Mazina'igan
A Chronicle of the Lake Superior Ojibwe
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Bizhibayaash recognized nationally

By Sue Erickson
Staff Writer

Lac du Flambeau, Wis.—Marking twenty years of improving wetlands and waterfowl habitat, Bizhibayaash (Circle of Flight (COF)) coordinator and Bureau of Indian Affairs (BIA) Biologist Bob Jackson was proud to recognize about 26 tribes/tribal organizations, the Great Lakes Agency and Midwest Region of the BIA, and the Environmental Protection Agency (EPA) as collaborators in the COF wetlands enhancement initiatives.

The dedication, vision and downright hard field work on the water and in the mud earned the COF program the Department of Interior's Partners in Conservation Award in 2010.

The ceremonies for the award normally held in Washington, DC were postponed last year due to the oil spill in the Gulf, so were held locally at the Lac du Flambeau reservation in February.

In his introductory remarks, Jackson noted that the BIA's Midwest Region is the only region nationwide with a waterfowl management program. That program began in 1988 when the first Midwest Region Waterfowl Management Task Force convened at Lakewoods Resort, Cable, Wisconsin.

Stemming from the Task Force, the COF Initiative was first funded in 1991 when it received a $600,000 appropriation from Congress. Since that time, the program has continued to grow despite some years when the renewal of the program's funding hung in balance. At least for now Circle of Flight is a BIA base program.

In both 2009 and 2010 the COF program enhanced or maintained about 21,000 acres of wetlands and restored or reseeded about 5,800 acres of manoomin. COF also established 1,894 acres of upland nesting cover and prairie grassland in both years as well as constructed and installed 530 nesting structures.

Relying heavily on collaboration, tribes and intertribal organizations such as GLIFWC partner with federal, state, and county governments as well as with private organizations like the Nature Conservancy, the Minnesota Waterfowl Association and Ducks Unlimited.

These partnerships, Jackson says, have allowed the COF dollars to leverage a three to one ratio in match dollars from federal, state, private and tribal funds and made efficient use of the expertise and manpower available from multiple collaborators.

For 2011, twenty-eight tribes, GLIFWC and the 1854 Treaty Authority, with a combined land base of nearly 62 million acres with 5 million acres of wetlands have identified $1,347,00 funding needs to continue long-term management and protection of waterfowl populations and wetland habitat throughout the Great Lakes Region.

The Circle of Flight program has enhanced or maintained about 21,000 acres of wetlands in 2009 & 2010. (Wood duck photo: ©Ducks Unlimited, Inc.)

Tammie R. Poitra Deputy Regional Director for Trust Services in the Midwest Region noted the program's success resulted from continued hard work and commitment on the part of Jackson and the tribes to ensure that federal funding for this important wetlands initiative continues year after year.

Noting the success of COF, Poitra said, "When DC is looking for a region to shine, they come to the Midwest Region."

(See award photo, page 23)

Tribes, states grapple with moose management

By Charlie Otto Rasmussen
Staff Writer

Odanah, Wis.—The contrast stands out like a thousand-pound bull on a snow-covered highway. Divided by just two hundred miles of *Gichigami* and its rugged western highlands, the primary moose populations of Minnesota and Upper Michigan have experienced remarkably different fortunes since the turn of the century.

Following aerial surveys last winter, wildlife managers confirmed that the Michigan herd continues its slow, mostly stable increase. For Minnesota moose—centered in the state's northeastern Arrowhead region—survey results reveal that the ongoing population slide continues.

A cow and calf in Minnesota's 1854 ceded territory. (Photo by Mike Schrage)

"Minnesota moose are having some big problems—the biggest being health issues," said Mike Schrage, Fond du Lac wildlife biologist. "After the January survey, the decline is now statistically significant." In other words, these numbers don't lie.

Schrage said that because population estimates—are, well estimates—it takes years to accurately pinpoint ups, downs and long-term trends. For the state and tribal biologists who calculated herd numbers around 7,900 in 2005 and now 4,900 in 2011, any uncertainties about the trajectory of the moose population are gone. If the current drop-off continues, Schrage said the iconic ungulate known as *mooz* in Ojibwemowin could vanish from Minnesota by 2060.

Head east into the heart of Upper Michigan and you'll find a small, intrepid moose herd that's grown more-or-less steadily since translocation efforts in the mid-1980s. Released onto the peninsula through a Department of Natural Resources (DNR) program, 59 Ontario transplants form the core of today's herd estimated at around 430 moose. A smaller, isolated pocket of moose numbering less than 100 exists in the eastern end of the peninsula.

"Historic reports indicate that low numbers of moose may have survived in Michigan after the settlement era and after failed releases in the 1930s," said Dean Beyer, DNR wildlife research biologist. "We do know that since 1997, the main herd in the western Upper Peninsula has settled into a growth rate of about 8% a year."

Beyer notes that a below-average reproduction rate tempers herd growth in Michigan's core range. Far-wandering, or emigrating, animals also have an effect. Moose routinely strike out southwest into northern Wisconsin. Sometimes they return, sometimes they don't.

Cooler is better

Of all the animals in the Ojibwe ceded territories, moose are by far the largest. Weighing in on either side of one thousand pounds, *moozoog* have recently suffered in Minnesota's Arrowhead region.

As annual temperatures inch higher, the process of cooling-down their massive bodies becomes increasingly problematic. The result is debilitating heat stress. Species harmful to moose, on the other hand, are enjoying the uptick in temperatures. Put together, moose health takes a hit.

"It's a very complex issue, but we're drawing solid correlations between

(See Moose, page 2)

Wisconsin elk on the move

Interagency plan to boost herd kicks off

By Charlie Otto Rasmussen, Staff Writer

Clam Lake, Wis.—A chance motorist spying the rumbling, southbound livestock trailer last winter may have absently registered: cattle, horses…empty. On most days. Under the late-morning sun of January 4, the passengers were wild elk.

Efforts are underway to expand occupied elk range beyond the core area surrounding Clam Lake. The Wisconsin Department of Natural Resources (WDNR) is spearheading a multi-year program to trap-and-transfer young elk cows and bulls to good habitat where the concentrated herd has yet to populate.

GLIFWC wildlife staff assisted their WDNR counterparts handling captured elk, conducting biological sampling and preparing animals for translocation to a temporary holding enclosure in Sawyer County.

"Hopefully this project will help jump start Wisconsin elk numbers," said Jonathan Gilbert, GLIFWC Wildlife Section leader. "It's provided an excellent opportunity for wildlife staff from different agencies to work together."

The work is demanding, requiring equal measures of efficiency and patience. Inside a high, circular paddock obscured by black panels, technicians bait and trap elk. On moving day, WDNR Elk Biologist Laine Stowell scales a ladder on the corral siding and selects animals with a short, CO2-powered rifle. Each elk Stowell knocks out with a tranquilizer dart is rolled onto a reinforced tarp and carried outside the enclosure by a group of seven or eight. Wildlife staff and a veterinarian swing into action, drawing blood, monitoring body temperature and securing radio collars.

"It takes a lot of help from a lot people for an operation like this," said Stowell, leader of the project known as assisted dispersal. The US Forest Service (USFS), Rocky Mountain Elk Foundation and private volunteers added money and manpower, Stowell said.

Drawing animals from two different corral traps, Stowell darted a dozen elk including eight yearlings and a pair of two and three-year-olds. With only four yearling bulls, cows predominate the group—a sex ratio designed to help add numbers quickly.

Browsing on a variety of natural vegetation and bales of alfalfa hay, the animals have spent four months in a fully enclosed 2.3–acre acclimation pen. After the landscape greens-up, wildlife managers plan to turn the elk loose into an area that includes 95% public forestland. This will follow a May 14 ceremony conducted by tribal members as a blessing for the young elk.

Proven method, good results

Wisconsin is among a handful of eastern states with elk reintroduction programs. Factors including predation, diseases and accidents, however have kept a lid on robust herd growth around Clam Lake. The original release of 25 elk in 1995 numbers only 152 today.

And then there are places like Pennsylvania and Kentucky with elk-o-plenty. Stowell learned that elk numbers in those states blossomed after biologists physically moved small groups away from the main herd. From 1998 to 2000, Pennsylvania moved 69 elk to three different sites. Within nine years the population had grown from 160 to approximately 700 elk. Drop down to Kentucky for even more dramatic results. A wide distribution of 1,549 translocated elk soared to 10,000 between 1998 and 2009.

GLIFWC Wildlife Technician Jake Parisien supports the head of a cow elk while Laine Stowell, DNR elk biologist attaches a radio collar. Wildlife officials hope the bright orange collars help avoid traffic accidents and make the animals more visible to deer hunters. (Photo by Charlie Otto Rasmussen)

"The Clam Lake herd has stayed concentrated in the same area for years," Stowell explained. "Local wolves are becoming more successful at hunting elk and in response it appears that the herd gathers in a large group as a protection technique."

GLIFWC specialists created a series of habitat suitability maps to help identify the best areas for assisted dispersal. Wildlife managers selected two sites including the current Moose Lake holding area—about a dozen miles southwest of Clam Lake. GLIFWC, USFS and DNR elk project staff are reviewing additional sites for similar releases in upcoming winters. Officials plan on moving up to 60 additional animals over the next five years.

Stowell said elk trappers will continue to target young animals that are more "pliable" to relocation efforts.

"Other states witnessed older animals returning to their original range, sometimes leading the other transferred elk with them," Stowell said. "Yearling bulls without established ranges and cows that have not chosen a calving site are the best animals for this project."

Ceded territory moose management

(Continued from page 1)

warming trends and moose decline," said Schrage.

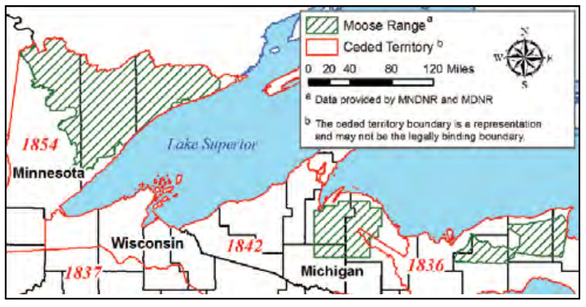
Parasites like winter ticks and deer-carried brain worm, take a toll on moose. Improved overwinter survival for both ticks and whitetails in a warming Minnesota translates to trouble for moose. *Mooz* are also exposed to relatively new diseases like West Nile Virus and Lymes Disease, but the health impacts are unknown. Schrage said that ultimately a handful of factors with a common thread to climate change works against moose.

"Some people are convinced that this is simply about wolf predation," Schrage said. "Wolves have a role to play, but are certainly not the prime mover in the population decline. We need to consider too that a moose that doesn't feel well—whether due to heat stress or sickness or both—is going to be more susceptible to wolves."

So how in the world is the neighboring Michigan moose herd eking out positive numbers?

"Look at the climate history," said Beyer, who leads UP moose research efforts. "Michigan does not have the same significant temperature increases."

Regional temperature data reaching back to 1951 confirms that large portions of Minnesota moose range—including the state's rapidly vanishing northwest herd—has steadily gotten warmer with some acceleration in recent years. Jump across the headwater of *Gichigami* to Michigan moose range: temperatures remained stable.



Beyer said that variability in temperatures is not unexpected. "Our moose range is influenced by Lake Superior more than in Minnesota where it's more of a continental influence."

Mid-century climate projections and a recent blip in moose population assessments, however, effects a cautious outlook in Michigan biologists. Biological indicators in the 2009 and 2011 surveys may be early signs of a slow-down in moose reproduction.

"It's too early to place much significance on those two years," said Beyer. "But with what we're seeing in Minnesota, it gives us some cause for concern."

To hunt or not to hunt

Discussions among policymakers and the public over the future of moose are gaining traction in the western Lake Superior country. While Minnesota enters a critical phase that could lead to a hunting closure in the years ahead, Michigan is exploring the possibility of its first moose hunting season since 1888. Both states assembled advisory committees charged with making moose management recommendations—including the effect of hunting on the health of the herds.

With input from a lone tribal representative, Michigan's seven-man Moose Hunting Advisory Committee (MHAC) is currently reviewing the biological and economic impacts of a hunting season. The majority of Michigan moose occupy 1842 ceded territory lands, with the balance inside the 1836 Treaty area—roughly the eastern half of the Upper Peninsula. An economic and biological analysis of a potential moose hunt is expected from the MHAC in December 2011.

In Minnesota, a new moose management plan is undergoing final review and should be available soon. As moose numbers diminish, tribal and state authorities continue to reduce the number of harvest tags. 1854 Treaty hunters killed 45 moose in 2009 and 36 animals in 2010.

As Schrage and Beyer both point out, it takes time and careful study to fully decipher moose population trends. The years ahead will reveal whether moose can provide for tribal hunters—and more importantly—continue to roam the landscapes of the ceded territory.

Massive Chippewa Flowage among 19 lakes surveyed by GLIFWC shocking crews

By Mark Luehring, GLIFWC Inland Fisheries Biologist

Odanah, Wis.—Bright, warm sunny days with calm crystal clear nights; or maybe gray afternoon skies and soaking cold rain; or perhaps brisk north winds and heavy wet snow; or even, with good fortune, glassy calm water, but more likely rolling waves: these are some of the conditions that GLIFWC spring survey crews have encountered during the peak walleye spawn when spring walleye surveys happen. At this time of year, GLIFWC inland fisheries crews join bats, owls, spearers, and spawning walleyes as creatures of the night to estimate walleye abundance in ceded territory waters.

The plan for 2011 was to conduct mark-recapture population estimates on 19 lakes in Wisconsin and Michigan (see lakes surveyed for walleye population estimates), including the massive Chippewa Flowage in Sawyer County which boasts a formidable area of over 15,000 acres and 232.9 miles of shoreline.

GLIFWC tackled a population estimate of the Chippewa Flowage in cooperation with the Wisconsin Department of Natural Resources (WDNR), which required sampling the entire shoreline. A similar cooperative survey was last performed in 1999, now twelve years ago.

During the marking phase, crews used fyke netting or night electrofishing to fin clip or tag adult walleyes on the spawning grounds, occasionally being treated to the first rays of dawn as they returned to hotel parking lots after long nights of sampling. The survey work is intense because the peak walleye spawning season can be brief; only lightning is likely to keep crews off the lakes until the work is done.

Mark-recapture population estimates were conducted on 19 lakes by GLIFWC's spring shocking crews. Working-up a fish on Oneida County's Squirrel Lake is GLIFWC's Fisheries Aide Sam Plucinski. (Photo by Butch Mieloszyk)

The recapture phase consisted of electrofishing along the entire shoreline, with the proportion of marked to unmarked fish in the sample used to estimate adult walleye abundance. The data **(See Electrofishing, page 6)**

Lakes surveyed for walleye population estimates

STATE	COUNTY	LAKE	AREA
MI	Gogebic	Tamarack L	335
WI	Bayfield	Namekagon L	3227
WI	Bayfield	Siskiwit L	330
WI	Bayfield	Upper Eau Claire L	996
WI	Forest	Butternut L	1292
WI	Forest	L Metonga	1991
WI	Forest	L Lucerne	1026
WI	Langlade	Enterprise L	505
WI	Oneida	Squirrel L	1317
WI	Oneida	Pelican L	3585
WI	Polk	Big Butternut L	378
WI	Sawyer	L Chippewa	15300
WI	Vilas	Annabelle L	213
WI	Vilas	Big Muskellunge L	930
WI	Vilas	Kentuck L	957
WI	Vilas	Sherman L	123
WI	Vilas	Squaw L	785
WI	Vilas	Star L	1206
WI	Washburn	Bass-Patterson L	188

Be informed and enjoy benefits of tasty ogaa

Wise choices make good eating

By Jennifer Burnett, GLIFWC Great Lakes Outreach Specialist

Odanah, Wis.—GLIFWC has been monitoring mercury levels in walleye for nearly 25 years. This information is passed along to tribal members so that they can minimize their mercury exposure while continuing to make use of this vital resource. With the help of GLIFWC's mercury maps, tribal members can harvest walleye from lakes with lower mercury levels, providing their families with a traditional, healthy and safe food.

