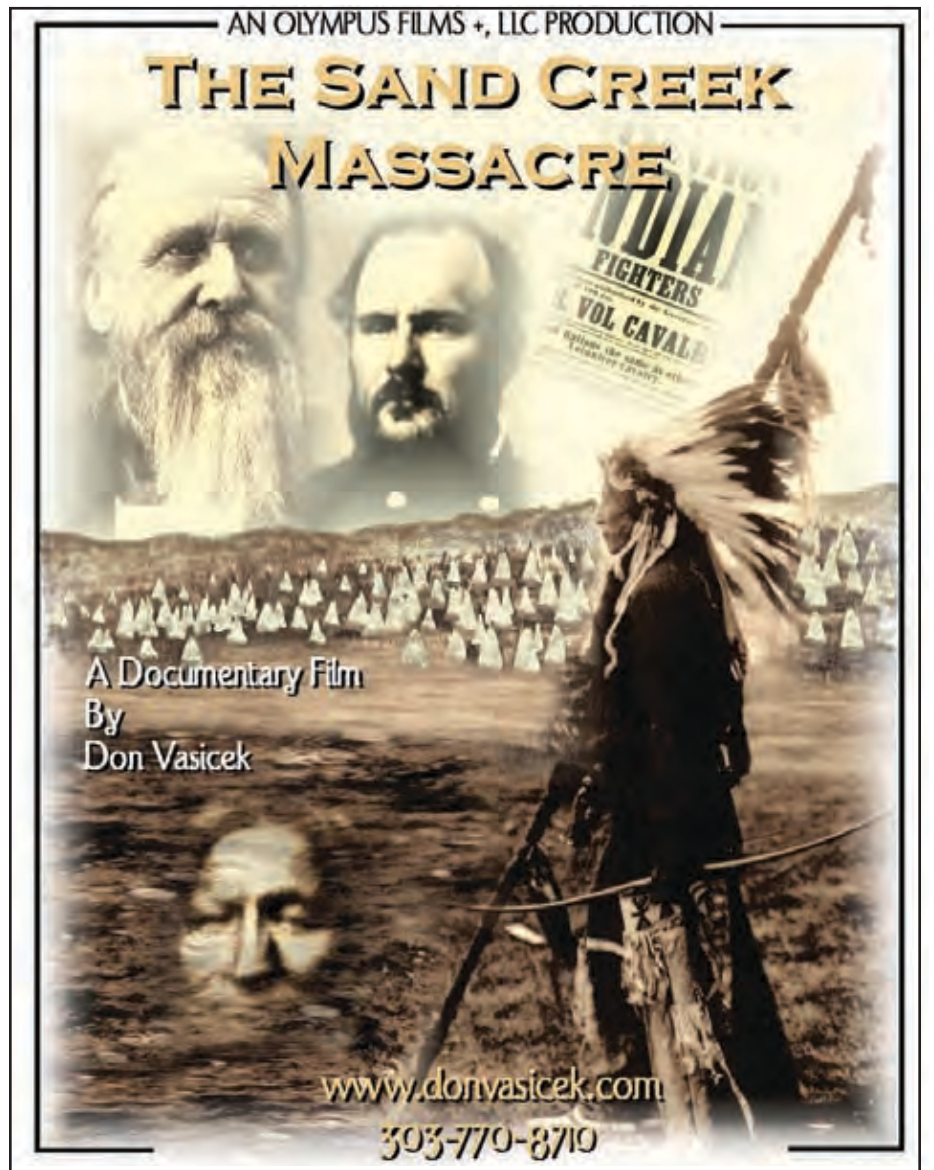
Yet, there were those who survived and went on to tell their stories to their children, grandchildren, and great-grandchildren. Today, the surviving descendants still speak of this brutal tragedy that has now been forgotten by most of us in America. Olympus

Films+, LLC, a writing and film company from Centennial, Colorado would like to illuminate these stories into a two-hour, six episode documentary film titled, *"Ghosts of Sand Creek."* The film project will feature Cheyenne and Arapaho descendants giving testimonies about the 1864 Sand Creek Massacre. Additionally, it will narrate a historical account of broken treaty agreements leading up to present-day conditions for Cheyenne and Arapaho living on and off-reservations.

Filmmaker, writer, and producer Donald L. Vasicek, founder of Olympus Films+, LLC is dedicated to exposing and discussing the historical and contemporary experiences of the Cheyenne and Arapaho. In addition to writing and/or producing a feature film, two documentary films, and an educational video, Olympus Films+, LLC has also already produced an award-winning 22-minute documentary short, *"The Sand Creek Massacre."* This short has won several film awards including the Best Film Award/Philip S. Miller Library's The Bull Theatre Film Project, the Best Documentary Short/American Indian Film Festival, and the Best Native American Film/Golden Drover Award, Trail Dust Film Festival.

It is the sincere intent that *"Ghosts of Sand Creek"* will contribute an invaluable art narrative and historical record from a much-needed Cheyenne and Arapaho perspective to not only bring living and breathing Native Indian culture to life, but also to promulgate an effective resolution of the 1865 Treaty of Little Arkansas.

You can discover additional detailed information about, *"Ghosts of Sand Creek"* and writer/director/producer, Donald L. Vasicek at [www.sandcreekmassacre.net/](http://www.sandcreekmassacre.net/) or call at 303-903-2103. For donations to *"Ghosts of Sand Creek,"* please contact the American Indian Genocide Museum, 11013 Fuqua, PMB # 178, Houston, Texas 77089-2510 or at [www.aigenom.com](http://www.aigenom.com), Phone: (281)841-3028, Email: [Indmuseum@yahoo.com](mailto:Indmuseum@yahoo.com).



## John Leonard, USFWS tribal liaison, retires

*By Sue Erickson, Staff Writer*

**Odanah, Wis.**—*Mazina'igan* and GLIFWC say chi-miigwech (a big thanks) to John Leonard, tribal liaison for the US Fish and Wildlife Service (USFWS), Midwest Region, for his hard work and heartfelt concern over the years.

Leonard recently bid farewell to a long career with the USFWS, one which spanned about five decades. He was always helpful to *Mazina'igan* staff, as well as others at GLIFWC, providing information on events and issues of tribal interest and encouraging communication.

Leonard began his career with the USFWS as a co-op student from the University of Massachusetts to perform fish population surveys on the Connecticut River and concluded his career as the tribal liaison in the Midwest Region.