Fish are a staple in the traditional Anishinaabe diet since they are easier to catch than other game such as large mammals. They are held in a positive light in Anishinaabe culture. Fish are spiritually significant because they are creatures who pity the Anishinaabe enough to be willingly caught in large numbers for food. It is believed even in the harshest winter weather *namebin*, the suckerfish, is willing to be caught by Anishinaabe so that he has sustenance. The name of February in Ojibwe, Namebini-giizis, is a sign of respect and thanks for the help namebin offers to the Anishinaabe in this difficult time.

Ogaa or walleye is a staple of the traditional Anishinaabe diet for many reasons. Fish is a very nutritious food that is high in protein and low in fat. A low fat diet lowers the incidence of high cholesterol, obesity, diabetes, and cardiovascular disease. Ogaa is an especially good source of the mineral selenium, an antioxidant needed for a healthy thyroid and immune system, and vitamin B12 which helps form healthy blood cells and is crucial to proper brain function.

Unfortunately, fish harvested by the tribes may contain contaminants from past or present pollution, such as mercury. However, the amount of mercury in fish can vary greatly from lake to lake and depends on the size and species of fish. The human body is able to deal with a certain amount of mercury over time, but if a person eats fish with high mercury levels over a long period of time, mercury may accumulate to a high level in the body. Women of child-bearing age should exercise extra caution when consuming fish that contain mercury. Mercury at levels too low to harm the mother can cross the placenta to the fetus, negatively affecting brain development. Similarly, children also need to limit their mercury exposure due to their smaller bodies and still developing brains.

GLIFWC's mercury program focuses on ogaa since they are the most frequently consumed fish by tribal members. Additionally, they tend to have higher levels of mercury than other types of fish because they are higher on the food chain. But, tribal members, including women of childbearing age, can continue to eat ogaa if they are careful to minimize their mercury exposure by eating smaller ogaa and eating ogaa from lakes that contain less mercury. These lakes can be found on GLIFWC's mercury maps.

In addition, non-predatory fish like adikameg (whitefish), agwadaashi (sunfish), or asaawe (perch) will have lower levels of mercury and are another tasty choice for limiting exposure to mercury.

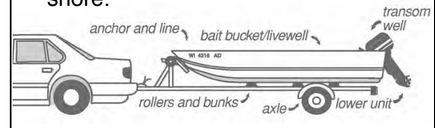
This spring GLIFWC will be sampling walleye from traditionally harvested lakes and continue testing the amount of mercury in them in order to update GIS maps with recommended monthly consumption advice. The new maps will be available in early 2012. GLIFWC will also be sampling from additional lakes in 2012 for another set of updates with those maps becoming available in 2013.

The current GIS maps' monthly fish consumption recommendations can still be used for this year's harvest and can be found at *www.glifwc.org/Mercury/mercury.html*.

Help prevent the spread of aquatic exotic plants and animals

BEFORE Launching...
BEFORE leaving:

- **Remove** aquatic plants and animals.
- **Drain** water away from boat landing
- **Dispose** of unwanted live bait on shore.



Zebra mussels and Eurasian water-milfoil have been found in the waters of Mille Lacs Lake. Zebra mussel populations have grown quickly. Their abundance in 2009 has risen significantly since 2005 when they were first detected. Properly cleaning your equipment prevents the inadvertent spread of invasive species to other waterbodies.

On the cover

A snapping turtle, or mikinaak, prepares a nest adjacent to a rural Sawyer County, Wisconsin road. Watch out for turtles crossing the road this spring and summer. Mothers are often looking for high ground to lay eggs in May and June.

If possible and safe, give them a hand crossing the road, but always move them in the direction they are going, or they will turn around and cross the road again. Move large snapping turtles by holding the rear of their shell or back legs. Do not pick them up by the tail. Also, watch for baby turtles crossing roads after the hatch. (COR)

Asemaa—A gift from the Creator

By Alex Wrobel
GLIFWC Forest Ecologist

Odanah, Wis.—The Great Lakes Ojibwe (along with various other nations) have long used asemaa (tobacco) as a symbol of respect and adoration for the Creator, and for each other. Asemaa is traditionally used as an offering, to give thanks for gifts, pay homage or to create an unspoken bond.

"To offer someone tobacco is to ask that you and the person receiving the tobacco be of one heart, one mind and one spirit. Tobacco is offered when you ask someone to do a ceremony for you, such as a name-giving, drumming or singing for someone, to do a smudging ceremony, a sweat lodge or sacred pipe ceremony; any ceremony. This signifies that you and the one doing the ceremony are of one heart, one mind and one spirit, that you have the same purpose." ***—Red Road Collective, The Four Sacred Plants***.

There are several ways asemaa can be used. It can be given as a gift, put in a fire, put in the water, placed at special places, or on a clean place on the ground to give thanks. However, the most common way of using tobacco is to smoke it in a pipe. It is believed that the rising smoke is a way to communicate with the Great Creator. Pure asemaa is commonly used in pipes; however, in earlier times, pipes were filled with "kinnikinnick." This can be a giniginige (mixture) of primarily dogwood, bearberry and tobacco and occasionally other plants.

Tobacco's genus *Nicotiana* contains 64 species, the most common of which are *Nicotiana tabacum* and *Nicotiana rustica*. Over time, some have come to misunderstand the significance of native asemaa because commercial tobacco has become a substitute for the traditional varieties. As this happens it has become more important than ever for Elders to begin or continue teaching the youth about sacred asemaa use and discouraging the abuse of commercial tobacco.

The best conditions for curing asemaa leaves is air-drying during the warm days and cool nights of early fall.

Growing asemaa

Growing asemaa generally requires a warm climate and well-drained soils; however, there is still the potential to grow your own if the right conditions are available. One of the more common forms of native asemaa, "*Nicotiana tobaccum*," is an annual herb that ranges from 1–2 meters in height. The plant consists of a large stalk with large and drooping leaves off the main stem. Flowers grow in clusters at the end of each branch and can vary from white to light red in color.

Tobacco seeds are best sown up to 50 days before the last frost. Sprinkle seeds on moist soil and allow between 6-10 days for germination (usually indoors) with the ability to be transplanted after 10 days. You will want to plant your seedlings in a "medium" soil with high sunlight and allow 2-5 months before it is ready to be harvested. The oldest and most common method of harvesting is to simply cut the stalk at the ground and spear onto sticks for curing.

Air-drying during warm days and cool nights of early fall are perfect conditions for curing asemaa leaves. It is during the drying (curing) process that the leaves begin to breakdown reserved nutrients from complex compounds into simple components that are more pleasant for the smoker. Because there are various ways to cure and prepare asemaa depending on your purposes, it is important to plan before you reach this stage in the process.

Growing asemaa can become a fun and traditional activity in Ojibwe families. These types of activities can also be used as an educational tool in understanding sacred asemaa use and tradition versus recreational and addictive tobacco use for Ojibwe youth.

Spring wild plant harvest: A family affair

By Charles and Shelly Gordon, for Mazina'igan

Red Cliff Reservation, Wis.—Even though winter is still trying to hold his ground, a few spring plants have been working hard to push through to greet the sun. After our sugarbush was done, we went in search of other forest treats. Every spring the wild leeks grow near Raspberry Bridge on the Red Cliff Reservation. This year our family watched the determined plants push through the snow. As if right on schedule, the leeks were ready for the harvest.

River Gordon readies to take a bite out of a wild leek. (Photo by Shelly Gordon)

For us, harvesting is a family affair. Happy to get out without our winter jackets and into the woods, we gladly offer our *Asemaa* in thanks and take only what we need. We use the wild leeks instead of onions from the store. Healthier and better tasting, the wild leeks we harvest are free of pesticides and not genetically altered in any way. Determined not to expose our five children to any more chemicals, we are grateful to these plants for the short time they are here.

Last fall an ethnobotany class (study of plants and their uses) was offered through the local college outreach site; the wonderful instructor shared a known location of wild ginger, so now we have yet another spring plant to gather, although ginger can also be harvested in the fall.

Not far from the leeks, our family set out to locate the wild ginger root. Ginger is a sprawling plant that lies close to the ground. It has heart-shaped leaves and a flower that looks like a bright purple star. Finding some, we once again gave our Asemaa and thanks. With a shovel we could dig under the root system and pull it up quite easily.

Wild ginger can be used to settle upset stomach, but if used in place of store-bought ginger, it can also be used to make wonderful cookies. We feel that little steps to break away from store-bought items are steps to a healthier way of life. We are also on the lookout now for wild asparagus, morel mushrooms, and the tasty fiddleheads as spring progresses into summer. Our family treasurer hunt through the local woodland store continues. It's a great family activity, gets us outside, provides good exercise and nutritious, locally-grown delicacies to enjoy.

Ma'iingan News Briefs

Wisconsin wolf population count

The Wisconsin DNR recently released a preliminary estimate for the late winter/early spring ma'iingan (wolf) population in the state. The 2010/2011 count, made when the population is at its lowest level in the year, came in at approximately 825 animals in over 200 packs. This figure is more than 100 animals higher than the previous year. Nearly 40 of these wolves are considered to reside primarily on tribal lands. Roughly 670 were found in the northern part of the state—generally within the ceded territory—with the remainder occurring outside the ceded territory in the "central-sands" region of the state.

The state also reported paying nearly $204,000 in wolf damage payments in 2010, more than double what was paid in 2009, and 50% higher than was paid in the previous highest year (2008). Depredations were confirmed on 47 farms (compared to 28 in 2009), with the biggest losses being to cattle. A total of 24 dogs were killed and 14 injured; most involved hunting dogs, but five (5) of the deaths and 10 of the injuries occurred to pet dogs near homes. Non-lethal abatement methods were attempted at 10 farms. Roughly 13% of the wolf packs in the state were involved in pet or livestock depredations.

Congressional delisting of western wolves

The see-saw battle over wolf delisting in the western population was largely brought to a close April 15, when the federal budget bill was passed with a rider that removed most of the wolves in this population from protection under the Endangered Species Act.

The first ever Congressional action to remove a species from Act protection essentially restored a 2009 delisting rule that was rejected by the courts, who had ruled that wolves could not legally be separated along state lines. The action delists wolves in Montana and Idaho—which contain significant populations—as well as the small number of wolves existing in Washington, Oregon and Utah. Wolves in Wyoming—which were excluded from the original delisting proposal because of inadequate protection in the existing state plan—remain listed. The budget rider specifies that the re-issuance of the 2009 rule "shall not be subject to judicial review."

In Michigan, House Resolution 48 was passed, and Senate Resolution 39 has been introduced, requesting Congress to similarly delist wolves in Michigan.

Federal western Great Lakes delisting proposal published

A new proposal to delist wolves in the western Great Lakes region is expected to have been published by the time this issue of the *Mazina'igan* has gone to press. Information on the proposal will be available at from the US Fish and Wildlife Service regional website at: *www.fws.gov/midwest/wolf/*.

—By Peter David, GLIFWC Wildlife Biologist

Digging up old lake stories

Researchers find information in the mud

By Sue Erickson, Staff Writer

Fond du Lac Reservation, Minn.—Mix freezing weather, ice, snow, a brisk breeze with water and thick, muddy slime, and you have a concoction that results in the task of taking core samples from lake bottoms in the northland's mid-winter.

That's what a number of Fond du Lac staff and students, ranging from middle school through college, were up to on Naawonigami (Mid-Portage) aka Jaskari Lake last March. Along with scientists from the University of Minnesota (U of M), they set out across the lake's frozen surface to obtain samples of the lake's bottom on Saturday, March 5.

Who would want to do that and why? Well, Tom Howes, Fond du Lac (FDL) Natural Resources Program Manager thinks it's a great thing to do because the core samples of lake sediment reveal the long-term history of the lake. Many of the northern lakes were formed about 10,000 years ago, he says. Reading the layers of sediment that compose core samples is like reading a story from a book, but you must have the expertise to take the sample correctly and to interpret it.

That's where Dr. Amy Myrbo with the U of M's LacCore laboratory comes into the picture. Through a grant with the National Science Foundation, LacCore has been able to collaborate with the Fond du Lac Band in a five-year program that samples three lakes each year, incorporating students from the Fond du Lac Tribal and Community College (FDLTCC) and U of M's National Center for Earth Surface Dynamics (NCED)-sponsored "gidakiimanaaniwigamig" and "manoomin" projects into the whole process. Locally, the project is called "nanda gikendaasowin naawij gaa-izhiwebakin manoomin zagaa'iganiing" (Studying what happened out in the wild rice lakes).

Jessica Heck, LacCore scientist, and student Wayne Greensky Jr. prepare to sink a D-tube into Naawonigami Lake. (Photo by Sue Erickson)

Students and staff all lend their hand to push a D-tube into the mud bottom of Naawonigami Lake in order to obtain a core sample. The study seeks to establish the history of manoomin's presence in the lake. (Photo by Sue Erickson)

In fact, six different groups of students have participated in sampling expeditions over the last two winters. While some are out in the field, others are taking science classes at the U of M's forestry compound on the FdL Reservation. Along with the winter camps, the project provides summertime research camps for the younger students and research internships for tribal college students. Now in the second year of the project, Howes says the Band is interested in the story of wild rice in the sampled lakes. "In the short term we hope to learn how to improve our management for wild rice, but we will also be looking at how things have changed over long periods of time."

In the short term, the Band hopes to learn more about the watershed that supports the wild rice lakes. Ninety years ago the watershed was drastically altered by the creation of a drainage ditch network. The Band is extremely interested in conditions in the rice lakes prior to the drainage network. By long term, scientists are talking about thousands of years of information within these core samples.

Information such as the nutrient levels, depth, the type of plant community, forest composition, and water chemistry are elements that can be revealed about the life of a lake through a core sample. Other events such as drought, fire or climate change can also be discerned, Howes says. All these events are able to have a date assigned to them by using lead 210 and radiocarbon dating of the cores.

Taking core samples involves a process of sinking a long cylinder about 1.5 meters long and seven centimeters in diameter into the lake's sediment. Designed to capture the ooze in place, the cylinder, called a D tube, is lifted to the surface once it's filled. Marking the depth where the first tube left off, another tube is sunk to where the first one concluded. This process continues until a hard-to-puncture, sandy, gravelly layer is hit at the bottom of the lake's bed. At that point it would be difficult to go further.

The operation is a messy one. As mud-splattered scientists and students lift the tube from the lake, water splashes up, and someone must quickly cap the bottom of the tube to prevent the mud from running out. This is a barehanded feat—cold and slimy. The whole coring tube is covered in mud and must be cleaned before being laid gently aside.

Two different locations were sampled in Naawonigami Lake that afternoon, with seven samples from one location and three from the second location closer to shore. Fond du Lac and LacCore staff had been out the day before and taken samples as well, so the holes drilled with the students were on a specific transect across the lake.

Retrieving the samples was pretty much an all day task, but a bag lunch on the ice and a few moments to sit on whatever might be available broke the day.

(See Looking for clues, page 22)

Dr. Amy Mybro and Jessica Heck, both of the University of Minnesota's LacCore Laboratory, open one of the core samples taken from Naawonigami Lake so students can look for preserved life forms in the Fond du Lac Resource Management's new laboratory. (Photo by Sue Erickson)

Wayne Greensky, Jr., (left) Greenway High School, and Connor Houle, AlBrook High School, run samples of muck extracted from Naawonigami Lake through a series of sieves, searching for evidence of life forms that once characterized the lake and its surroundings. (Photo by Sue Erickson)

Premier manoomin water suffers from carp surge

Biologists study, work to restore Upper Clam Lake

By Charlie Otto Rasmussen, Staff Writer

Siren, Wis.—Several hundred acres of wild rice, or manoomin, vanished from the shallow water of Upper Clam Lake in northwest Wisconsin in just a handful of years. Research biologists have a pretty good hunch why: a carp population explosion.

Common carp are notorious for uprooting and eating aquatic plants. During recent interagency fisheries surveys on Upper Clam, assessment crews witnessed a dramatic spike in carp numbers that mirrored the manoomin decline.

"A rice crop failure isn't uncommon. But after consecutive years we began gathering data and consulting with the DNR and University of Minnesota," said Anthony Havranek, St. Croix land & water resources manager. "Other area wild rice lakes were on a normal schedule. Something was happening on Clam Lake."

Specialists from the St. Croix Tribe, Wisconsin Department of Natural Resources (DNR), Great Lakes Indian Fish & Wildlife Commission (GLIFWC) and Freshwater Scientific Services are collaborating on the investigation. A fishery survey conducted last year revealed that 90% of sampled carp were born in one remarkable year: 2005. That same year, biologists learned that adult panfish numbers—especially bluegill—had bottomed out.

"It appears that the loss of bluegill and other fish populations allowed carp to expand rapidly. We think an event like a large panfish winter-kill could be responsible. Those fish that usually ate carp eggs just weren't around," said Havranek.

When it came to evaluating the results of a manoomin exclosure experiment, carp impacts on Clam Lake vegetation were clear. Inside a fenced plot—essentially a cage designed to keep fish out—technicians planted wild rice seed just after the ice melted. Making frequent visits over the summer and early fall, researchers witnessed healthy manoomin development in all its stages within the exclosure. Where the abundant carp population had free reign, however, wild rice didn't have a chance.

"It was an oasis of incredibly dense rice," said Havranak. "Beyond the exclosure, little or nothing grew. The contrast was off the charts."

Recovering a great lake

Even with four consecutive crop failures beginning in 2007, Clam Lake still leads all Wisconsin waters in manoomin output over the past twenty years. It's also the most heavily harvested lake in the 1837 ceded territory.

"Clam Lake is a jewel among the state's manoomin waters," said GLIFWC's Peter David, biologist and wild rice expert. "In terms of significance to both state and tribal ricers, there isn't another lake in Wisconsin you can compare it to. We know carp have had a major role in the decline of some historical rice waters in the southern part of the state, but this is alarming not just for Clam, but that it might be a bellwether for other northern waters."

Working with a contractor, resource managers launched carp removal operations in late January when the exotic fish schooled-up in large numbers. With help from the radio transmitters that St. Croix environmental staff surgically implanted in carp in fall 2010, technicians located a likely concentration of fish near the west shore. Small submarines guided seine nets underneath the ice near a sawed-out, rectangular hole of open water. When the net was pulled, however, submerged debris snarled the haul, allowing most of the carp to escape. Only 54 were removed from the lake.

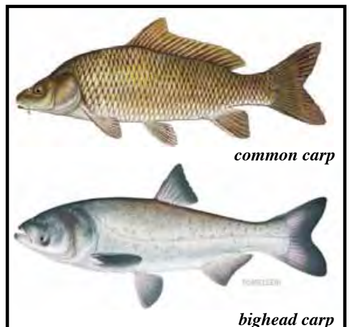
St. Croix Tribal Environmental Services staff with a load of common carp netted from Upper Clam Lake, Wisconsin (Burnett County) on January 25. Biological samples—including ear bones, or otoliths—were later removed to evaluate the age and health of the fish. From left: Tom Frye, wildlife technician; Jamie Thompson, fish & wildlife technician; and Anthony Havranek, land & water resources manager. (Photo by Charlie Otto Rasmussen)

Wild rice sprouts from an experimental exclosure on Upper Clam Lake. Protected by submerged fencing, carp cannot access the interior of the exclosure. The rest of the lake is stripped of vegetation—notably manoomin—where a very large carp population has dominated the lake since the mid-2000s. (Photo by Andy Havranek)

A mid-April netting attempt near the mouth of the Clam River produced better results with approximately 2,300 carp captured. Havranek said biological staff marked and released 500 fish with a fin clip to assist with upcoming population estimate efforts. The contractor took the remaining fish to markets where carp are a valued food fish.

"I think we've only seen a small percentage of what's in the lake," said Havranek. "This project will continue developing this year and beyond until we can restore balance to the lake."

DNR fisheries teams are scheduled to conduct comprehensive assessments on Clam Lake in 2011, including electrofishing and fyke netting survey methods. Havranak said removal efforts will start up again this coming winter.



common carp

bighead carp

Introduced as a gamefish, common carp have lived in ceded territory waters since the late 1800s. Established populations of the more destructive bighead and silver carp are not known to exist in Ojibwe Country. (Photo credits: common carp—dnr.state.md.us; bighead carp—Michigan Sea Grant)

Electrofishing surveys

(Continued from page 3)

collected during these surveys allow biologists to assess the health of the adult walleye populations: healthy populations generally have adult densities of above three walleyes per acre and have multiple year-classes contributing to the spawning population.

Crews from Mole Lake, St. Croix, and the U.S. Fish and Wildlife Service will worked in conjunction with GLIFWC to complete the survey work. Additionally, surveys on Pelican Lake, Oneida County, and the Chippewa Flowage, Sawyer County, were cooperative efforts with the WDNR.

N'miigwetchwaanaami (for the rice we give thanks)

Manoomin Management Plan being drafted

By Lisa David, GLIFWC Manoomin Biologist

Odanah, Wis.—A Joint State/Tribal Wild Rice Management Plan is in the works—a plan that will be the product of collaboration between the tribal ricers and representatives, state biologists, and the Great Lakes Indian Fish & Wildlife Commission (GLIFWC). This will be the first-ever comprehensive, joint state/tribal plan addressing the management of manoomin. Taking on the task of writing the plan is a wise course of action to preserve and responsibly manage the rice resource in our northern sloughs, back bays, lakes, and rivers.

Historically, rice was more prominent on the northern landscape. The combined effects of water level manipulation, changing weather patterns, and increased recreational pressures on northern water bodies have contributed to a reduction in wild rice acreage. However, this slender annual grass continues to play a vital role in Ojibwe culture, feeding both the physical and the spiritual needs of the Anishinaabe.

The development of the management plan is made possible by a recently awarded Great Lakes Restoration Initiative grant to work on several issues relating to wild rice. Awarded to GLIFWC and titled *Ceded Territory Wild Rice Protection and Enhancement*, the grant focuses on wild rice work in the 1837 and 1842 Wisconsin ceded territories.

Currently, plan writing is underway with GLIFWC Wildlife Biologist Peter David taking the role of lead author with direction from the Tribal Wild Rice Committee and the Joint State/Tribal Wild Rice Committee. The thought is that a joint management plan, covering the Wisconsin ceded territories, would improve management capabilities and increase protection over all of the rice in the state of Wisconsin, which is presently estimated to be 5,000–6,000 acres on approximately 325 sites.

This manoomin management plan will be unique in that it will be an example of cooperative management between the tribes and the state—starting with both parties having a hand in the plan's drafting. In the past, rice was managed mostly at the local level. But now, with a wild rice management plan adopted by the state and individual tribal governments, there can be a more cooperative effort leading to a landscape scale perspective of the manoomin resource.

Working with the two wild rice committees, GLIFWC has been able to gather ideas from rice chiefs, ricers, and tribal, state and federal natural resources staff on what the plan should address. Although not a comprehensive literature review of wild rice, the manoomin management plan will definitely act as a comprehensive management guide, ultimately providing direction and serving as a reference tool for natural resource personnel as they develop and implement their programs.

Photo by biskakone.

The plan will endeavor to cover a wide array of topics related to the rice resource. To date chapter titles include: Introduction and Background; Ecological and Cultural Significance; Range and Taxonomy; Ecology and Life Cycle; Historic Abundance; Harvest Information; Threats to the Resource; Regulation Review and Possible Rule Changes; Management Methodologies and Restoration Strategies; Information and Education Needs; Research Needs; Site Specific Recommendations; Beaver Control Strategy; and lastly, Implementation Strategies.

In addition to writing the Joint State/Tribal Management Plan the manoomin grant has four other objectives aimed at increasing and protecting rice acreage. Grant work will produce a series of GIS maps to evaluate rice distribution and also evaluate potential seeding locations. GLIFWC staff are also reviewing and commenting on Wisconsin Department of Natural Resources permitted activities that may affect rice abundance in the ceded territory. And lastly, GLIFWC Biological Services staff is coordinating with GLIFWC conservation officers to offer education and outreach to youth on the different aspects of harvesting manoomin.

GLIFWC looks forward to watching the management plan process unfold and hopes all come to the table to work together toward the preservation of manoomin beds.

N'miigwetchwaanaami (for the rice we give thanks).

Free camping on National Forest campgrounds while exercising treaty rights

Through an agreement between participating GLIFWC member bands (Bad River, Bay Mills, Keweenaw Bay, Lac du Flambeau, Lac Vieux Desert, Mille Lacs, Red Cliff, and Sokaogon (Mole Lake)) and the Eastern Region of the U.S. Forest Service, members of the participating Bands exercising their treaty rights may camp for free and without length of stay restrictions for most campgrounds in the Chequamegon-Nicolet, Ottawa, Hiawatha, and Huron-Manistee National Forests.

Some fee-exempt campgrounds (especially those that are busy) still maintain a 14-day length of stay restriction between June 15 and August 15. This provision is periodically reviewed to ensure that these restrictions are not interfering with the exercise of treaty rights.

For free camping on National Forest campgrounds you must:

1. Be a member of a band that has ratified the Tribal/USFS Campground Agreement.
2. Obtain a tribal camping permit through your tribal registration station or GLIFWC.
   - Your registration station or GLIFWC will use the newly adopted online permitting system (*glifwc.nagfa.net*)
   - You will be issued a "license" and a "tag"
     - —The license will include all information on all permits that you have obtained. This license is to be kept on your person while camping.
     - —The tag will include information including the National Forest and your desired length of stay. This is the document that you will use in lieu of payment at the campground of your choice.
3. Follow the camping registration procedures at the campground. Generally, this involves providing information requested on a registration form or envelope. Place your camping "tag" in the envelope and place the envelope into the fee tube.
4. Follow all campground rules and regulations found in the tribal rules.

There is generally no limit on the number of camping permits a person may obtain. However, you will only be allowed one permit per time period.

Be aware of possible illegal activity in forest

Last fall the Chequamegon-Nicolet National Forest (CNNF), in cooperation with an interagency enforcement action, eradicated approximately 70,000 marijuana plants that were cultivated by a large drug trafficking organization. These grow sites were located on National Forest lands and were first reported by a hunter.

The illegal activity of growing and harvesting marijuana on public lands is expected to continue. The safety of the public and employees is the top priority for the Forest Service.

National Forest and other public lands are being used for these illegal operations as they are often vast, uninhabited acres the growers find have the right conditions for their illegal operations. Typically planting occurs in the spring and the plants are harvested in late summer.

These marijuana growers are dangerous and are known to carry firearms. The CNNF asks that visitors be aware of their surroundings and know what to do to remain safe. Knowing how to recognize grow sites is vital.

Indicators of illegal marijuana grow sites include:

- Isolated tents in the forest where no other recreational activity is present
- Garden tools, bags of fertilizer, and large amounts of garbage
- Signs of cultivation/soil disturbances in unlikely areas
- 1- to 2-acre cleared areas with stumps up to approximately three feet tall

If you encounter a site, or unusual circumstances you should take these actions immediately:

- Leave the area as quickly and quietly as possible
- Do your best to know your location by use of landmarks or waypoints
- Notify local law enforcement authorities, if on National Forest you can also notify the local ranger district office.

Authorities will continue to work to decrease this unlawful and damaging activity. Your assistance is important to help stop marijuana growing in your National Forest.

(Reprinted from the Ashland Daily Press, May 6.)

Traditional knowledge meets the computer age

Mapping project extended to native plants

By Steve Garske, GLIFWC Invasive Plant Specialist

Odanah, Wis.—Indigenous people have relied on plants for food, clothing, shelter, and medicine throughout most of human history. Their quality of life depended in part on knowing where hundreds of plant species grew and how they could be used. These plants not only provided for people's physical needs, but also helped shape their culture and world view. The Ojibwe were no exception to this rule, relying on many species of plants for ceremonies and for day-to-day living.

The way things were (and sometimes still are today)

Springtime was a time of celebration and ceremony for the Ojibwe, as bands gathered into camps to make maple sugar and syrup. Sweetgrass (*wiingashk*) flowers reappeared, followed by the long summer leaves which were used for basketry, braids and as ceremonial incense. Cedar (*giizhik*) branches and leaves were used as incense and as a medicine, and cedar bark was used for constructing lodges. Birch (*wiigwaas*) bark was used to build durable canoes, baskets and other containers, and for construction as well. Wild rice (*manoomin*) was (and still is) a tasty staple food, harvested just as the long winter was approaching.

Northern cedar provided the Ojibwe with medicine and construction materials. It is still widely used and respected today. (Photo by Steve Garske)

Fruits and berries were picked in season, starting with Juneberries (*gozigwaakominag*), followed by black, pin, and chokecherries (*ookweminan, bawa'iminaan*, and *asaweminan*, respectively), Canada honeysuckle (*ozaawaaskaned*) berries, strawberries (*ode'iminan*), currents (*zhaaboominan*), raspberries (*miskominag*), blackberries (*odatagaagominag*) and thimbleberries (*datgaagminan*), blueberries *(miinan*) and cranberries (*mashkiigimin*) nannyberries (*atiteminan*), highbush cranberries (*aniibiminan*) and hawthorn (*miinensag*) "berries." (And this doesn't even cover them all!) Many of these fruits were dried and stored for winter.

Many of these familiar plants continue to be widely used and appreciated today, by Ojibwe and non-Ojibwe people alike. But the Ojibwe once relied on a host of other plants as well.

Arrow-head tubers or "duck potatoes" (*waabiziipiniig*) were a major source of food for tribes in the Pacific Northwest (who called it *wapato*), and an important food for the Ojibwe as well. Anyone who enjoys fishing or swimming is probably familiar with this plant. With its arrow-shaped leaves and attractive white flowers, *waabiziipin* is a common sight along lakeshores and in slow-moving rivers and wetlands. It's a well-kept secret, though, that *waabiziipin* produces edible tubers that can grow to the size of a smallish potato and are just as tasty and even more nutritious!

To enjoy them you often have to get wet and a little muddy, as the tubers usually grow under at least six inches of muck in up to six feet of water. (They can sometimes be harvested with a rake from a boat, but this technique is usually much less effective.) Once gathered, you need to peel off the hard outer layer, and the starchy tubers are ready to cook. Found across the continent, *waabiziipin* was an important food for tribes across much of North America.

When it comes to versatility of uses, the common cattail (*apakway*) is hard to beat. The spring shoots are edible, as are the green, unripened male flowers (the top section of the "cattail"). The abundant fuzzy seed hairs are great for padding and insulation. The underground lateral shoots are excellent cooked or raw. When peeled, dried, and ground, the underground rhizomes can be processed into flour. The ripe, golden pollen also makes a delicious flour that is very high in protein. The Ojibwe wove cattail leaves into durable mats for the sides of wigwams.

You may have noticed loose clusters of bright-red branches about three–four feet tall, brightening the otherwise dull brown wetlands this time of year. These are the branches of red-osier dogwood (*miskwaabiimizh*). Traditionally the branches and twigs were used to make baskets and dream catchers. They were also sliced into small pieces and mixed with tobacco, bearberry, and sometimes other plants to smoke as kinnikinnick.

Bearberry (*apaakozigan*) is a low shrub that often grows in sandy pine forests and barrens. An infusion of *apaakozigan* bark was used to treat poison ivy, while an infusion of the roots were used (along with other plants) as a wash for sore eyes. *Apaakozigan* leaves were smoked to cure a headache, and the berries used as a seasoning for meat.