The USFWS recently hosted a retirement event in Minneapolis for Leonard at which numerous tribal representatives expressed their appreciation for his work with and on behalf of the tribes over the years. Among tribal representatives present were Mic Isham, Lac Courte Oreilles Conservation; Larry Wawronowicz, Director, Lac du Flambeau Department of Fish and Game, and Mike Swan, Natural Resources Director, White Earth. In appreciation for his work, tribal representatives honored him with gifts, plaques and hugs.

According to Jason Holm, USFWS Assistant Regional Director, External Affairs, "John made it a point to treat his constituents with respect, consistency, and compassion, and I think that really served the relationship well. Tribal partners are essential in the conservation of fish, wildlife and their habitats throughout the nation, and it's clear that their efforts in the Midwest are paying dividends."

Leonard, along with his wife, Mardell, will be heading to North Carolina, to be near their children and grandchildren.

*Mazina'igan* wishes them a long and healthy retirement. (Information and photo supplied by Valerie Rose Redmond, USFWS, External Affairs.)

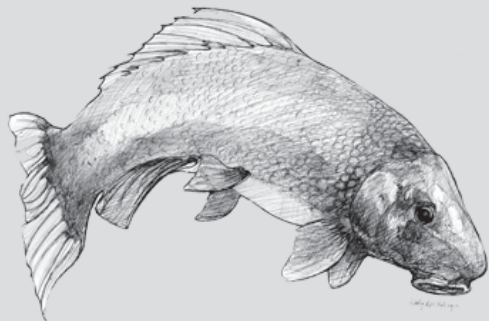


## Namebini-giizis: Sucker Moon

Some of the other names for namebini-giizis (February) include:

### Migiziwi-giizis

Eagle moon. During this month the bald eagle returns by flight from the south.



### Makoonsi-giizis

Bear cub moon. This is when the bear cubs are born. It is said that there will be a day in this month that a fog will fall all over; this is when the black bear gives birth to her cubs.

### Webinigewi-giizis

The throw away moon. During the full moon of this month, you can take an old piece of speckled alder and put a tobacco tie on it. Then pray to release all of your sickness, i.e. addictions, anger, pain and so forth. Then when the full moon is in the sky, you throw the stick up towards the Grandmother Moon and ask her to take away your sickness. "Niwebinaan indaakoziwin"—I throw away my sickness.

(Miigwech to Wes Ballinger for drawing & information.)





# Taking care of our elders

(Reprinted with permission from Wana Chinook Tymoos, Winter 2009, Columbia River Inter-Tribal Fish Commission.)

**Portland, Oregon**—The elders say the rocks at Celilo Falls were black with them. They were collected daily and until recently, could be found by the millions on rocks and in sediments throughout the Columbia and Snake river basins. They were an important part of the Columbia Basin ecosystem and a cherished food source that was available year-round since time immemorial. No, these weren't salmon, they were the Pacific lamprey.

Pacific lamprey (*Lampetra tridentata*) are one of the 40 members of the lamprey family still found on earth. The lamprey family is one of the oldest of all the vertebrates and is the only living representative of this ancient line. Pacific lamprey are the most ancient of the native fish currently found in the Pacific Northwest, appearing in the fossil record almost 450 million years ago—long before the age of dinosaurs and a quarter of a billion years before sturgeon. They showed up on earth during the same era as insects and seed-bearing plants.

"450 million years is a long time," explained Elmer Crow, a Nez Perce tribal elder whose passion for saving lamprey extends back to his childhood. "For us to let them go in a single lifetime is unimaginable."

Each female adult lamprey lays between 10,000 and 200,000 eggs in a nest that she has carefully created by arranging rocks and pebbles with her sucking disc one by one on the stream bottom. After hatching from eggs, lamprey young—called ammocoetes—burrow in the mud and sand of freshwater streams. They are toothless, have only rudimentary eyes and resemble worms.

The ammocoetes filter feed on microorganisms for 5-7 years, after which they undergo a radical metamorphosis, which gives them their round body shape and sucker mouth similar to that of their Eastern and Midwest cousins, the sea lamprey.



A group of Warm Springs youth harvesting lampreys at Willamette Falls to take back to their reservation for subsistence and ceremonial use. (Photo courtesy of Wana Chinook Tymoos.)

This transformation involves the rearrangement of their internal organs and the development of eyes and their characteristic bony plated sucking disc.

Just like salmon, the lamprey then migrate to the ocean where they spend 1-2 years feeding before returning to fresh water to spawn. The migration patterns and techniques used by lamprey have not been thoroughly studied, but preliminary research suggests that lamprey do not home to specific areas like salmon do. One theory currently under investigation is that odors or pheromones emitted by juvenile lamprey may attract adults to spawning areas.

## Cultural importance

Lamprey have always played a very important role to tribes for cultural and subsistence use as part of their traditional diet. They are served alongside salmon at tribal feasts and celebrations. The tribes prize them for their rich, fatty meat.

When tribal leaders negotiated treaties with the United States, they reserved the right to fish at usual and accustomed places along the river—a right extending to all important fish species, including lamprey. This decline has been very troubling to the tribes. As lamprey numbers dwindle, it grows increasingly difficult to retain the traditional practices associated with their harvest and consumption. The few places that lamprey remain abundant have become even more precious—most notably at Willamette Falls in Oregon City, Oregon.

"The rivers used to be thick with eels but today we don't see them," said Warm Springs tribal elder Viola Kalama. "Our food is disappearing; lamprey are disappearing like a lot of the food that comes from the earth that we rely on."

## How Lamprey lost his bones

Long before the arrival of humans on earth, the animals could talk and act like people, but they were still animals. One day two of them, Lamprey and Sucker Fish, challenged each other to a stick game.

"Now we'll play. Don't let anyone interfere. Just the two of us will play the stick game," Sucker Fish challenged. So they played, Sucker Fish on one side and Lamprey on the other. They played long into the night. Eventually Sucker Fish defeated Lamprey, winning from him everything he had.

Lamprey had even lost his scales in the stick game, which is why he has no scales to this day. After losing everything, Lamprey, who wanted to win back his scales, told Sucker, "I'm going to bunch up my bones and gamble with them."

And so Lamprey bid his bones and the stick game resumed. They continued playing, and as the sun was rising the next morning, Lamprey had lost all of his bones to Sucker Fish, too. And to this day, lamprey have neither bones nor scales and sucker fish have such large scales and so many bones.