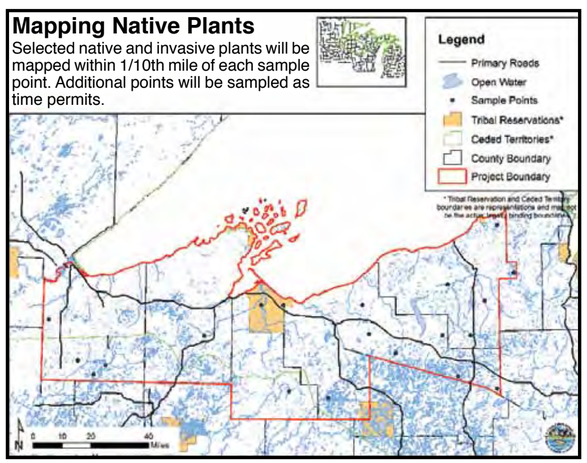
The Ojibwe used many other plants as well. Sumac (*apaakwaanaatig*) was used for everything from pipe stems and maple syrup taps to juice, made from the bright pink flower clusters. (This tart juice, which closely resembles lemonade, is delicious!) White ash (*baapaagimaak*) was used for baskets and snowshoe frames. Willows were used to make hunting bows. The tough, stringy bark of basswood (*wiigob-atig*) was used for lacing, baskets, twine and animal snares. Even the now-unappreciated Canada goldenrod (*giiziso-mashkiki*) was valued. *Giiziso-mashkiki* flowers were used for yellow dye, and the insect larvae that form winter galls on the stems were used for bait. Pitch from evergreen trees was processed by boiling, to separate it from bark and other debris. Mixed with pulverized cedar charcoal, it then made an effective glue and sealant for canoes and other items. This is just a small taste (pun intended) of the variety of uses which the Ojibwe and other Native American tribes found for native plants.

The Ojibwe of long ago would likely be quite shocked at what has become of their world. Many of the plants they relied upon have declined significantly in abundance. Except for white-tailed deer, most wildlife species are found at a small fraction of their former abundance, victims of relentless development and habitat loss. Climate change threatens to strand many native plants in conditions unsuitable for their long-term survival. Invasive species (including earthworms, plants, and plant pests from overseas) continue to spread across the landscape and take their toll.

So where are the distributions of native and invasive plants likely to overlap?

As reported in the *Niibin* 2009 issue of the ***Mazina'igan***, GLIFWC was in the process of constructing species distribution models for a number of invasive plants in northern Wisconsin. Thanks in part to a US Environmental Protection Agency (EPA) grant, GLIFWC is now expanding this project to encompass the western Upper Peninsula, and to include native as well as invasive plants.

After reviewing interviews with Ojibwe Elders and talking with other tribal members familiar with these plants, we have settled on a list of about 40 native plants that are culturally and/or economically important to the Ojibwe people. This summer we will be gathering occurrence data for as many of these plants as possible across six Lake Superior counties, from Douglas County in northwest Wisconsin east to Ontonagon County, Michigan. Along the way we will gather occurrence data for selected invasive species as well.



Plant species often vary greatly in how much light, water, soil nutrients, and warmth they need to survive. Some species do well rooted in thick leaf litter, under high, dappled shade. Others do well in dry roadside gravel or high rock outcrops, and would quickly die if they somehow ended up in the forest. Some prefer wet swampy conifer forest, while others thrive in pine barrens. Only a relative handful of plants can survive in the nutrient-poor environment of an acid peat bog. By matching GIS layers containing data on various environmental conditions with known occurrences of these species of interest, maps can be produced showing **(See Mapping native plants, page 22)**

Significant drop in lake trout catch using modified gill net

By Bill Mattes, GLIFWC Great Lakes Biologist

Gay, Mich.—GLIFWC's Great Lakes Section staff deployed over 10 miles of gill net in an area of Lake Superior known locally as Black Point flats near Gay, Michigan. Gill net was set to determine if modifying gill nets can reduce lake trout catch while maintaining whitefish catch.

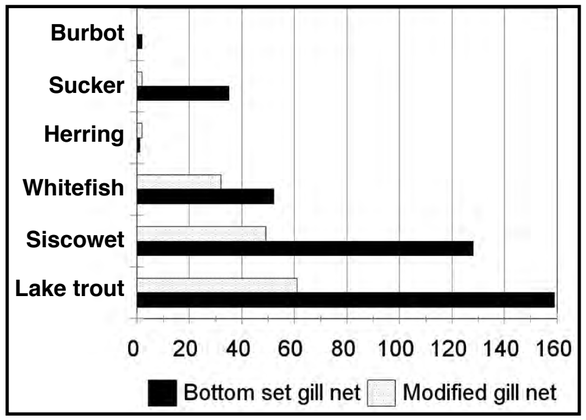
Modifications raise the bottom of the gill net off the bottom by four feet, while the rest of the net remains the same. By opening up the bottom of the net, fish closely associated with the bottom can swim past the net freely even as fish that are swimming up off the bottom are captured.

In other areas of the Great Lakes modified gill nets, or "lag-nets," are already being used by commercial fishermen. In northern Lake Michigan where zebra mussels and dying algae foul the bottom of the lake, the lag-nets serve a dual purpose. They not only keep nets away from being fouled by zebra mussels and algae but also allow for a greater whitefish harvest.

As with all gill net fisheries in the Great Lakes, the Lake Michigan tribal fishery has a quota for lake trout—only a limited amount can be harvested. By reducing lake trout harvest in gill nets, the amount of gill net fished for whitefish can be increased.

Preliminary results from the Great Lakes Section's work indicates a significant reduction in catch rates of lake trout and a non-significant reduction in catch rates of whitefish as a result of gill net modifications. These results are consistent with finding by other researchers using similar gill net modifications.

Nets were set in November 2009 (10,800 feet), June 2010 (10,800 feet), July 2010 (16,200), and October 2010 (16,200 feet). More lake trout were captured in the standard bottom-set gill nets (N=287) versus the modified bottom-set or "lag" gill nets (N=110). Catches of whitefish were much lower in the area, which is a known lake trout area, where 52 whitefish were captured in the standard bottom-set gill nets versus 32 whitefish captured in the modified bottom-set or "lag" gill nets (see graph).



Protection of Lake Superior basin critical to tribes

By Jennifer Burnett GLIFWC Great Lakes Outreach Specialist

Odanah, Wis.—Tribal efforts to implement on-the-ground projects and become more involved in intergovernmental initiatives to restore and protect Lake Superior have been given a dynamic boost through Great Lakes Restoration Initiative (GLRI) grants. In order to coordinate efforts and discuss various tribal projects that work in conjunction with the Lake Superior Binational program, representatives from tribes and tribal organizations met on March 16 at the Northern Great Lakes Visitors' Center near Ashland, Wisconsin.

The Binational Program to Restore and Protect Lake Superior is an international program made up of tribal, state, provincial and federal governmental agencies from the United States and Canada to protect the Lake Superior basin's ecosystem. The Binational Program produces the Lake Superior Lakewide Management Program (LaMP) that identifies the most effective and urgent ways to protect the lake's ecosystem. Since the GLRI, which is overseen by the U.S. Environmental Protection Agency, funds projects that contribute to the environmental sustainability of the Great Lakes, coordination between the Binational Program and GLRI is a natural.

A common theme brought forth by tribal spokepersons was the desire to be proactive and protect the Lake Superior basin. Indian tribes do not want to wait around for environmental harm to occur and then have to restore a damaged ecosystem later.

GLIFWC's GLRI grants are performed on behalf of its member tribes to address a variety of environmental concerns in the ceded territories. GLIFWC also works with other governmental agencies through the Binational Program and other Great Lakes initiatives for Lake Superior basin restoration and protection within the ceded territories.

Some GLIFWC projects are a part of the Great Lakes Binational Program and include developing information about the potential impact of proposed mining projects in the ceded territory and within the Lake Superior basin. Mining impacts are a significant concern expressed by tribal representatives.

Another area of focus for GLRI grants is to combat invasive species in the Great Lakes ecosystems. Through a GLRI grant, GLIFWC is currently working on a risk assessment, studying the threat invasive plant species pose to native plant species in the Lake Superior basin, especially plants that have cultural significance to the Anishinaabeg. This project will determine which native species are most at risk of being outcompeted by non-native invasive species and the areas where non-native invasive species are most likely to gain a foothold. Once the areas are identified, early detection and rapid response efforts can be put into place.

Yet another area benefitting from a GLRI grant that targets wetland and habitat restoration is GLIFWC's wild rice program. Under the grant, GLIFWC will use GIS mapping to evaluate wild rice distribution for inclusion into the state/tribal management plan. Several objectives under the grant also aim to increase protection of wild rice stands through management as well as increase acres of restored and reseeded rice beds while also developing and implementing an educational outreach strategy.

GLIFWC's mercury consumption advice grant is also funded through the GLRI. GLIFWC will test the level of mercury in fish such as walleye, lake trout, whitefish, cisco, and siscowet this spring. The test results will be compared to previous levels in order to update GIS maps and consumption advice for mercury-contaminated walleye. Monitoring the levels of mercury in fish also monitors the mercury level in a lake, which is important for the GLRI goal of cleaning up toxics in the Great Lakes basin.

Participants in the March 16 meeting included tribal representatives from the Bad River Natural Resources Department, Lac Vieux Desert Environmental Department, Keweenaw Bay Natural Resources Department, 1854 Treaty Authority, Red Cliff Environmental Department, and GLIFWC.

Grandmothers' Gathering for Gitchigaaming 2011 community event

This summer 50 elder women will again gather for four days and three nights during the 2nd Grandmothers' Gathering for Gitchigaaming retreat on Madeline Island, August 11-14, 2011. There will be a free public opportunity to meet and listen to the grandmothers on Saturday, August 13, at 12:30 at the Madeline Island Music Camp. Everyone is welcome.

The Grandmothers' Gathering for Gitchigaaming is a completely non-profit event organized by local volunteers. Elder women, including Margaret Behan, one of the International Council of 13 Indigenous Grandmothers and Josephine Mandamin from Thunder Bay, are coming from many parts of the country to pray for the well-being of Lake Superior, which holds 10% of the world's surface fresh water.

An edited DVD has been created from the 2010 Grandmother talks and can be ordered as an educational resource on the importance of water. For more information email: *ggg2010LN@yahoo.com* or call 218-879-2288.

A fix for zebra mussel invasion on the horizon?

The invasive, trouble-causing zebra and quagga mussels are uniquely susceptible to native bacteria, *Pseudomonas fluorescens*, according to researcher Dr. Daniel Molloy, New York State Museum. The bacteria are worldwide in distribution and are present in North American water bodies. In laboratory trials these bacteria do not affect other mussels, nor do they affect fish and wildlife, but zebra and quagga mussels die en masse when exposed to unnaturally high concentrations of the bacteria.

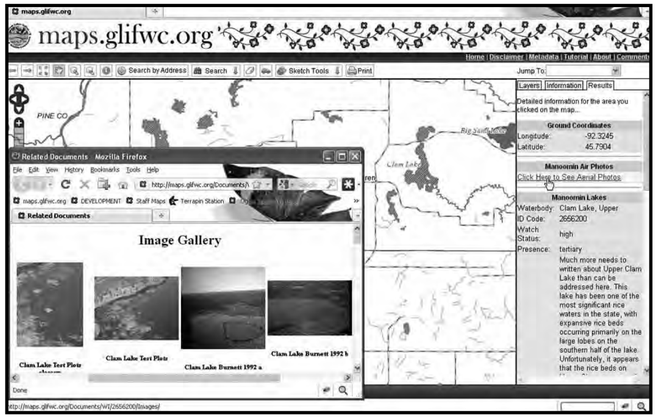
Currently, Marrone Bio Innovations in Davis, California is working to produce "Zequanox," a trademark-named biological control agent. Field trials are expected to begin later this year at power generation plants. It is unknown at this time the extent to which this new-found biological control agent may be used in open lake and river systems.

Currently, its effectiveness has only been tested in controlling mussels within power plant pipes, but it does appear to be another promising tool in the fight against the invasive zebra and quagga mussels.

—Bill Mattes, GLIFWC Great Lakes Biologist

Intern helps improve GLIFWC mapping site

By Jeffrey Schmitz, GLIFWC Mapping Intern

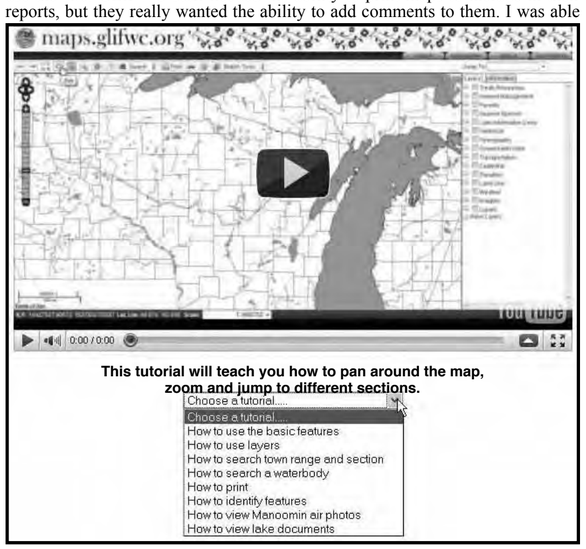


Madison, Wis.—Developing GLIFWC's resource mapping site—*maps.glifwc.org*—and making it more user-friendly has been my job since last June when I joined GLIFWC staff as an intern. The mapping site is a great tool to help people visualize various aspects of treaty resources used by GLIFWC member tribes. For example, go to the map site, pick a lake in the ceded territory, and a few clicks will reveal information about the *ogaa* (walleye) or *manoomin* (wild rice) as well as harvest information.

I was originally interested in the project because I had done previous web development and mapping with the National Wildlife Health Center and really enjoyed developing these skills while helping out worthwhile projects. I am a computer science student finishing my degree from the University of Wisconsin at Eau Claire. I love to find areas where people and technology interact and make those interactions easy and enjoyable. For example, when I first started working on the website, we had a large collection of air photos of manoomin lakes, but there wasn't an easy way to view them. Now, we constructed the site so when you click on a lake, you get a link to a gallery of photos associated with that lake. This makes it simple enough so that anyone can use the map site to view the photos.

Some of the other added features aren't as easy to use, so a tutorial section was developed. Step-by-step videos walk you through the use of these more difficult features.

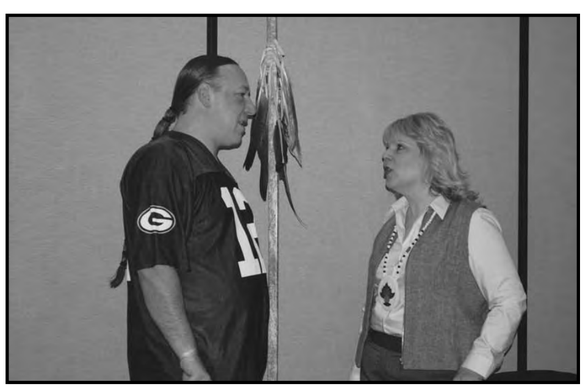
After the summer was over I returned to school but continued to work for GLIFWC remotely on the site. After speaking with my professor about GLIFWC's projects, he suggested I use this opportunity to earn internship credit. Throughout the semester we developed various project goals to assist the various people who use the site. GLIFWC staff needed the ability to print maps to include in their reports, but they really wanted the ability to add comments to them. I was able to write some code that allows their comments to be printed right on the map so they don't have to add it separately.



One of the most difficult issues with online mapping is having a huge amount of data to display, while needing to display it quickly. The website needs to be relatively fast so that it is enjoyable to use. I went to work figuring out what could be done to speed things up under the hood. Our site is built on an Open Source piece of mapping software known as GeoMoose.

Since it is Open Source, anyone can look at how it works and change it as they please. I was able to find an area of the code to modify, so that the load time was nearly cut in half. I sent this fix out to some other users on the mailing list to use as well. Recently, I received an email from the lead developer on the Open Source project saying that he would like to include my code into the next official release of the software. I was very excited to find out that some of my work while with GLIFWC was going to go back into the Open Source project that we have been using.

I look forward to continuing to work on this project and improve upon this excellent website. Meanwhile, give the site a try. Go to *www.maps.glifwc.org* and check out all the neat information available there.



Cathy Stepp, Wisconsin Department of Natural Resources secretary, chats with GLIFWC Board of Commissioners Chairman Mic Isham prior to a February Voigt Intertribal Task Force at meeting at Lac du Flambeau. The meeting with the Task Force provided an opportunity for tribal representatives to dialogue with the newly appointed Secretary. (Photo by Sue Erickson)

New *Voigt* case stipulation filed with federal court

By Kekek Jason Stark
GLIFWC Policy Analyst

Odanah, Wis.—GLIFWC and the Wisconsin Department of Natural Resources (WDNR) recently announced a number of updates to the court-approved tribal regulations that govern Ojibwe treaty reserved rights in Wisconsin's Ceded Territory.

The changes were filed with the federal court on March 15, 2011 as an amendment to the final judgment entered in *Lac Courte Oreilles Indians v. State of Wisconsin,* most commonly known as the *Voigt* case and became effective immediately upon filing.

Over the past several years, WDNR staff, the six plaintiff Wisconsin Chippewa bands and GLIFWC staff have been meeting to find the areas in which both sides agree that changes to the Voigt Code are appropriate. Modifications reflect changes on the landscape over the last 20 years that have enhanced opportunities for both state and tribal harvesters. For the most part modifications relate to changes in deer hunting regulations, trapping issues, the wild turkey hunt, and gathering.

"It was an excellent collaborative process governed by our shared goal of assuring robust, diverse resources now and for future generations," said WDNR 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.

Many of the modifications represent an increase in the level of shared knowledge and cooperation between the WDNR and GLIFWC staff.

"We have twenty plus years of good science and data that the parties have utilized and relied upon," said Mic Isham, GLIFWC Chairman and member of the Lac Courte Oreilles Tribal Governing Board.

Both the tribes and the state view the result as a step forward in the way these issues are handled for all parties. "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.

Spring spearfishing season: A Lac du Flambeau perspective

By Abbey Thompson, for Mazina'igan

Lac du Flambeau, Wis.—"Sometimes when I look down into the water, it's as if somebody threw hundreds of dimes into a wishing well." Greg Johnson is a Lac du Flambeau (LdF) Tribal member and spear fisherman. "If the water temperature is right and the walleye are running on that lake, all you can see are eyeballs."

For the Ld F Tribe, spearing enforces a purpose and a discipline which benefits their entire community. Spearing and ogaa (walleye) are central to Ojibwe culture.

The traditions of spearing require rituals and respect for the water, which are deeply spiritual. They are the subject and inspiration of Ojibwe songs, stories, and artwork designs.

LdF is known as a very active Lake Superior Ojibwe band in terms of spearing. It is so important to the Ojibwe, that in 1837 and 1842 when the Ojibwe ceded millions of acres of land to the government of the United States, they explicitly reserved their right to spear within the treaties. The US Government had more interest in acquiring the vast timber and mineral resources at the time.

Spearing, pre-contact

To prepare for spearing, each man would pray and fast ceremoniously. Each had his own place to do this and devoted much time to spiritual readiness. They waited for the ice to break and for favorable weather conditions. They timed that night's activities so they would be out on the waters at night, spearing by torchlight, and be done by daybreak.

Paddling silently, two to a canoe, Ojibwe spearers studied the patterns of their quarry. They knew from experience what to expect. In the cold winds of early *ziigwan* (spring) they would patiently glide across the surface of the lakes beneath the black, starry sky. The torch mounted on the bow of the canoe lit the way.

LdF's name itself translates from French, and means "Lake of the Torches." The French missionaries described the sight of *ogichidaa* (warriors) spearing at night by torchlight "a sight to behold!"

The torchlight reflected light from the eyes of the fish, and from experience the spearers knew where to aim the spear—just a few inches behind the head. A hit in the flesh would mean holes in the fillets. Once an ogaa was chosen to spear, the fisherman would raise the long spear, aligning it with the target. The spear quickly pierced the flesh in a flash; the sharp ends usually went completely through the fish, against the rock or sand surface beneath the fish. In a large swooping motion, the fish would be hoisted from the water, tail thrashing, and dropped into the canoe. Accuracy was vital.

Lac Vieux Desert spearfisherman Louis McGeshick pulls a walleye from Lake Gogebic in Upper Michigan on a calm May 3 evening. High winds kept treaty fishermen away from landings at Gogebic days earlier. Safety concerns prompted mandatory landing closures on Minnesota's Lake Mille Lacs where winds gusted to 40 mph on May 1. (Photo by Charlie Otto Rasmussen)

Practicing an age-old tradition, Lac du Flambeau spearers hunt for ogaa (walleye). (Photo by biskakone Johnson)

The next step was to haul the fish to the shore for cleaning, a distance seeming longer because of the weight of the fresh fish now lying in a heap on the bottom. Songs eased the paddling. Songs welcomed the returning *ogichidaa* to shore and praised *Gitchimanidoo*, who made it all possible.

Spearing in the 21st Century

Assimilation brought changes to the method of spearing. Birch bark canoes were replaced with motor-driven boats, torches with halogen powered mining hats, metal spears replaced deer bone, and boat landings are lined with trucks and cars. Any songs heard come from car stereo systems.

Some things remain the same however; the strong ties to Ojibwe culture and gratitude to Gitchimanidoo for providing ogaa meat. *Asemaa* (tobacco) is offered before the boat leaves the landing. Walleye is so revered (it can be found on the menu in restaurants for as much as $30 per plate), and harvesting it still requires a great deal of time and energy.

Spearing still provides food for many elders and community members. Cleaning and storing it unites families for a few weeks of working together, and telling stories while they work. Exercising the right to harvest fish this way is one tangible way the Lake Superior Ojibwe prove their culture has survived a long, tumultuous journey.

LCO v. State of Wisconsin

The relationship between Ojibwe and fish is centuries old and also very recent. Spearing existed for millennia in this land area around Lake Superior, littered with freshwater lakes. After the long and bitterly cold winter months, the ice recedes and female walleye approach the shores to spawn.

(See Spearing traditions, page 23)

Lingering ice, high winds create tough conditions for spring harvest

Lingering cold and blustery weather challenged tribal fishermen taking to northern lakes to harvest walleye this spring. Whether it be with spear or net, late ice-out and windy conditions made tough going for the early part of the season.

Despite some less than favorable conditions, spearers in Wisconsin ceded territory lakes had a successful season. As of May 16, preliminary totals for walleye were 29,748 fish compared to 34,156, a record harvest in 2010. For muskellunge, preliminary figures show treaty fishermen took 210 from ceded territory lakes in comparison to 335 in 2010.

In Mille Lacs Lake the netting harvest of walleye was less than half the 2010 harvest. Heavy ice cover, high winds and a late ice-out hampered the season. Preliminary figures for the combined harvest of eight participating bands was 61,274 pounds of walleye from a quota of 142,500 pounds as of May 16. For northern pike in Mille Lacs Lake, preliminary figures show netters harvested 12,882 from a quota of 14,998 pounds.

In Michigan, preliminary figures show the Lac Vieux Desert Band took home 4,106 walleye during the treaty spring spearing season.

The St. Croix Band kicked off Wisconsin's off-reservation spring spearing season on April 14 on Burnett County's Lipsett Lake and Big Round Lake, Polk County.

At Mille Lacs Lake in Minnesota nets were set on reservation as early as March 17, but off-reservation harvest began on April 24 with spearing by Mole Lake/Sokaogon members. The following night on April 25 nets were set off-reservation by netters from Mole Lake/ Sokaogon, Red Cliff and Lac Courte Oreilles. The 2011 start-up lagged about two weeks behind the 2010 season's opener.

Sugarbush: The sweet gift from ininaatig

Passing on the knowledge

By Sue Erickson, Staff Writer

Mille Lacs Reservation, Minn.—Doug Sam can remember coming to this sugarbush on the Mille Lacs reservation as a kid to help his grandparents with the annual collection of maple sap, an Ojibwe rite of spring. In fact both of his grandparents ran their own sugarbush operations, so as a young boy, he wouldn't have had time to watch TV, even if there was one.

"I can remember my grandpa making me a special yoke across my shoulders so I could carry two buckets of sap at time," he relates as he watches two huge caldrons of maple sap steaming over a slow-burning fire at about the same spot in the rather massive maple stand, but decades later.

Today, Doug is joined by his nephew Wayne Boyd and Wayne's son Nakoya Keezer and Nakoya's wife, Reba LaFriniere. Sometimes Nakoya and Reba bring their four-year old son—making four generations around the fire at the sugar camp. Reba says she hopes to pass their big black kettle on to their son—keeping the tradition going.

Others also had trees tapped in the vicinity—the Mille Lacs Historical Museum, the Boys and Girls Club, some families. But years ago, the whole area was filled with tribal families, each working their own sugarbush operation in the maple stand, Doug explains. Now, not so many families still do this. It requires a lot of time, work, patience, and knowledge.

The sap is running strong on this day in early April. It had been running for about three weeks, but had been somewhat on and off, Doug says, with the weather fluctuating as it did from warming to a steady diet of cold days and nights. It takes freezing nights and warm days to get the sap flowing well, he says. This is when the old ininaatig (maple tree) gives most freely of its sweet gift. This camp uses a mixture of metal cans and the more recent blue plastic bags to collect the sap as it drips from wooden taps. You can see clear liquid sap dripping rather quickly into the metal buckets attached to rough-barked tree trunks beneath the taps. It didn't take long to fill them on this particular day.

Reba and Nakoya collect the sap in buckets and transport it to large plastic containers where it is stored until it can be boiled down over the fire.

The boiling is an all day process, requiring patience and steady tending. A stack of split wood is ready nearby to be fed slowly into the fire, piece by piece to keep the heat up just right. Doug, along with his assistant Fawn DeWitt, Red Lake, put up the split wood during the summer so it is ready for spring sugar time. Large logs lay parallel to the fire. Now pitted and charred from the heat, they actually help hold the heat into the central fire, Doug explains.

Just about to the boiling point, ziinzibaakwadwaaboo (maple sap) in one of two huge kettles at Doug Sam's sugar camp on the Mille Lacs reservation is about to become maple syrup. (Photo by Sue Erickson)

As the sap comes to a boil, Reba periodically skims the top foam, removing any extraneous debris. All the tools related to this sugaring operation are hand-made. Pine boughs also hang handy to grab in case the boiling gets too rapid. Swoops with the pine bough brushed across the top of the bubbling liquid help bring that boil under control.

Most of the trees tapped in this sugarbush are hard maple, which Doug indicates is preferred to the soft maple. It takes about 30 gallons of hard maple sap to make one gallon of maple syrup; whereas it requires about 40 gallons of soft maple sap to get the same gallon, he says.

Coffee is brewed cowboy-style over the campfire in a blackened pot, using fresh maple sap to make the beverage. A rather delicious, sweet warm drink results—an unusual sweet treat on a cool morning in the woods.

The relative calm and serenity of the operation is broken late morning when a busload of teenagers from the Robbinsdale School District's Native American Studies Program emerge from their bus to visit the little sugar camp in the woods. Failing to heed warnings about proper garb, some of the students wearing white tennies or sandals have a rude awakening in the oozy mud that's inevitably part of springtime in the woods.

Regardless, the young crew gather round the camp for a little education as Doug shares information about the process and the cultural importance of the sugarbush with the teens, who also were sent with buckets in hand to help collect sap from the surrounding trees.

The sugar camp actually welcomes visitors throughout the season, sharing the traditional knowledge that is so much a part of the camp. It's a sugar camp, but also a teaching camp. As Wayne noted, Doug is the real sugaring veteran, the master teacher at the camp; Wayne is an intermediate, having been at it for a few years; and Reba and Nakoya are new to sugaring. So it's matter of mentoring and sharing traditional knowledge, and that is why youth particularly are so welcome there.

Most of the sap will be boiled to make amber colored maple syrup—sweet and rich, delicious on pancakes and a wonderful ingredient in many recipes. But some will also be boiled way down to make maple sugar or maple cakes.

Years ago when storage was a problem for the Ojibwe people, the sap was boiled all way down to make maple cakes or sugar that could easily be stored and transported.

This takes a lot of careful boiling and vigorous stirring. Today, Doug brings the last of the process home to the kitchen for the finishing touches. Working with Doug as a mentor on a variety of cultural activities over the past six years, Fawn has developed her own expertise and also adds her own innovations to the process. One of these happens to be a nicely constructed devise for straining the boiled sap, further removing impurities to obtain a beautifully clear syrup as a final product. Doug deeply admires the product and appreciates the assistance. The two of them have been contracted by Mille Lakes Representative Sandra Blake to do all the cultural activities on the reservation, Doug relates. Their expertise is not confined to the sugarbush.

How the sweetness of maple sap was discovered

This is an account from the Iroquois. Doug Sam says there are several stories about the discovery of maple sap, but the Ojibwe stories can only be told in the winter and at night.

This account relates that maple sap was accidentally discovered by an Iroquois woman whose husband removed his tomahawk from a tree prior to going out on a hunt. A container below the gash where the blade had been embedded caught some of the flowing sap. Mistaking the liquid for water, she cooked the evening's meat in it. The sweet taste was so enjoyed that the people began collecting the "sweet water" from then on. Other accounts say the bucket was beneath a broken limb of a maple tree.

From maplemuseum.com and about.com/homecooking.

A galvanized can catches sap as it runs from a wooden tap set in ininaatig (maple tree). (Photo by Sue Erickson)

Doug Sam (sitting) talks about the sugarbush to group of teachers and students who arrived from the Robbinsdale School District for some hands-on experience with the process of making maple syrup. Students were put to work hauling in sap from the surrounding sugarbush. (Photo by Sue Erickson)

Making ziiga'igan (sugar cakes), Fawn DeWitt, assistant to Doug Sam, puts the warm sugar into molds to set. This is the final step after hours of boiling and stirring. (Photo submitted)

Getting around in the woods is just not as easy as it used to be for this veteran of the sugarbush, so a few short cuts and some assistance are definitely allowed. For the most part, Doug surmounts physical problems that would keep most people at home.

Swinging himself from vehicle to ATV and jouncing and bouncing his way to the campsite regardless of physical disabilities, he makes himself at home at the camp and continues to help by sharing his knowledge, his stories of times past and his hopes for times to come. Like the old maple trees that keep on giving each spring, Doug freely gives his gifts of wisdom and his life's experiences—all gifts to be respected and appreciated.

Sugarbush vocabulary

Ojibwemowin	English
iskigamizigan	sugar bush/sugar camp
ziiga'igan	sugar cake
ziinzibaakwad	maple sugar
ziinzibaakwadwaaboo	maple sap
nase'igan	granulated maple sugar
bigiwizigan	maple taffy
ininaatig or aninaatig	maple tree

Visitors to Porky's Sugarbush in Maple Plain, Minnesota are able to participate in the entire process of making maple syrup and sugar. In order to make maple sugar, very reduced maple sap needs to be stirred in a basswood trough while hot, so that cold air can crystallize the sap into sugar. (Photo by Jennifer Burnett)

Harvested maple syrup

When the maple syrup and sugar is done, Doug Sam and Fawn DeWitt have many ways to enjoy it.

Doug loves to add maple sugar to oatmeal, and also add the sap into pancakes, swamp tea, and onto frybread and cornbead.

Fawn likes to add the sisibaakwad (granulated maple sugar) to a stick of butter with a little honey and whip it until creamy and fluffy as a topping for frybread. Yummy!

She also likes to add maple sugar to a little melted butter and coat it over walleyes or salmon and grill.

Wild rice dessert: Adding maple syrup to wild rice is delicious too with little bits of fruit: diced apples, fresh blueberries, dried cranberries, diced strawberries, a squirt of lemon juice, a shake of cinnamon, chill for a few hours, serve cold and top with a little whip cream. Hurrah! You have delicious wild rice dessert!

Swamp Tea: It's always good at the sugar bush camp during the cold mornings to take some of the fresh sap that's been cooking for a few hours (not near syrup yet) , heat it over the fire and make swamp tea (or any tea you like). It tastes good, and you feel good too.