—Nez Perce oral story

## Young girl, record bull An elk to remember



**Sault Ste. Marie, Mich.**—Young Sault Tribe member, Courtney Williams, age 13, scored big during the off-reservation elk hunt in Michigan. Courtney, from Cooks, Michigan, put her name in the tribal elk lottery and won the chance to join the hunt. Accompanied by her father and guided by Dustin Mac Leod, Sault Ste. Marie tribal member, the young hunter got her chance at this bull elk, weighing in at 640 pounds, dressed. The antlers green-scored at 383 inches, and when dry, will top the state record of 343 inches. Using a .308 calibre rifle, she shot the massive elk at about 75-80 yards. (Photo by Jason Grandin. Courtesy of the Sault Ste. Marie Tribe's newspaper, Win Awenen Nisitotung.)

## Waterfall access in jeopardy

By Ian Shackelford  
For Mazina'igan

**Ironwood, Mich.**—Public access to Interstate Falls on the Montreal River near Hurley, Wisconsin could be lost. An undeveloped 39-acre piece of property along the river is up for sale.

The tract includes a scenic 0.3-mile trail through hardwood-hemlock forest which leads to a ledge at the top of Interstate Falls. Here water plunges eighteen feet over a cliff of gray basalt rock into a wide pool ringed by forest and cliffs.

Visitors can also follow the trail a little farther and climb down the riverbank for an outstanding view of the falls from downstream.

This land on the Wisconsin side of the river is the only public access to the falls, there being no public access on the Michigan side.

The Montreal River forms the jagged border between Wisconsin and the Upper Peninsula of Michigan. Over its forty-mile length, the river drains northward through northern hardwood forest, over waterfalls, and finally through a 180-foot-deep rock gorge before emptying into Lake Superior. Locals fish the river for brook trout, and whitewater kayakers

know the Montreal as one of the most challenging rivers in the Midwest.

The Ojibwe people called the river Gaa-waasijiwaang-ziibi, or "river of the white cascades." Perhaps due to the remote setting, lack of public land, and two-state jurisdictions, the Montreal River receives less attention than other Northwoods rivers.

The most popular attractions on the Montreal River are the waterfalls: Superior Falls, Saxon Falls, Interstate Falls, and Peterson Falls. Superior Falls, near the mouth of the river at Lake Superior, is the second-highest waterfall in Wisconsin and the only one of the four Montreal waterfalls with permanent public access established. The other three waterfalls are on a mix of private and Xcel Energy land.

To visit the falls this spring, take US Route 2 to Hurley, Wisconsin. Just west of the State line, look for Center Drive on the north side. Follow the gravel road a quarter-mile, watching for the signs to the trailhead. Go soon, as the land could be sold and subdivided for development at any time, ending public access to Interstate Falls.

More information on Interstate Falls is available at [www.interstatefalls.org](http://www.interstatefalls.org).

(Ian Shackelford is a Northwoods Land Trust Volunteer.)



# Making the old ways new again

(Continued from page 15)

levels of obesity and diabetes. Nowhere is this more evident than in the Native American community, which suffers diabetes at twice the rate of the non-Indian population. In their amazing 37-page book **"Food is Medicine,"** Winona LaDuke and Sarah Alexander draw on history, government and corporate policy, and agricultural and medical research to make a convincing case that many of the health problems facing Native Americans (and others) today are a direct result of the switch from a nutritious traditional diet to the high-carbohydrate, high-calorie, and low fiber and nutrient diet of industrial agriculture. They discuss how individual tribes across the country are tackling these problems head-on, encouraging their members to again rely on traditional and other whole foods.

The Ojibwe word Gitigaaning means "Place of the Gardens." The confluence of the Bad and White Rivers was once a major site for Ojibwe agriculture. The Bad River Gitigaaning Project helps Bad River tribal members who want to grow gardens get started. Community garden staff can do a site visit to make sure the site has the basic requirements for a successful garden: well-drained, fertile soil, at least 6 hours of sunlight per day, and (ideally) a slight south-facing slope. They can also supply a rototiller and some seeds, along with instructions on plant spacing and care.

The Gitigaaning Project also provides young fruit trees to interested tribal members. This year apple, cherry, plum, and pear trees will be available. To receive trees interested members must take a one-hour class on the planting and care of fruit trees, given by the UW-Extension Office. The Project is also working on planting a 1.5 acre area in Odanah with fruit trees, rhubarb, strawberries, blueberries, and other perennials for use by the entire community.

The garden program is also looking for volunteers to help tend the tomato, pepper, and other seedlings raised each spring. The seedlings are given away on the last weekend in May (the weekend after Labor Day), with volunteers getting first choice, followed by tribal members and then nontribal members who work on the reservation.

Most of the other Ojibwe bands across the region have started community garden programs as well. To get started, Bad River members should contact Becky Lemieux or Luis Salas at 715-682-7137. Members of other tribes might inquire at their tribal offices, to see what resources might be available. Like a number of other tribal garden programs around the country, the Bad River Gitigaaning Project follows the philosophy that "Food is Medicine." But as Becky Lemieux points out, there is one BIG difference between this food and most modern medicine—this medicine tastes good!

## For more information (and credit where credit is due)

Many of the ideas presented here are discussed in the book, **"Food is Medicine"** by Winona LaDuke and Sarah Alexander, published by Honor the Earth in Minneapolis. Honor the Earth seeks to create awareness and support for Native environmental issues, and to develop needed financial and political resources for the survival of sustainable Native communities. See [www.honorearth.org/](http://www.honorearth.org/) for more information.

The Union of Concerned Scientists (UCS) is a nonprofit organization of more than 250,000 citizens and scientists, working for a healthy environment and a safer world. For more information on genetically engineered crops visit the UCS website at [www.ucsus.org/food\\_and\\_agriculture/food\\_and\\_agriculture\\_101/](http://www.ucsus.org/food_and_agriculture/food_and_agriculture_101/).

The nonprofit Center for Food Safety also works to protect human health and the environment, and to promote sustainable agriculture and nutrition. Visit them at [www.centerforfoodsafety.org/](http://www.centerforfoodsafety.org/).

Finally, miigwech to Becky Lemieux and Luis Salas of the Bad River Gitigaaning Project for patiently explaining the activities and goals of this interesting and worthwhile program.

# Madeline Island Summer events

Just a short ride by ferry boat from Bayfield, Wisconsin is Madeline Island. This green jewel rising out of Lake Superior was the sacred center of the Anishinaabeg world and the place where the 1854 Treaty was signed.

On Memorial Day weekend the Madeline Island Museum will host a free open house for Anishinaabeg people to honor the ancestors. Programming will include showings of the film, *"Mikwendaagoziwag—They Are Remembered"* on the Sandy Lake Tragedy. Later in the summer the Museum will host its annual: "Traditions and Transformation—Celebrating Ojibwe Heritage" special event, with demonstrations by Anishinaabeg artists, harvesters of wild rice, and other cultural activities all weekend, June 27-28, 2009.