Cooking with maple syrup

Use ¾ amount of maple syrup as sugar if substituting maple syrup for sugar. You may also have to adjust the liquid by reducing liquid by 3 tablespoons for each cup of syrup used.

As a substitute for honey, it can be used on a one-to-one ratio.

Baking with maple syrup

If you are planning on using pure maple syrup in place of sugar in a baked recipe, use ¾ cup pure maple syrup for 1 cup of granulated sugar and reduce the dominant liquid in the recipe by 2-4 tablespoons for each cup of maple syrup used. Add ¼ teaspoon baking soda and reduce the oven temperature by 25 degrees. Keep in mind that using maple syrup in place of sugar will give a brownish tinge and also cause the baked goods to brown more quickly due to the high sugar content. (*Vermontmaple.com*)

(See page 19 for Maple Sugar recipies and nutritional values)

Full Circle Project

GLIFWC summer youth programs

By Heather Naigus, GLIFWC Youth Outreach Coordinator

Odanah, Wis.—Two unique and exciting summer camp experiences await interested youth this summer. GLIFWC, partnering with the United States Forest Service (USFS), the Hannahville Indian School, and Northern Michigan University's (NMU) Center for Native American Studies, is excited to announce our 2011 Cultural Summer Camp Programs: National Indian Youth Leadership Program (NIYLP) /Onji-Akiing and Science, Technology, Engineering, and Math (STEM). Deadline for accepting applications to the camps is June 3, 2011.

NIYLP/Onji-Akiing

5th and 6th graders
July 25—31

A collaborative effort between GLIFWC and the USFS, Onji-Akiing (From the Earth) is a cultural outdoor adventure-based camp that focuses on natural resource career exploration and treaty rights. This year Onji-Akiing is working with the NIYLP to bring a fuller, more enhanced opportunity to youth, so participants will get two programs within one week. This camp is held at beautiful Camp Nesbit, nestled in the heart of the Ottawa National Forest in Sidnaw, Michigan, also home to the calling loons of Lake Nesbit.

Leadership and service learning activities are important aspects of this program. Activities also focus on group cooperation and communication, problem-solving, self-confidence, physical exercise, spiritual growth, social skills, as well as respect and responsibility to self and community. Hands-on activities include a group obstacle course, high ropes course, fishing, archery, swimming, canoeing, GeoCache, and cooperative games.

Centered on the Medicine Wheel, this camp explores Native American traditional ways and traditional ecological knowledge, but also learning in the areas of forestry, biology and botany. Running from July 25-July 31, Camp Onji-Akiing caters to students going into 5th and 6th grades. Youth will work with staff from GLIFWC, USFS, and NMU. Transportation in specific areas will be provided. This camp is free of charge.

STEM

7th and 8th graders
June 20—July 1

The STEM Camp program includes the same Camp Nesbit experience as the Onji-Aking/NIYLP Program but extends further to give participants a taste of the campus life at Northern Michigan University in Marquette.

STEM has been created to develop specific competencies and skills in students who will assume leadership roles in the future. Students will be introduced to careers associated with STEM, and culture will be incorporated into campus sessions. While on campus, students will stay in dormitories, eat in dining halls, and use university facilities, such as science and technology labs and classrooms. Many recreational activities are provided as well. This camp caters to students going into 7th and 8th grade and takes place June 20-July 1. This camp is free of cost.

Both programs include fun recreational programs, nature walks, bonfires, warrior games, and many other activities. Please feel free to contact GLIFWC Law Enforcement Youth Outreach Coordinator Heather Naigus with any questions or concerns at hnaigus@glifwc.org or 906-458-3778. We look forward to spending our summer with you!!!

Learn to trap! GLIFWC Warden Roger McGeshick stationed at the Mole Lake/ Sokaogon reservation will be offering his Learn to Trap class again this year in August (see page 15). Above, McGeshick leads students down a river, teaching them techniques in determining trap placement and also checking set traps. McGeshick's class combines classroom-style learning with hands-on, outdoor experience. (Photo submitted)

Mckenzie Seymour (KBIC) meets the mental and physical challenge of high ropes up in the pines of the Ottawa National Forest. (Photo by Heather Naigus)

Summer Camp Registration Form

Lake Nesbit Environmental Center • Sidnaw, Michigan
GLIFWC/USFS application

Participant Name _____
Address _____
City _____ State _____ Zipcode _____
Email _____
Grade _____ Age _____
Tribe Affiliation _____(if none, leave blank)
Phone #( )_____

Place a check mark in the box of the camp you would like to attend:

☐ NIYLP/Onji-Akiing (5th & 6th graders)
☐ STEM (7th & 8th graders)

① Please attach another sheet of paper with a short essay (at least 100 words) on why want to attend the 2011 Camp Onji-Akiing (from the earth) or the STEM Camp at Camp Nesbit. Please include any special achievements, and how this camp might help you in school, your community, and with any life goals.

② Please attach one letter of recommendation from an adult, not related to you, about why they think you should attend the camp and will benefit from it.

③ Students are accepted on the basis of their essays, recommendations, and space availability. In the event you are accepted, you will be expected to sign a statement saying that you will participate fully in all activities and parents/ guardians will have to complete and sign health forms and permissions for all camp activities.

For questions or concerns, please contact:

Heather Naigus	or	Fred Maulson
906-458-3778		715-682-6619 ext. 113
hnaigus@glifwc.org		*fmaulson@glifwc.org*

Mail application, essay and letter of recommendation to: GLIFWC, Attn: Camp Registrations, PO Box 9, Odanah, WI 54861

Deadline for accepting applications is June 3, 2011

The busiest season for GLIFWC's Enforcement Division is spring when netting and spearing in Minnesota's Mille Lacs Lake occurs simultaneously with the spring spearing season in Wisconsin. Under gusty winds and a cold rain, these Red Cliff members pulled fish from Lake Mille Lacs on April 30. From left: Robert Benton, Steve Elmer (seated), Ross Benton, and Cathy Elmer. (COR)

Workshop teaches an ancient art: Tying a gill net

By Heather Naigus, GLIFWC Youth Outreach Coordinator

Marquette, Mich.—Did winter get long? Nothing to do? Not so in Marquette, where community members were treated to a weekend of traditional gill net making, a craft used for subsistence and commercial fishing.

Last January approximately 50 students, tribal members, and other community residents participated in a gill net workshop, where they sewed nets by hand while discussing the cultural history and ethics of subsistence and commercial fishing practices.

Northern Michigan University's Center for Native American Studies hosted the event on campus, in which GLIFWC officer Heather Naigus and Dan North offered education and instruction on this age-old, art of tying gill nets.

Tribes of the Great Lakes have used gill nets for hundreds of years to catch fish out of Gitchigami (Lake Superior) and ensure their survival. Historically, tribes of the region used birch bark canoes and nets made from twisted strands of willow bark. Today, most nets are made from monofilament or nylon and can take several days to construct.

GLIFWC wardens had participants measure out lead line and float line. Then the line was hung up and stretched out to allow for the attachment of the monofilament through a sewing process. Participants worked in teams, and 250 feet net was constructed over two days. One Northern Michigan University student found the process particularly soothing, stating, "There is a harmonious rhythm that I got lost in."

Some tribal members expressed interest in making their own subsistence nets after completing a gill net during the workshop, and others left with a new appreciation of this time-consuming skill.

The workshop will be followed up in the late spring/early summer with a net setting day, in which participants will learn how to clean and filet fish. The date for this will be announced. For information, please contact Heather Naigus at 906-458-3778, *hnaigus@glifwc.org.*

GLIFWC Warden Dan North demonstrates tying a gill net, then works with students as they try their hand at tying a net themselves. About 250 feet of net were produced during the two-day workshop presented by North and Warden Heather Naigus at Northern Michigan University's Center for Native American Studies. Plans are to also offer a net setting day in order to show students how to properly set a gill net. (Photo by Heather Naigus)

2011 GLIFWC enforcement youth activities/education

Class	Date	Location	Contact
Boating Safety	May 21-22	Lac Courte Oreilles	Mike Popovich (715) 292-7535 Jessica Gokey (715) 562-0177
ATV Safety	May 24-28	Bad River	Vern Stone (715) 292-8862
ATV/Snowmobile Safety	May 28-29	Red Cliff	Mike Soulier (715) 209-0093 Jim Stone (715) 292-3234
Hunter Safety	June 4, 11-12	Mole Lake	Roger McGeshick (715) 889-3200 Adam McGeshick (715) 490-0778
Youth Fishing Day	July 9	Mole Lake	Roger McGeshick (715) 889-3200 Adam McGeshick (715) 490-0778
Boating Safety	July 12, 15 & 16	Bad River	Vern Stone (715) 292-8862
Learn to Trap	August 6	Mole Lake	Roger McGeshick (715) 889-3200 Adam McGeshick (715) 490-0778
ATV/Snowmobile Safety	August 13 & 14	Mole Lake	Roger McGeshick (715) 889-3200 Adam McGeshick (715) 490-0778
Hunter Safety	August 25 & 26	Lac Courte Oreilles	Mike Popovich (715) 292-7535 Jessica Gokey (715) 562-0177
ATV Safety	September 9 & 10	Mille Lacs	Robin Arunagiri (715) 889-0734
Hunter Safety	September 11	Mille Lacs	Robin Arunagiri (715) 889-0734
Hunter Safety	September 12, 15 & 17	Bad River	Vern Stone (715) 292-8862
Hunter Safety	September 16—18	Red Cliff	Mike Soulier (715) 209-0093 Jim Stone (715) 292-3234
Trapper Education	October 15-16	Mole Lake	Roger McGeshick (715) 889-3200 Adam McGeshick (715) 490-0778

For updated information on these events and others please be sure to check our website at ***www.glifwc.org*** or visit us on **Facebook**.

GLIFWC's Vern Stone receives Outstanding Involvement Award

Veteran GLIFWC Conservation Officer Vern Stone received the "Outstanding Involvement Award" for hunter education instruction last January from the Wisconsin Department of Natural Resources. While Stone has been involved in hunter education programs for more than 15 years, the DNR award recognizes his first decade of service. Stone says that of all the outdoor safety courses he teaches—including boating, snowmobile, and ATV—the hunter course is his favorite. "Not only is it required to hunt off-reservation, it offers tribal members the opportunity to exercise their treaty rights in a safe manner." (COR)

Niibing—When it is Summer

Niibing, izhaa zaaga'iganing. Aanjigozi i'iw niibino-gabeshiwining. Gabeshi.
Onaagoshing boodawe. Waabang, goshkozi. Jiimaaning giigooyike.
Naawakweg, noodin, izhi-mawinzo. Abwe, wiisiniwin. Mawadisidiwag omaamaa dash wiin.
Niimi'idiwin o'ow. Miish niimid idash nagamod. Ayaan ziibaaska'iganagoode.
Ayaan bimoonjigan. Mino-bimaadiziwin. Gakina-awiiya ayaawag imaa.

(When it is summer, s/he goes to the lake. S/he moves to that summer-camp.
S/he camps. In the evening s/he builds a fire. At dawn, s/he wakes up.
In the canoe, s/he goes fishing. At noon, it is windy, thusly s/he picks berries.
S/he cooks on a fire, food. They visit with each other, him/her mother and him/her.
This is a traditional dance. And thusly s/he dances and s/he sings. She has a jingle dress.
He has a dance bustle. The Good Life. Everyone they are there.)

Bezhig—1

OJIBWEMOWIN
(Ojibwe Language)

Double vowel system of writing Ojibwemowin.
—Long vowels: AA, E, II, OO
Waabooz—as in father
Miigwech—as in jay
Aaniin—as in seen
Mooz—as in moon

—Short Vowels: A, I, O
Dash—as in about
Ingiw—as in tin
Niizho—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.

"She/He" VAIs—Verbs, Animate, Intransitive

Verbs do not take an object. Conjugate from root.
Gwaashwani.—S/he jumps.
Ningwaashwani**min**.—**We** jump.
Gwaashwani**wag**.—**They** jump.
Bagizo.—S/he swims.
Nimbagizomin.—We; Bagizowag. They
Agomo.—S/he floats. Nindagomomin.—We float.
Agomowag.—They float. Googii.—S/he dives.
Ningoogiimin.—We dive. Googiiwag.—They dive.
Dakwanjige.—S/he bites. Aamiwag.—They spawn.
Miigaazo.—S/he fights.

Niizh—2

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

A. Aamoog, Eya', makadewiziwag idaah waabishkiziwag.

B. Ezigaag. Babaamoodewag idash dakwangewag.

C. Oboodashkwaanishiiyag, odamwaawaan zagimen.

D. Ojiig, Babaamisewag. Mindigowag. Gaye agaashiinyiwag.

E. Inashke! Zagimeg dakwangewag. Gaawiin ninzaagi'asiig zagimeg.

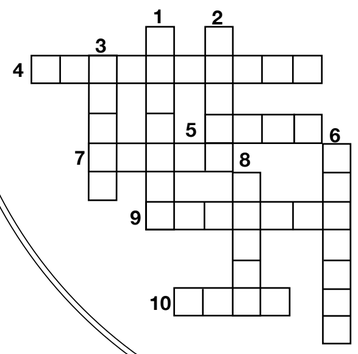
F. Asabikeshiiyag bi-izhaawag dash namadabiwag.

G. Giigooyag ozaagi'aawaan iniw moosen.

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

Niswi—3

IKIDOWIN ODAMINOWIN (word play)



Down:
1. S/he builds a fire.
2. S/he has it.
3. S/he goes.
6. mosquitoes
8. S/he floats.

Across:
4. S/he fishes.
5. S/he cooks on a fire.
7. S/he has it.
9. woodticks
10. this (inanimate thing)

Niiwin—4

Giigooyike.—S/he fishes.

Walleye (s)—Ogaa (wag)
Sturgeon (s)—Name (wag)
Northern Pike (s)—Ginoozhe (g)
Sunfish (pl.)—Agwadaashi (wag)
Crappie (s)—Gidagagwadaashi (wag)
Perch (pl.)—Asaawe (g)
Whitefish (pl.)—Adikameg (wag)
Bass (pl.)—Ashigan (ag)
Bullhead (s)—Awaazisii (g)
Sucker (s)—Namebin (ag)

–wag
Nin–....–min
Nim–...–min
–ag
–g

Goojitoon! Try it!
Translation below.

1. Ginoozhi_____ miigaazowag debibinadwa jiimaaning.
2. Namewag googii_____ zegiziwaad idash bakadewaad.
3. _____gwaashwani_____ idash gwaashwaniwag debibinadwa ingiw agwadaashiwag.
4. _____bagizo_____ zaaga'iganing. Aabawaa na?
5. Ashigan_____ aamiwag jiigibiig ziigwang.

Translations:

Niizh—2 **A.** Bees. Yes, they are black and they are white. **B.** Woodticks. They crawl and they bite people. **C.** Dragonflies they eat them mosquitoes. **D.** Flies. They fly about. They are big. Also they are small. **E.** Look! Mosquitoes they are biting people. I do not like mosquitoes. **F.** Spiders they come and they sit. **G.** Fish they love them those worms.

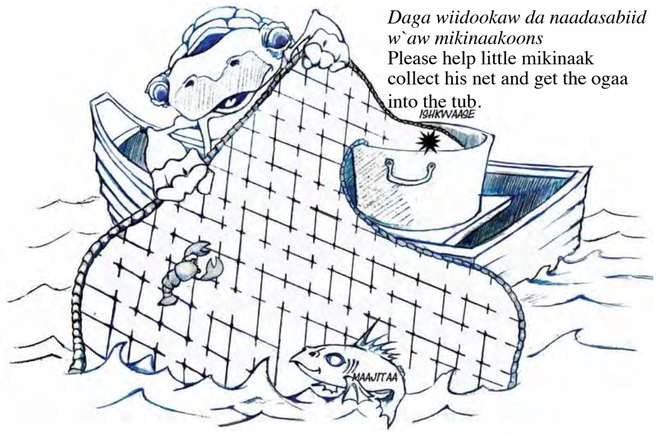
Niswi—3 ***Down:*** **1.** Bookawe **2.** Ayaan **3.** Izhaa **6.** Zagimeg **8.** Agomo ***Across:*** **4.** Giigooyke **5.** Abwe **7.** Ayaan **9.** Ezigaag **10.** O'ow

Niiwin-4 **1.** Northern Pike**s (g)** they fight when you catch them in the boat/canoe. **2.** Sturgeon **they** dive **(-wag)** when they are scared and when they are hungry. **3. We** jump **(Nin-...-min)** and they jump when we catch them those bass. **4. We** swim **(Nim-...-min)** in the lake. Is it warm weather? **5.** Bass **(pl.)** they spawn by the shore when it is spring.

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 transaltions 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.

Spring and summer brings lots of harvest fun

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



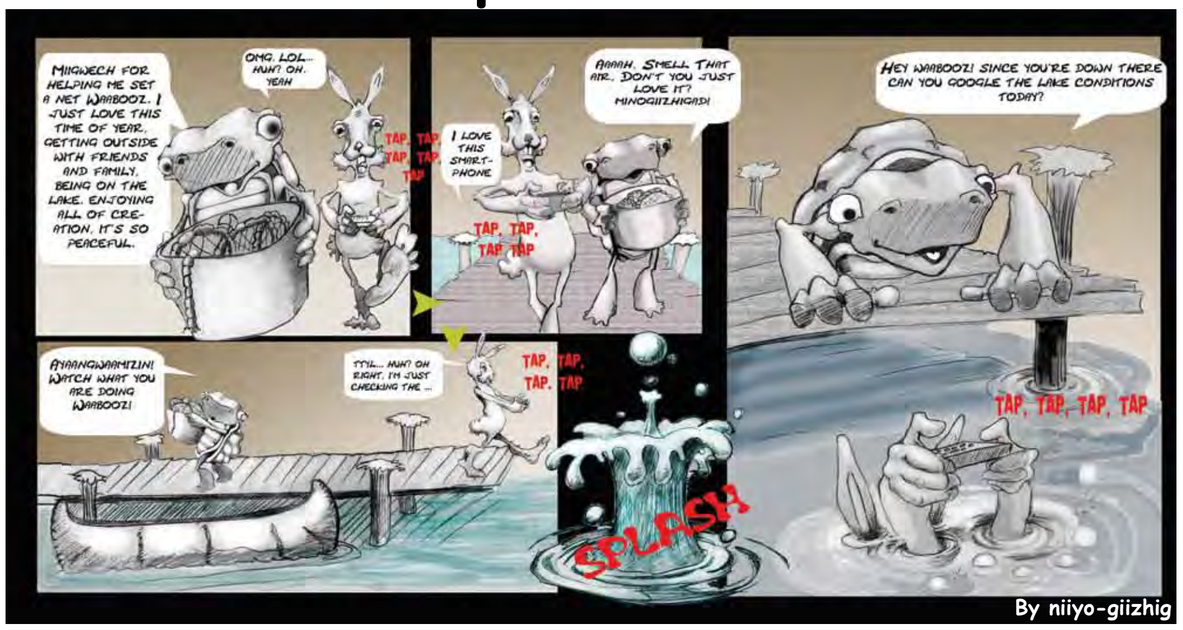
Daga wiidookaw da naadasabiid w`aw mikinaakoons
Please help little mikinaak collect his net and get the ogaa into the tub.

Circle the bolded word in the search-a-word to the left
Agoodasabii (s/he hangs up a net)
Anishinaabeg
Anit (spear)
Asaawe (perch)
Asab (net)
Asabike (s/he makes a net)
Asemaa (tobacco)
Bagidawaa (s/he sets a net)
Ezigaa (wood tick)
Fish
Giigoonh (fish)
Ginoozhe (northern pike)
Ininaatig (maple tree)
Iskigamiziganing (sugar bush)
Iskigamizige (s/he boils sap)
Jiimaan (boat)
Mawinzo (s/he picks berries)
Miskomin (raspberry)
Mizay (burbot)
Naadoobii (s/he collects sap)
Negwaakwaan (tap)
Niibin (summer)
Ogaa (walleye)
Perch
Spear
Tobacco
Treaty
Waasakonenjigan (lantern)
Waaswewin (spearing fish by torch light)
Waawaatesi (firefly)
Zagime (mosquito)
Zhiiwaagamizigan (syrup)
Ziigwan (spring)
Ziinzibaakwad (sugar)

Odaabajitoon nase` aawang-waan da-ziinzibaakwadooked wa`aw waabooz.
That rabbit is using a sugar trough to make sugar.

Mawinzo makoons. Ogichi-minopidaanan iniw miinan.
The bear cub is picking berries. She really likes the taste of those blueberries.

Smartphone berries



Red Cliff student wins "Minwaajimo" art contest

By LaTisha McRoy
ANA SEDS Project Coordinator

Odanah, Wis.—Congratulations go out to our "Minwaajimo" art contest winner, Eva Madeline Jean Pratt, a Red Cliff tribal member, for her pencil sketch of traditional Anishinaabe harvesting practices. Pratt, a Bayfield high school student, has won $600.00 and the honor of having her artwork featured on the cover of GLIFWC's future multimedia publication "Minwaajimo—Telling a Good Story: Preserving 25 Years of Treaty Rights," due for distribution in late summer of 2011.

Here is a complete list of winners:
1st—Eva Madeline Jean Pratt (Red Cliff)
2nd—Tashina Emery (Keweenaw Bay)
3rd—Jalyn LaBine (Mole Lake)
4th—Daniel Bressette (Red Cliff)
5th—Esiban Parent (Lac Courte Oreilles)

In early February, GLIFWC distributed over 170 posters to its member tribes, regional schools and Boys and Girls clubs to announce its art contest for tribal high school students. To qualify, the applicant had to be attending high school and enrolled in a GLIFWC member tribe.

High school students were challenged to create a 2-D art piece that represented one of the following themes: exercising treaty rights, community feasts, racial response to treaty rights, spiritual connection between the Anishinaabe and natural resources and intergenerational harvesting, processing. On April 7th in Keweenaw Bay, Michigan, Voigt InterTribal Task Force representatives judged and approved all winners for this art contest.

With the addition of Eva's artwork, the "Minwaajimo—Telling a Good Story" project is continuing on pace. Our Digital Media Operator Fawn YoungBear-Tibbetts, a senior at UW-Madison and White Earth tribal member, has been hard at work editing video and creating web page designs for our future "Minwaajimo" website.

To help in finalizing the "Minwaajimo" book, Attorney Howard Bichler, who served as lead attorney during the *Voigt* litigation, and Dr. James Oberly, historian, UW–Eau Claire have been brought on as consultants because of their experience and knowledge about Ojibwe treaty rights and their long-term relationships with GLIFWC. Bichler will be reviewing the symposium transcripts, and Oberly will be helping with book layout and content flow.

Once all materials are finalized, printed and packaged, project staff will be hosting eleven intergenerational workshops with each member tribe in late summer of 2011. Watch for posters in your community about a workshop close to you or visit us at *www.glifwc.org* for more information.

Eva Madeline Jean Pratt, a Red Cliff tribal member, won first place in the Minwaajimo" art contest for her pencil sketch of traditional Anishinaabe harvesting practices.

GLIFWC's Deputy Administrator Gerry DePerry presents Eva Madeline Jean Pratt with a check for her winning 1st place in the "Minwaajimo" art contest. (Photo by Charlie Otto Rasmussen)

GLIFWC's Administration for Native Americans (ANA) project staff attended the annual ANA grantees meeting in Washington DC January 19-21. GLIFWC's staff Wesley Ballinger, Dara Olson, Latisha McRoy, and Fawn YoungBear-Tibbetts pose in front of Olson's poster presentation of GLIFWC's Environmental Regulatory Permit Project. All 2nd and 3rd year grant recipients were required to make a poster outlining their specific projects. (Photo by Jim St. Arnold)

GLIFWC's Jim St.Arnold (center) transfers 500 Inaadiziwin DVD's to Bad River officials last January. GLIFWC Anishinaabe language program specialists distributed nearly 7,000 interactive Inaadiziwin DVDs to Commission member tribes through the middle of biboon, or winter. Dedicated to language speakers and tribal elders, the DVD preserves words and phrases used by generations of native people in the upper Great Lakes region. Tribal Historic Preservation Officer Edith "Bardo" Leoso and Bad River Chairman Mike Wiggins (pictured) accept the discs on behalf of the tribe. (Photo by Charlie Otto Rasmussen)

GLIFWC's latest ANA language project and staff were introduced to GLIFWC's Board of Commissioners during a January meeting at Lac Courte Oreilles (LCO). Pictured at an open house at LCO Ojibwa Community College are ANA Project Director Jim St.Arnold along with language assistants Michelle Defoe, Red Cliff; Michelle Goose, Leech Lake; Leora Tadgerson, Bay Mills; Levi Tadgerson, Bay Mills, and Project Assistant/Language Specialist Wesley Ballinger. (SE)

Ashiniswi giizisoog Dibaajimowini maawanji'idiwin, Thirteen Moons Storytelling Event draws a crowd

By Sue Erickson
Staff Writer

Sawyer, Minn.—Ojibwemowin was everywhere at the Thirteen Moons second annual storytelling event held March 19th at the Fond du Lac's Sawyer Community Center.

As you entered, you could hear the language from the continuously playing Ojibwe movie set-up in the far corner. You saw it on the red t-shirts of event workers and on the signs in Ojibwemowin that decorated row upon row of tables. You heard it in the opening pipe ceremony and again and again as stories and songs were shared throughout the afternoon.

Drawing over three hundred participants, the event highlighted both the Ojibwe language and a sense of community. Drawing young and old to share language, laughter and good food, the storytelling event definitely achieved a "feel good" status.

David "Niib" Aubid launched the storytelling with a Wanabozhoo and Ma'iingan story. Replete with wolf masks and fur cloaks, Niib acted out the story with the assistance of Dennis Jones. Drawing in participants from the audience as part of the wolf pack, Niib related events in Ojibwemowin and translated to English. Poor Wanabozhoo got into all kinds of trouble when he wanted to become a wolf but didn't want any hair on his arms or legs. Wanabozhoo had much to learn from Ma'iingan!

Wanabozhoo popped up in several stories during the afternoon. Rick Defoe combined the traditional with the contemporary in a Wanabozhoo baseball story. Wanabozhoo joined a baseball team and was lucky enough to crack the ball a good distance. His teammates yelled to him "Run home! Run home!" So that's what Wanabozhoo did—he ran to his home!

Of course, once Jim Northrup took the microphone, people were kept in stitiches as he reeled off a series of jokes about both shinaabs and chimooks. "What do shinaabs say at Halloween? Boo …zhoo!" or "How can you tell a novice ricer? He's using a kayak!" "How many schinaabs does it take to change a light bulb? Six—one to do the job and five to sing the light bulb changing song."

In all, about sixteen presenters entertained through the afternoon with music, stories, readings and historical accounts.

Meanwhile, in the background a silent auction organized by Pat Northrup enticed folks with a beautiful array of items to bid on. Raising money for the summer language immersion camp, Northrup's spread of goodies ranged from books and DVDs to handcrafted moccasins, jewelry and original artwork.

Concluding with a feast and a raffle drawing for a quilt, the event ended as it began—on a positive note. Participants were full—full with good food, good thoughts, good stories, good friends.

Chi-miigwech to event organizers and 13 Moons staff David Wilsey and Nikki Crowe!

David "Niib" Aubid drew the audience into the action as he related a story about Wanabozhoo and Ma'iingan and acted out several episodes.

Liz Jaakola leads the Anishinaabe Singers in several songs during the Thirteen Moons Storytelling Event at Fond du Lac's Sawyer Center in February. (Photos by Sue Erickson)

Organized by Jim Pete, storytelling also happened at Red Cliff in February, drawing about thirty people to this first time event at the bingo hall. Above Leonard Moose entertained the group with a traditional story. He and his wife, Mary, traveled north from central Minnesota to participate.

Zhiiwaagamizigan (maple syrup)

Crisp Edged Maple Oatmeal Cookies

6 Tbsp. butter
½ cup Maine maple syrup
1 tsp. grated lemon rind
1 egg
1 c. minus 2 Tbsp. all-purpose flour
¼ tsp. salt
½ tsp. baking soda
pinch of allspice
½ cup rolled oats (not instant)

Sift or thoroughly stir together the flour, salt, soda, and allspice. Cream the butter, then beat in the syrup, lemon rind, and egg. Stir in the dry ingredients, then the oatmeal.

Drop by teaspoons on a lightly buttered baking sheet and spread flat with a knife blade. Bake in a preheated 350° F oven for about 10 minutes, until the edges are well browned, then cool on wire racks.

Centers will remain slightly cakey, edges will crisp as they cool. Makes about 3 dozen.
*(Reprinted from mainmapleprocu*cers.com)

Maple Indian Pudding

3 cup milk
¾ cup maple syrup
½ cup cornmeal
1 Tbsp. butter
½ tsp. cinnamon
½ tsp. salt
¼ tsp. ground ginger
¼ tsp. nutmeg
2 large eggs, beaten
Whipped cream (optional)

Prepare pudding: Preheat oven to 350º F. Lightly coat a 1-quart casserole dish with cooking spray. In a large saucepan, bring milk to a boil over medium heat. Reduce heat to low, stir in maple syrup, and cook 4 minutes. Add cornmeal and cook, stirring constantly, 6 to 8 minutes

Add butter, cinnamon, salt, ginger, and nutmeg while stirring well. Remove from heat and let cool 5 minutes. Whisk eggs into the milk mixture until well *combined.*

Bake pudding: Pour into prepared casserole dish and bake until the center is set, about 1 hour. Serve warm and top with whipped cream, if desired.
(Reprinted from countryliving.com)

Nutritional value per 100 g (3.5 oz)

Energy	1,093 kJ (261 kcal)
Carbohydrates	67.09 g
Sugars	59.53 g
Dietary fiber/Protein	0 g
Fat	0.20 g
Thiamine (Vit. B1)	0.006 mg (0%)
Riboflavin (Vit. B2)	0.01 mg (1%)
Niacin (Vit. B3)	0.03 mg (0%)
Pantothenic acid (B5)	0.036 mg (1%)
Vitamin B6	0.002 mg (0%)
Calcium	67 mg (7%)
Iron	1.20 mg (10%)
Magnesium	14 mg (4%)
Manganese	3.298 mg (165%)
Phosphorus	2 mg (0%)
Potassium	204 mg (4%)
Zinc	4.16 mg (42%)

Percentages are relative to US recommendations for adults. Source: **USDA Nutrient database**

GLIFWC employee count up by five

Wardens, data manager & outreach specialist join the ranks

By Mazina'igan staff

Keeping track of the data

GLIFWC's new fisheries data manager, Kia White, Bad River tribal member, was raised in the "GLIFWC ranks," her father, Ed, being on GLIFWC's staff as a fisheries technician for twenty-five years. So, GLIFWC's programs were very familiar to her when she joined the staff last February.

Kia began entering data into various databases, including wild rice harvest information and data from the long-term understory plant study. However, the onset of the spring spearing and netting season put her to work processing the daily influx of numbers that accompany these intensely monitored harvest seasons. She will be responsible for entering data from the spring, treaty spearing and netting seasons and ultimately generating harvest reports on each of those seasons.

The 2011 spring spearing and netting season, fast-moving and intense, quickly immersed her into the task of receiving and recording all the nightly/daily information coming in from open landings throughout the ceded territory.

While Kia received a diploma from Brown College, Mendota Heights, Minnesota in massage, much of her work experience prior to GLIFWC was actually in accounting and business management, working as an auditor and in hotel management in River Falls, Wisconsin.

Kia lives in Ashland with her significant other, Patrick Hmielewski, and their three-year-old son Marquinn and four-month-old daughter Danika. Given some free time, Kia enjoys cooking and baking, but also outdoor activities like hunting, fishing and hiking.