The summer season will culminate with the new Madeline Island Anishinaabeg Gathering Event that will take

place Sept. 25-26, 2009 in honor of the Signing of the 1854 Treaty and the historical importance of Madeline Island to the Anishinaabeg people.

Friday activities will include speakers, a community lunch, an evening feast, and finish with drumming and dancing. Saturday activities will include book signings, workshops, films, Island tours, and more. Everyone is invited to make the journey again to the Island to renew their connections and honor their ancestors.

For more information and free admission tickets to the Museum for the Memorial Day open house, contact Steve Cotherman at (715) 747-2415 or email [www.madeline@wisconsinhistory.org](mailto:www.madeline@wisconsinhistory.org).

The Museum is just opposite the ferry on Madeline Island. Ferries run on a regular schedule all summer long. For a 2009 ferry schedule visit: [www.madeferry.com](http://www.madeferry.com).



Field chickweed (*Cerastium arvense*) makes a nice border. (GLIFWC staff photos)



Cinnamon fern (*Osmunda cinnamomea*) is a great landscaping plant, with cinnamon-colored spikes. Plant in moist to wet areas, in light to moderate shade.

# Sources for native plants

(Continued from page 14)

Each spring the Iron County and Ashland County Land and Water Conservation Departments holds a Native Plant Sale. This year they'll have a wide variety of trees, shrubs, broadleaf perennial herbs, ferns and grasses. Prices are quite reasonable compared to most commercial outlets. Proceeds from the sale help support scholarships for students and teachers to pursue education and training in natural resources. For a brochure and order form, contact MaryJo Gingras at 715-561-2234.

While the official deadline to order was February 27, MaryJo has indicated that they may be able to extend the deadline a bit if people get their orders in promptly! Tree/shrub orders must be picked up at the Great Lakes Visitor's Center just west of Ashland or at the Iron County Courthouse in Hurley on May 1-2, or at the Bayfield Fairgrounds in Iron River, Wisconsin on May 2.

Flower orders can be picked up at either the Iron County Forestry Department in Hurley or the Sigurd Olson Environmental Institute at Northland College in Ashland on Friday or Saturday, June 5-6. Contact MaryJo Gingras for details.

A native plant sale will also be held from 9 AM to 1 PM on Saturday, June 6, at the Sigurd Olson Institute in Ashland. This will be a farmers market-style sale, with a wide variety of native perennials, including plants for sunny gardens, woodland gardens, and rain gardens. No advance ordering is necessary.

A number of independent regional growers now deal in native plants as well. For a brief list of local sources, see [www.northwoodscwma.org/assets/pdf/native\\_seed\\_sources.pdf](http://www.northwoodscwma.org/assets/pdf/native_seed_sources.pdf).

Another way to get native plants for your yard is to simply grow your own. Many are amazingly easy to grow from seed. Wild columbine (*Aquilegia canadensis*), wild bergamot (*Monarda fistulosa*), bottlebrush grass (*Elymus hystrix*), and blue vervain (*Verbena hastata*) are just a few that will come up profusely and will often reseed themselves in a flowerbed or woods edge once established. Probably the best way to go about propagating these plants is simply to gather the seed when ripe, sow them in flats with a seed starter mix or simply a loose mixture of garden soil, sand, and peat (or alternatively coconut shell mix), and place them in the refrigerator (or a cool porch if others in your house object!) for the winter. Water as neces-

sary to keep soil moist. Alternatively you can plant the seeds shallowly (a good rule-of-thumb is to plant seeds the same depth as their thickness) in a flower bed where they can grow in the spring. (Seed and seedling predators like mice and slugs can be a problem outside, though.) This is called "cold stratification." Most native plants need at least three months of cold stratification in moist soil to simulate winter conditions before they will sprout.

While a relatively small percentage of introduced species have spread aggressively, causing major ecological and economic problems, many have been grown for decades without significant problems. Non-native plants that have a long track record of being well-behaved include peonies, marigolds, petunias, pansies, zinnias, snapdragons, and many others.

**A note of caution:** Beware of "wildflower mixes" that often include weedy non-native plants such as dame's rocket, sweet-William, baby's breath, chrysanthemums, foxglove, garden forget-me-not, and common valerian. And it's a good idea to check the Latin (or "scientific") name of the plant to help verify you're really getting the plant you're looking for, especially if you're buying from a supplier that doesn't specialize in native plants.

## Help is available

Within the last several years a number of books have been published dealing with natural landscaping and native plant cultivation. One of the best is **"Natural Landscaping: Designing with Native Plant Communities (Second edition)"** by John Dieckmann and Robert Schuster, published in 2002 by the University of Wisconsin Press, Madison, Wis.

The Evergreen Project has an interesting, searchable website with a wealth of information concerning native plant cultivation. Though based in Canada, most of the information is fully applicable to the northern US. See [www.evergreen.ca/nativeplants/about/index.php](http://www.evergreen.ca/nativeplants/about/index.php).

Finally, the staff at GLIFWC is always ready to help. While we generally can't do site visits and don't claim to be experts in wild plant cultivation, we may be able to help with some questions concerning plant ID, cultivation, and suitability to various habitats. Contact Miles Falck at the GLIFWC offices (715-682-6619 x 124) for more information.



# Nigig—Northern River Otter

Compiled by Sue Erickson, Staff Writer

Boozho (Hello), let's talk about nigig, the otter.

**Nigig loves to play.** The river otter, known as nigig in Ojibwe, lives up north and loves to swim in rivers, streams, lakes and ponds.



Nigig sliding down a hill.

Nigig is one of nature's water-babies. A fast swimmer, nigig spends many hours in the water, but when winter comes, the otter also likes to slide on the snow and ice.

Nigig will bound through the snow and then s-l-i-d-e for five to fifteen feet. What fun! Of course, a slide downhill is really fast and fun for nigig. Nigig is known to be a playful animal. Playing tag with otter friends is a favorite game.

**Nigig belongs to the family of weasels.** In fact, nigig is the biggest member of the weasel family. Dark brown with smooth shiny fur, nigig has a long body and a long, thick tail used for swimming. Nigig's webbed feet are also designed for swimming. Nigig is usually about three to four feet long and has light brown along the throat, chin and cheek. Nigig is kept warm and dry by a layer of very soft underfur covered by an outer layer of longer guard hairs. This traps a layer of air that helps keep the animal warm.

**Being a fast swimmer helps nigig catch fish, a favorite food.** Otters also like shellfish, birds, amphibians (like toads and frogs) and small mammals like mice and voles. Nigig will spend about four to five hours every day hunting for food.

Even as a baby or young pup, nigig starts to swim, usually at about eight to ten weeks old. Most like to dive right in, but others might have to be forced into the water at first. The pups will sometimes ride on their mother's back in the water. Nigig can go underwater for four to eight minutes and dive down very deep.



Nigigwag love to swim.

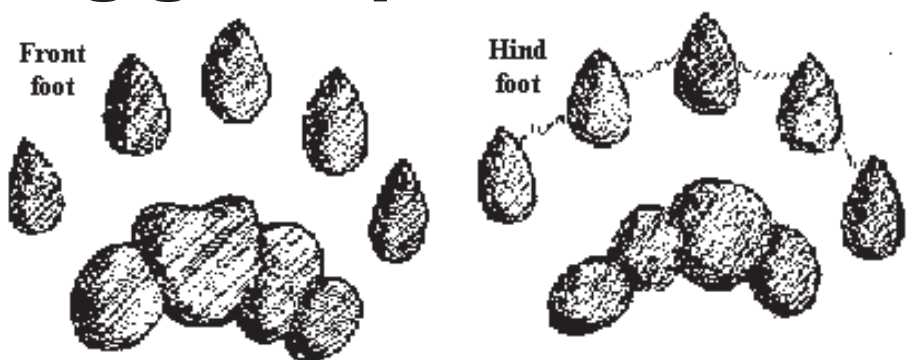
**Nigig lives in a den or burrow for a home.** It is called a holt. Babies are called pups or cubs. Adult females are called bitches, and adult male otters are called dogs. A group of otters, or nigigwag (plural in Ojibwe), is called a pack or sometimes a romp, which describes their playfulness.

**Nigig is an important Ojibwe clan symbol.** The otter represents certain healing or medicinal traits in the clan traditions. (Information derived from Wikipedia, WDNR website, EEK! and "baby animals" by Evan & Lael Kimble, Sterling Publishing Co., Inc.)

Ojibwe words describing nigig's habitat, or living area.

- |                      |                 |
|----------------------|-----------------|
| Water—nibi           | Snow—goon       |
| Sliding—zooshkwajiwe | Fish—gigoonh    |
| Fur—gipagawe         | Swim—bimaadagaa |
| Dive—googii          | Play—odamino    |

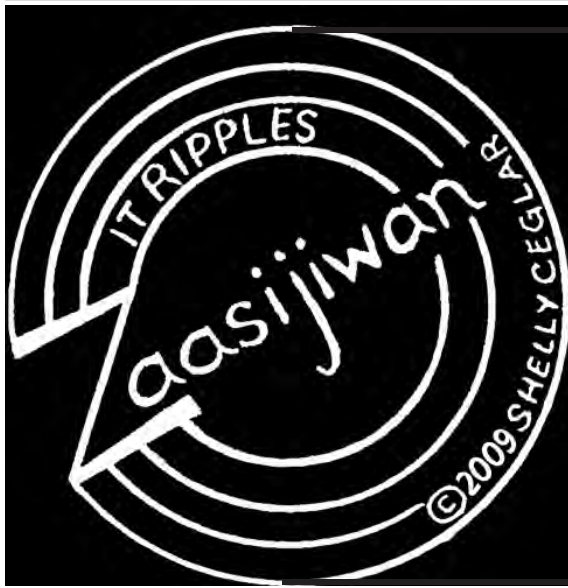
## Nigig footprints



Nigig is dark brown with smooth shiny fur, has a long body and a long, thick tail used for swimming. Nigig's webbed feet are also designed for swimming.



Complete the dot-to-dot of the Nigig family in their den or burrow. Then color the picture. (Dot-to-dot is reprinted from baby animals by Evan & Lael Kimble, Sterling Publishing Co., Inc.)



# Ziigwan—It is Spring

Oshki-gikinoonowin. Niizhosagoons ashi zhaangaso. Aaniin waa-izhichigeyan? Endaso-giizhik abinoojiiyensag, wii-ondaadiziwag. Abinoojiiyag, odaminowag. Ininiwag idash ikwewag, wii-anokiiwag. Mindimoyeyag idash akwenziyag, wii-kinoo'amaadizowag. Akina-awiiya gitiziwag. Anishinaabeg wii-ojaanimiziwag agwajjng. Maajigaa. Nagishkodaadiwag. Ikidon! Boozhoo, name nindizhinikaaz. Aaniin ezhinikaazoyan? Mii'iw.

(A young new year. Two-thousand and nine. What will you be doing? Everyday babies, they will be born. Children, they will play. Men and women, they will work. Elder women and elder men, they will teach. Everyone they are older. Anishinaabe people will be busy outside. Maple sap start to run. They will meet each other. Speak! Hello, "such an such" is my name. What is your name? That's all.)

## Bezbig—1

### OJIBWEMOWIN (Ojibwe Language)

Double vowel system of writing Ojibwemowin.

—Long vowels: AA, E, II, OO

Onzaam—as in father

Miigwech—as in jay

Wayiiba—as in seen

Manoomin—as in moon

—Short Vowels: A, I, O

Dash—as in about

Iwidi—as in tin

Zoogipon—as in only

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

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

### Pluralize

To speak about more than one, suffix n, an, wan, oon, iin for inanimate nouns. Suffix g, ag, oog, wag, yag for animate nouns.

Achaab, Achaabiin—Bowstring (s)

Wiisiniwin, Wiisiniwinan—Food (s)

Bikwak, Bikwakoon—Arrow (s)

Gitigaan, Gitigaanan—Garden (s)

Mitigwaab, Mitigwaabiig—Bow (s)

Mooz, Moozoog—Moose (s)

Aandeg, Aandegwag—Crow (s)

Odaabaan, Odaabaanag—Car (s)

All animate pluralization end in G

## Niizh—2

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

A. Aaniin enaandeg? Makadewaa i'iw apabiwin.

B. Aaniin enaanzod? Miskozi a'aw misko-bineshii.

C. Aaniin enaanzowaad? Waabishkoziwag ingiw weweg.

D. Ozaawaawan iniw gibiiga'iganan idash anaakanan?

E. Ozhaawaashkwaawan iniw makakoon adoopowining.

F. Niwaabamaag niizho waaboozoog. Ozaawiziwagg.

G. Iwidi ziibiing. Howah! niimiwag.

L W X K  
O N T U H S  
M I S K O Z I  
A I C J W M Y M  
N Z B D A C E A D  
V H M L H I Z K I A  
O O Z A A W A A W A N  
I E U H Q I T K E N S I  
W E W E G D I O V I R N  
P I O K N I I O F I G I  
A A N A A K A N A N Q W

## Niswi—3

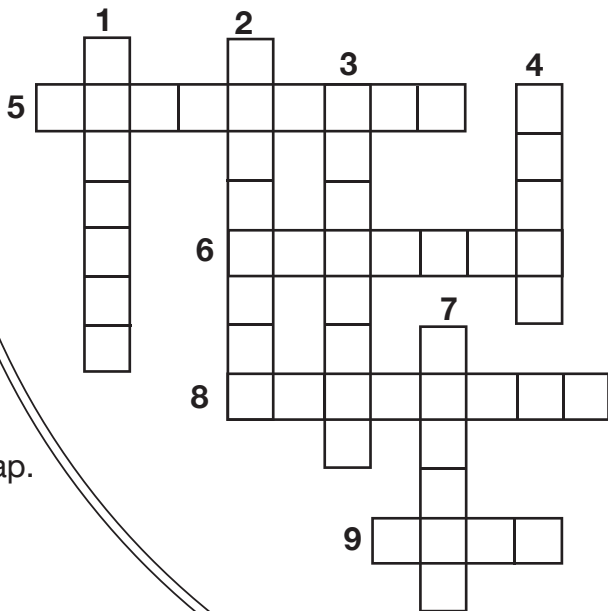
### IKIDOWIN ODAMINOWIN (word play)

#### Down:

1. Day
2. It starts to run sap.
3. Pipe
4. Snow geese
7. He or she flies.

#### Across:

5. Arrows
6. Look! Behold!
8. Chair
9. Rock



## Niiwin—4

### Animate and Inanimate

Living—Breathing—Sacred—Traditional—

Use only animate verbs for living nouns

Dewe'igan, Dewe'iganag—Drum (s)

Minjikaawan, Minjikaawanag—Glove (s)

Asin, Asiniig—Rock (s)

Opwaagan, Opwaaganag—Pipe (s)

Non-living—only inanimate verbs

to speak of these

Waabigwan, Waabigwaniin—Flower (s)

Atisigan, Atisiganan—Dye (s)

Nemaab, Nemaabiin—Marble (s)

—an

—ag

—wag

—iin

—iig

### Goojitoon! Try it! Translation below.

1. Daga ginaadinan iniw waabigwan \_\_\_\_ imaa.

2. Niwii-naadawaag ingiw asin \_\_\_\_ iwidi agwajjng.

3. Niimiwining ningii-waabaamaag niiyo dewe'igan \_\_\_\_.

Ningii-niimimin.

4. Adoopowining ogii-miijinan gitigaaniwiisiniwin \_\_\_\_.

5. Inashke! Aandeg \_\_\_\_ bimisewag giwedonong.

### Translations:

**Niizh—2** A. What color is it? It is black that chair. B. What color is s/he? S/he is red that cardinal. C. What color are they? They are white those snow geese. D. They are yellow, those curtains and rugs. E. They are blue those baskets on the table. F. I see two rabbits. They are brown. G. Over there by the river they dance. Wow, alright!

**Niswi—3** Down: 1. Giizhik 2. Maajigaa 3. Opwaagan 4. Weweg 7. Bimise

Across: 5. Bikwakoon 6. Inashke 8. Apabiwin 9. Asin

**Niiwin-4** 1. Please go get those flowers there. 2. I will get those rocks there outside. 3. At the dance I saw them two drums. We danced. 4. At the table she ate garden foods. 5. Look! Behold! Crows they are flying to the north.

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 *The Concise Dictionary of Minnesota Ojibwe* by John D. Nichols and Earl Nyholm. All inquiries can be made to **MAZINA'IGAN**, P.O. Box 9, Odanah, WI 54861 [pio@glifwc.org](mailto:pio@glifwc.org).



# The dangers of lead continued

(continued from page 8)

It was good news to hear that the eagle would survive, but I wondered how the eagle had lead poisoning.

I asked Gibson, and this is what she said: "Lead poisoning is a very serious condition, and it is totally human caused. It is a hard thing because adult birds that have survived any problems of youth turn out to be experienced hunters. The birds become poisoned while eating off a carcass or a gut pile left in the woods by hunters. Eagles and other lake birds also ingest lead fishing sinkers."

"Lead has been banned from the paint we use in our homes since 1974. We no longer have lead in our gasoline. People get frantic when toys made in China have minute levels of lead in the paint; and yet we use it often in things such as fishing tackle and ammunition."

Gibson further stated, "There are alternatives, but the hunting lobby is strong and I am convinced they seem to want to keep sportsmen in the dark about the problems involved."

In the e-mail, Gibson also commented on how very upset and sad she was at the loss of another eagle there earlier that morning—an eagle also being treated for lead poisoning. This was a beautiful female that nested for over 15 years on the same lake. Gibson went on to talk about lead poison and how serious it is. "Lead is so toxic that a piece the size of a grain of sand can poison a human child. You can imagine what a lead sinker or lead bullet fragment does to an eagle."

My interest led me to visit the facility after the holidays. Our eagle seemed to have been doing a little better as he was out in the flight building managing to take wing a few times before resting with the other eagles. X-rays of our eagle showed he was actually shot; two pellets were in his left chest cavity.

"He's still being tube fed," Gibson stated. "He was so sick when we first brought him in that I spent the entire night holding him—he had seizures on and off throughout the night."

We took a look at the X-rays of our eagle along with other birds that have been in or are still in the facility. One X-ray was of a loon that had a full sinker in its stomach; another X-ray of an eagle showed 64 pellets. This eagle did not survive.

Many of these birds that are released into the wild once they are healthy, return back to her center, a majority of the time with lead poisoning.

Gibson and her husband have many types of birds at her sanctuary from barn owls to chickadees, vultures to red-tailed hawks. All are there for the care and nurturing needed to return to the wild.

There are others that are unable to return to their natural environment due to some sort of illness or injury that prevents them from surviving on their own. These birds then are considered foster parents to the birds that are brought in for care.

Along with eagles, Gibson has been getting calls regarding sick trumpeter swans, which are on the endangered species list. Many swans along with other waterfowl are obtaining food where they weren't able to before, which results in lead poisoning from eating lead sinkers in shallow wetlands.

Elizabeth Rogers, Ph.D., Environmental Program, Director/Ecologist of the FCP Natural Resources Department stated, "Waterfowl can ingest lead pellets when they are dabbling for food in the muck in the bottom of a shallow wetland. This is particularly true for geese and dabbling ducks (like scaup and ring-necked ducks), and loons are more apt to get lead from ingesting fishing gear although they may also deliberately pick up what they perceive to be gravel for an aid in digestion."

The medication Calcium Versenate (Ca EDTA) that Gibson gives in the form of shots to these birds is quite expensive. The cost for 30 ccs of Ca EDTA is \$600. The swans use about three ccs per day and eagles two ccs per day for weeks at a time.

"The medical costs for x-rays and other medication are similar to what it is for humans. The eagle that was found by Daniels has about \$1700 worth of medical costs at this point and that includes nothing for care and food," Gibson said.

Seriously ill birds needing intensive care are housed downstairs in the Gibson home. Watching Gibson tube-feed two trumpeter swans, it's hard to imagine how much work is entailed in the birds' recoveries and clearing the lead from their systems.

There are several signs that indicate lead poisoning in birds. If you see a bird that has lead poisoning, you will see messy green droppings in the area. This type of mess was evident with the swan as the lower half of its white downing was covered with a dark green mess.

The only way to remove the lead is the Ca EDTA shot. They cannot get it out by themselves. Recovery time varies. Some take months and some take over a year before being fit to return to the wild.

With the impact of lead poisoning obvious, solutions need to be sought. Rogers stated, "It appears that the only real solution will be to stop using lead bullets and lead fishing sinkers. With the evidence mounting, there will probably be pressure for some legislation."

## Lead issues

- 1991 lead shot banned for waterfowl hunting nationwide. This decreased wildlife deaths from lead. Use of lead in fuel, paint, pesticides and solder in food cans has been eliminated.
- Lead is STILL used in upland game and rifles as well as fishing sinkers. There is discussion of banning these uses of lead as well. It is important to properly dispose of old sources of lead in the home through disposal as hazardous waste (during hazardous waste pick-ups).
- Sources include: solder, putty, welding, batteries, leaded glass, ink, old paint, lead weights, old ceramic glaze, hunting gear, and fishing tackle.
- Household potential sources of lead contamination can be treated as hazardous waste and dropped off separately at the FCP Solid Waste Building or your local Solid Waste Building during a drop-off day, or any time.

### Ways you can get the word out:

Write your representatives! This issue could be addressed at the State or National level. One difficulty is that although the objection is to the environmental effects of lead, the gun lobby sometimes sees this attempt to ban lead ammunition as an attack on gun rights. So, one should be clear that *it is a concern about the environmental effects*. Until there is not a lead option, there will be the cost differential in the products.

"1991 was a nationwide ban on lead shot for hunting waterfowl. There is currently no nationwide ban on lead shot for upland game, or lead bullets, or lead sinkers."

Rogers continued by stating, "Given the mounting evidence of effects, there probably should be. Other alloys cost more—but if lead ammunition were no longer available, people would no longer notice the price difference. And the lead sinkers for fishing gear really ought to be replaced with tungsten or bismuth. Such products do exist already."

Gibson noted that the sanctuary is a non-profit organization and funding is all private. "We get no state or federal funds, which is odd because state and federal law protect all of the birds we care for. Many of the birds we do care for are endangered."

"We are fortunate when fish are donated to us to be used as food for the eagles. The Sokaogon Chippewa Tribe donated a truckload of bullheads this past June. That was super!" Gibson continued, "Often, people think they cannot do anything to help; but even volunteers to help in building repairs, painting or even yard work and laundry is so valuable to us and allows us to give our time to the birds directly."

Earlier I had commented to Alloway that I'd like to think there is a reason why Daniels found this eagle. The more I thought about it, the more it became clear to me; the eagle came

to us with a serious message to address about the dangers of lead to our birds and waterfowl.

Carry this message to your loved ones and remember this eagle in the story as you do so. His story must be shared from generation to generation in order to keep Mother Earth and her beings the best they could ever be.

The story that came with this male bald eagle is clear—it was a message from our Creator and those animal and bird spirits that have walked on before us. Treat the earth with much respect, but treat all creatures that call this place home, the same. Let it be known that the message the bird has left behind in heart and mind is to be more conscientious about what it is you do when you hunt or fish. Also, when other family members and friends are out fishing, inform them of the harms of lead sinkers and let them know of non-lead alternatives.

Please keep him in your thoughts and prayers, along with all of the other birds that are at the sanctuary with injuries or illnesses.

### An update:

Gibson contacted me early in February letting me know that the eagle is now eating on his own. She also mentioned that she has four more swans at her facility that are undergoing Ca EDTA treatments at the same time. The swans mentioned in this story are eating on their own and standing now.

## Forest Service withdraws Cayuga logging project

The U.S. Forest Service recently announced that it is withdrawing and reconsidering its Cayuga timber sale for logging 5,220 acres of the Chequamegon-Nicolet National Forest (CNNF) near Clam Lake, Wisconsin.

Scientists and conservationists filed extensive comments expressing concern that the Forest Service was allowing too much logging in the proposed Cayuga Project, which is next to other large timber sales and contains old growth forests and high quality trout streams. In addition, more than 300 citizens submitted letters urging the Forest Service to more fully consider the combined impact of the timber sales on the environment.

"The Forest Service is proposing too much logging, too fast and in too many of the wrong places when it comes to protecting natural resources values," said Howard Learner, Executive Director of the Environmental Law and Policy Center, "We appreciate that the Forest Service has decided to step back and reconsider more balanced solutions."

The Cayuga Project has been on hold due to the federal court's previous decision and injunction. Supervisor Jeanne Higgins re-approved the Cayuga Project on November 3, 2008. In recent years, the Forest Service has proposed 15 timber sales totaling over 100,000 acres of logging in the CNNF.

The Environmental Law and Policy Center [www.elpc.org](http://www.elpc.org) is the Midwest's leading public interest environmental legal advocacy and eco-business innovation organization.

### Raptor Education Group, Inc:

The Raptor Education Group, Inc. (REGI) is a non-profit 501(c)(3) organization dedicated to caring for injured or orphaned native bird species and public education on wildlife issues. All donations are tax-deductible.

REGI holds permits from both the State of Wisconsin and the U.S. Fish and Wildlife service to possess threatened and endangered indigenous species for rehabilitation and educational purposes.

REGI is a member of the International Wildlife Rehabilitation Council, National Wildlife Rehabilitators Association, Raptor Research Foundation, and American Society of Ornithology. One of the largest in the world, this flight training facility is used to teach eagles and other birds to fly. It also is used to help raptors build muscle and social skills necessary in the wild.

**REGI's Executive Directors:** Marge and Don Gibson founded Raptor Education Group, Inc. (REGI) in 1990. Marge has worked with wildlife for over 30 years. She began her work with raptors as a field biologist. Marge teaches wildlife rehabilitation internationally. Don is a recently retired M.D. His specialty is pathology.

(Information about REGI and the executive directors was obtained from their website [www.raptoreducationgroup.org](http://www.raptoreducationgroup.org).)



# Save the Date – July 28-30, 2009

## Minwaajimo – Telling a Good Story: Preserving Ojibwe Treaty Rights

### Celebrating GLIFWC's 25<sup>th</sup> Anniversary

#### Symposium Overview

The day and a half symposium, held on the grounds of the Bad River Lodge and Casino in Odanah, Wisconsin, will be structured with morning and afternoon presentations and shared breaks and meals. Come early to enjoy the opening ceremony July 28, 2009. And don't miss the opportunity to join in the informal conversation around the ceremonial fire opening day.

The symposium will be structured around four focus areas:

#### Legal Issues/History

This section will tell the story of the various court cases in recent times that helped reaffirm treaty rights in Wisconsin, Michigan, and Minnesota. Highlighted will be how key cases were crafted and brought through the court system, why self regulation was designed the way it was, and how GLIFWC emerged as a result.

#### Socio-Economic Issues

This section will tell the story of how implementation of treaty rights took place over the last 25 years in the face of the myths and misconceptions that fueled the anti-treaty movement and stirred unfounded con-



trovery. The claim that treaty rights harmed tourism will be examined within the context of the changes occurring in the sport hunting and fishing industry nationally.

#### Biological/Natural Resource Management Impacts

This section will tell the story of the facts and data behind the biological impacts of treaty rights implemen-

tation and the overall implications for natural resource management in the ceded territories. Discussed will be GLIFWC's contributions to co-management, stressing key natural resource environmental programs, key players, and their lasting importance.

#### Tribal Communities

This section will tell the story of the importance of modern-day treaty rights affirmation and implementation to tribal communities. Highlighted will be the importance of treaty rights, their vital role in the tribal communities, the inter-generational transfer of knowledge, and the establishment of tribal court systems through the reaffirmation of tribal sovereignty.

#### Continuing education credits available

For more information contact GLIFWC's Website at [www.glifwc.org](http://www.glifwc.org), click on Treaty Symposium or call GLIFWC at 715-682-6619 or e-mail [pio@glifwc.org](mailto:pio@glifwc.org). For hotel reservations and current rates at the Bad River Casino and Lodge call (800) 795-7121. You can also email the lodge at [lodgemanager@badriver.com](mailto:lodgemanager@badriver.com) with

# Educational Resources

## Indinawemaaganidog (All My Relations)

This interactive Anishinaabe language CD identifies the names of animals, birds, fish, reptiles, insects, and plants. The CD utilizes voice links to allow the user to hear the name while viewing photographs of the species. In addition, traditional knowledge is passed along through stories in the Anishinaabe language with partial translation. This is a resource that both beginning and advanced language students can use to increase their knowledge of Anishinaabemowin—\$12.00.

## Gidakiiminaan (Our Earth) atlas

The *Gidakiiminaan* atlas is an 80-page atlas that identifies the Anishinaabe (Ojibwe) names of lakes, rivers, islands, bays, and other locations in northern Wisconsin, the Upper Peninsula of Michigan, and east central Minnesota. Some of these are the pre-European names. Included in the atlas is a translation of the original name and a table that identifies the modern location name with the Anishinaabe name—\$12.00.

## Gidakiiminaan (Our Earth) CD

The *Gidakiiminaan* CD is an interactive CD that identifies the Anishinaabe (Ojibwe) name of lakes, river, islands, bays, and other locations within northern Wisconsin, the Upper Peninsula of Michigan, and east central Minnesota, some of these are the pre-European names. The CD incorporates voice links to the names so the user will be able to hear how they are pronounced and provides a translation of the Anishinaabe names—\$12.00.

## Ojibwe Journeys: Treaties, Sandy Lake & the Waabanong Run

This book explores key events in the history of Ojibwe people in the greater Lake Superior region. Soon after Ojibwe leaders negotiated treaties with the United States in the mid-1800s, tribal members embarked on a journey to maintain their reserved rights to natural resources. Through traditions that include distance running, spiritual living, and a growing legal prowess, Ojibwe people have struggled against formidable governments and anti-Indian groups. Includes rare historical photos, color images and maps, an explanation of treaty rights fundamentals, and an intimate look into the lives of some Ojibwe people today—\$16.00.

## The Sandy Lake Tragedy DVD Mikwendaagoziwag: They are Remembered

A 28-minute DVD tells the story of the 1850 Sandy Lake Tragedy. The story provides significant historical background for the event at Sandy Lake, Minnesota, which claimed about 400 Ojibwe lives as part of a conspiracy to provoke Ojibwe bands to move from Wisconsin into Minnesota Territory. The story dramatically portrays the tragedy as it unfolded in the 1850s and continues to depict Chief Buffalo's heroic trip to Washington, DC in protest of the 1850 Removal Order, a trip also in response to the tragic events at Sandy Lake and which resulted in the establishment of permanent reservations—\$12.00.

*Special purchases: *Gidakiiminaan* atlas / CD \$18.00  
Ojibwe Journeys: Treaties, Sandy Lake & the Waabanong Run /  
The Sandy Lake Tragedy DVD \$25.00*

## Plants Used by the Great Lakes Ojibwa

This book includes a brief description of 384 plant species and the plant's use. These plants were of great importance to the Anishinaabe people. Included in the book is a reproduced line drawing, and a map showing approximately where each plant is distributed within the ceded territories.—\$20.00

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Item	Unit Price	Quantity	Total
Gidakiiminaan (Our Earth) atlas	\$12.00	_____	_____
Gidakiiminaan CD	\$12.00	_____	_____
Gidakiiminaan atlas & CD combination	\$18.00	_____	_____
Indinawemaaganidog (All My Relations) Anishinaabe language CD	\$12.00	_____	_____
Ojibwe Journeys: Treaties, Sandy Lake & the Waabanong Run	\$16.00	_____	_____
The Sandy Lake Tragedy (DVD)	\$12.00	_____	_____
Ojibwe Journeys/Sandy Lake combination	\$25.00	_____	_____
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Make checks payable to:  
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Although MAZINA'IGAN enjoys hearing from its readership, there is no "Letters to the Editor" section in the paper, and opinions to be published in the paper are not solicited. Queries as to potential articles relating to off-reservation treaty rights and/or resource management or Ojibwe cultural information can be directed too the editor at the address given above.

For more information see GLIFWC's website: [www.glifwc.org](http://www.glifwc.org).



# Mazina'igan

A Chronicle of the Lake Superior Ojibwe



Ziigwan 2009