Outreach specialist targets mercury, mining, Lake Superior issues

Jennifer Burnett joined GLIFWC staff on February 28 as the Great Lakes Outreach Specialist, a three-year position funded through the Great Lakes Restoration Initiative. Jennifer, whose great, great grandfather is the renowned mail carrier John Beargrease from Grand Portage Band of Chippewa in Minnesota, grew up in Detroit, Michigan.

However, she moved to Minnesota to attend the University of Minnesota and graduated with a Bachelor of Arts degree in American Indian studies and the Ojibwe language and a Bachelor of Science degree in biology.

While attending the university, she also was employed as at teaching assistant under Professor Dennis Jones.

Jennifer will be providing information on mercury in fish and safe fish consumption in tribal communities and also working on outreach education relating to sulfide mining and Lake Superior management issues. She will also be contributing articles to the Mazina'igan and helping with some GLIFWC informational booths.

Currently residing near Bessemer, Michigan, Jennifer enjoys participating in pow-wows as a jingle dress dancer. She is currently making a new jingle dress outfit and is learning beadwork. In her spare time, she also likes to read, just relax and hang-out.—*(SE)*

Sandy Lake ceremonies tentatively set for July

Sandy Lake ceremonies are tentatively slated for July 27 at the US Army Corps of Engineers Recreational Site on Big Sandy Lake. This date awaits approval at the May Board of Commissioners meeting.

Please check GLIFWC's Facebook page and website at *www.glifwc.org* or call (715) 682-6619 for confirmation and further details. Traditionally, a noon ceremony and feast follow a paddle across Sandy Lake as we remember the Ojibwe ancestors who perished during the Sandy Lake tragedy in 1850.

Mikwendaagoziwag (They are remembered).

Enforcement recruits attend training

Following thirteen weeks of training alongside state recruits, three additional GLIFWC conservation officers are scheduled to be field-ready in summer 2011. Lauren Tuori, Steven Amsler and Matthew Kniskern come to GLIFWC with impressive credentials. And for all three, working in the outdoors is a must.

Matthew Kniskern

Marquette, Michigan native Kniskern served in the US Marine Corps for five years including a 2004 tour in Iraq. After an honorable discharge Kniskern returned home, attending Northern Michigan University where he earned a degree in Native American Studies. Kniskern then added a second major, Zoology, which he's near completing. Raised in an active hunting and family, Kniskern says working in conservation enforcement is an excellent fit with his interests.

Lauren Tuori

Tuori arrives in the ceded territory with a catalog of experience that dovetails nicely with the work of the GLIFWC Enforcement Division. She acquired law enforcement skills with the Alaska Wildlife Troopers; resource management know-how as an Alaska state fisheries biologist; and holds certification in emergency medicine and wildfire fighting. A University of Massachusetts Environmental Sciences graduate, Tuori shares a home near Mason, Wisconsin with GLIFWC's Sara Moses and a three-legged malamute, Trouble.

Steven Amsler

Steven Amsler has been on track for a law enforcement career since leaving his hometown, Brooklyn Park, Minn. At the University of Minnesota-Duluth, he earned a degree in Criminology and Anthropology. Amsler went on to Fond du Lac Tribal and Community College, acquiring a certificate in Law Enforcement. Whether hiking, camping—or just about any competitive outdoors sport—Amsler, wife Ann Marie, and the family dog Bailey stay active year-round.

The newly minted GLIFWC wardens are scheduled to report to field training officers after basic recruit graduation in late June. Amsler, Kniskern and Tuori will tackle advanced training with GLIFWC and state specialists for an additional 39-weeks, while engaging in ceded territory enforcement duties.—*(COR)*

Chief Derek Nepinak from Pine Creek First Nation addresses the Voigt Intertribal Task Force. Nepinak and a delegation of Canadian natives journeyed to northern Wisconsin to meet with area Ojibwe leaders and GLIFWC staff December 2-3. Three first nation representatives from Manitoba's Treaty Four region participated in a VITF meeting at Turtle Lake and toured GLIFWC offices. The visit followed a call from Canadian government authorities interested in negotiating the scope of reserved rights with first nations, rather than leaving the matter to the courts. Longtime GLIFWC friend and supporter Tobasonakwut Kinew, from Ontario's Ojibways of Onigaming reserve, led the delegation. (Photo by Charlie Otto Rasmussen)

Youth camp highlighted outdoor activities, sharing culture

By Heather Naigus, GLIFWC Eastern District Warden

Odanah, Wis.—Youth from three states gathered in Lac du Flambeau this past January for a weekend winter camp program that explored the beauty of different cultures. GLIFWC partnered with Ernie St. Germaine and former Intercultural Leadership Initiative staff to host this event that brought folks together from University of Wisconsin–LaCrosse, Milwaukee, Red Cliff, the Western Upper Peninsula, Lac du Flambeau area, and elsewhere to experience the fun and learning that winter has to offer.

Adventure-based workshops, instructed by GLIFWC law enforcement officers, centered on Native American traditions and connected participants with the outdoors. Trapping, wildlife identification, spearing through the ice, and fire-starting were only a few activities offered that got kids excited to be out in the winter season. "The snow shoe race was my favorite," stated Kolton Houlton, an eighth grade Navajo youth camper. "Also, it is amazing how easy it is to make snowshoes out of branches, and they can save your life." Youth were treated to survival snowshoe-making and then raced in teams on modern versions.

Although the days were bitterly cold, smiles shined on young faces as they grew closer through a variety of fun activities and Flambeau-cooked food. Each evening after dinner, participants played traditional games and participated in an ethnic talent show, where each camper performed, drawing upon their culture, including Native American, Mexican, Asian, African, and Australian.

Maranda Maulson, Lac du Flambeau, explained the significance of the jingle dress she made, and Skyler Dakota, a Cherokee youth from Marquette, Michigan, performed a Cherokee song with his hand drum. Youth from Somalia presented a traditional dance from their village, historically used for celebration but now used for war. They explained that this dance was bittersweet to perform for this reason, but must not be forgotten because of its cultural significance. They added that when they perform this dance, they try to remember the happiness it once held.

The winter camp drew in youth in grades 9th-12th and will take place next year with Ernie St. Germaine in Lac du Flambeau. GLIFWC will expand winter camp in 2012 to Michigan, where it will be held in the Baraga area. For information, please contact GLIFWC Officer and Youth Outreach Coordinator Heather Naigus at *hnaigus@glifwc.org*.

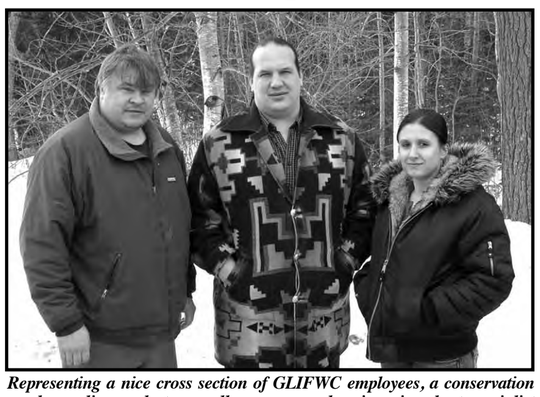
Learning to spear fish through the ice. (Photos by Heather Naigus)

In order to "feast" the new "Our Stories" language project, Wesley Ballinger, Kekek Jason Stark and Neil Kmiecik prepare pipes and other ceremonial objects. The upcoming project is special because staff will be collecting and documenting stories and teachings of traditional and cultural knowledge that at times may be rooted in the sacred and have deep cultural ramifications. GLIFWC staff working with the project felt it was culturally and spiritually necessary to acknowledge the spirit of the language. "The sacredness of this knowledge needs to be respected. It needs to be honored for that is in part who we are as a people. We are opening a door to a spiritual journey to heal and recover those aspects of our culture that are in danger of being lost. These manidoog need to know that we are doing this in a good way and for a good reason," says Ballinger. (Photo by Sue Erickson)

GLIFWC Wardens Jessica Gokey and Tom Kroeplin present on fur identification.

GLIFWC employees recognized

Six GLIFWC employees were recognized for 25 years of service at a February 10 gathering. Each silver anniversary staff member received a Pendleton blanket—and a chi miigwech! From left: Peter David (wildlife biologist), Gerry DePerry (deputy administrator), Kim Campy (enforcement administrator), Rose Wilmer (executive secretary), Jim Thannum (development specialist) and Ron Parisien (wildlife technician). (COR)

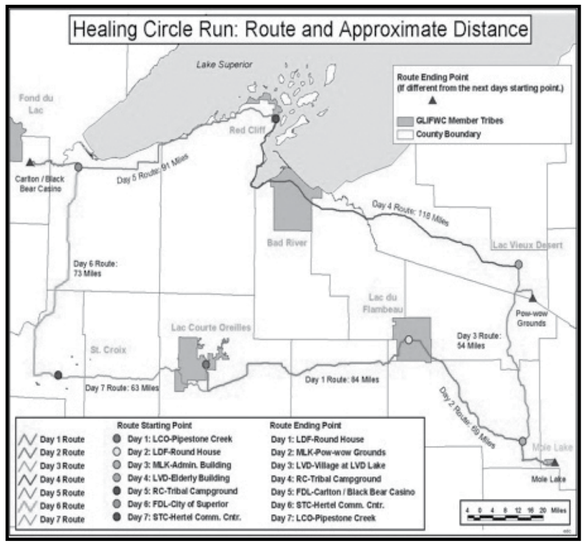


Representing a nice cross section of GLIFWC employees, a conservation warden, policy analyst, payroll manager and an invasive plant specialist were among the staff members recognized at the Commission's All Staff Day, February 10. Receiving employment anniversary pins from left: Jim Mattson (15 years), Keke Stark (5 years) and Shelly Ellson (5 years). Ten-year award recipient Steve Garske is missing from the photograph. (COR)

Healing Circle Run/Walk slated for July 9-15, 2011

Odanah, Wis.—The 2011 Healing Circle Run/Walk is intended to be a prayer for healing. During the 2001 Healing Journey Run, participants thought of a teaching about healing —"for a nation to heal, it must begin with the individual. As a person heals, then that person can help heal his/her family. As a family begins to heal, they can help heal their community. As communities heal, they can help the nation heal. As nations heal, they can help Aki (the earth), and our plant and animal relatives to heal." The 2011 Healing Circle Run/Walk is an opportunity for people to come together to pray for healing for themselves, their families, their communities, their nation, Aki, and our relatives.

The 2011 "Healing Circle" Run/Walk will occur from July 9-15, 2011. The run/walk will connect eight Ojibwe reservations in northern Wisconsin, Michigan, and Minnesota (see map below) starting at the Lac Courte Oreilles Reservation and ending at Lac du Flambeau on July 9 (day 1), then ending at Mole Lake on July 10 (day 2), at Lac Vieux Desert on July 11 (day 3), at Bad River/Red Cliff on July 12 (day 4), at Fond du Lac/Black Bear Casino on July 13 (day 5), at St. Croix on July 14 (day 6), and at Lac Courte Oreilles on July 15 (day 7).



If you are interested in participating as a core runner, or having a group of runners from your reservation participate, or just need more information please contact Rose Wilmer, Sue Nichols, or Neil Kmiecik at GLIFWC at (715) 682-6619. All participants must assume personal liability, as well as responsibility for their own transportation and expenses.

Mapping native plants

(Continued from page 8)

the probability of occurrence of each species across the landscape.

To construct these species distribution maps (or "habitat models") we will again use the maximum entropy method, as implemented by a program called Maxent. This statistical mapping program uses species occurrence data and GIS environmental layers to produce species distribution models. It starts with the assumption that a species is equally likely to be found at any point across the region of interest (the maximum entropy distribution). It then "constrains" the distribution based on correlations of species occurrences with various environmental conditions. The result is a distribution map showing the probability of occurrence of each species across the landscape.

Once these maps are constructed, we can compare them to find areas where the high probability of occurrence of each native species coincides with high probability of each invasive species. These areas can then be prioritized for monitoring and management. Areas important for tribal gathering will also be considered when prioritizing management activities.

We hope that this mapping project will provide a tool for maintaining healthy populations of these culturally and economically important plants across the northwoods. If we can protect these plants, other native plants and their habitats will be protected as well. In doing so we hope to give something back to these plants for what they have given to us, and protect them and the ancient knowledge that surrounds them for future generations.

Madeline Island Anshinaabeg Bi-Annual Gathering

September 23-25, 2011

Mooningwanekaaning-minis Anishinaabeg Maawanji'iding—Madeline Island Anishinaabeg Bi-Annual Gathering: The second Madeline Island Anishinaabeg Gathering will take place on Friday, September 23–Sunday, September 25, 2011 at the Ojibwe Memorial Park on Madeline Island. This is a time to honor our past, celebrate the present and vision for the future of the relationship with Anishinaabeg and Madeline Island.

Friday will begin the Gathering with youth activities for all ages including: a National Eagle Center presentation, a youth leadership panel, storytellers and more. Friday night will feature keynote speakers, and Saturday will start with a morning ceremony following with speakers, musicians, food, and end with a celebrational dance in the evening. Sunday will include an open house at the Madeline Island Museum with an Anishinaabeg artists show and reception, book signings and the film, "Mikwendaagoziwag—They Are Remembered" on the Sandy Lake Tragedy.

School groups are requested to make a reservation by contacting the email address below. There will be discounts on the ferry from Bayfield for tribal members and free camping sites on the Island.

For more information or if anyone is willing to be on the planning committee, be a volunteer on the day of the Gathering, or make a contribution, contact this email address: *mi2011ag@yahoo.com*.

Bad River to host water walkers

June 12 Water Ceremony planned

A welcome feast for the water walkers is slated for June 11th at the Bad River pow-wow grounds with presentations from local leaders and a social gathering. The walkers journeyed over 10,400,000 steps and carried the healing and sacred salt water from the four directions

On June 12th the final leg of the Water Walk, which unites all the waters of our Mother Earth, will take the walkers to the Mide School adjacent to the Bad River reservation, and a Water Ceremony will be performed. Times for the events will be announced.

Plans are subject to change on the basis of weather conditions.

Contact Esie Leoso-Corbine, area Water Walk coordinator, for further information at 715-292-0009.

Looking for clues

(Continued from page 5)

Once the samples are taken, the cores are transported back to the LacCore laboratory in Minneapolis to be studied. However, one sample was taken to FdL's new Resource Management Division headquarters, aka ganawenjigewining (the place of taking care of things). Once there, students were able to warm up and examine the samples in FdL's laboratory that afternoon.

Jessica Heck, LacCore scientist, deftly cut one of the core cylinders in half lengthwise, leaving the core exposed so students could take samples of the mud. Students put their samples through layers of sieves, looking for types and sizes of debris in the mud. In a couple weeks the students will also travel to the LacCore lab and spend a Saturday working with LacCore staff on the samples they have collected.

What's in the cores? According to Howes, scientists look for such things as pollen grains, plant macrofossils, phytoliths (silica particles found in many plants), diatoms (tiny one-cell microscopic algae with silica shells that can be preserved for thousands of years and used to study long term regional climate change) as well as sandy or silty mineral material washed into the lake (indicative of erosion)—all evidence of different types of life and vegetation present during periods of time that help tell the lake's story.

While the presence of manoomin can be difficult to discern because of its life cycle as an annual and how it decays, it is possible to detect. Wild rice and many plants create silica outlines of their cells which don't decay like the rest of the plant. These are called phytoliths. Phytoliths are different from one plant species to another, and archaeologists have identified phytoliths unique to wild rice. By sampling back in the core at intervals, it is possible to find phytolith evidence of the appearance of wild rice in a lake, when conditions became shallow and fertile enough. The college interns employed in the summer months will find these answers and many more by working with high caliber mentors that are experts in their fields of research.

While determining the life history of rice lakes is one priority of this project, it was clear that another priority is involving tribal youth in science. This has been an ongoing mission of the FdL Band, its Natural Resources Program and special FDL Tribal and Community College programs such as the gidaakiimananiwigamig and manoomin projects coordinated by Holly Pellerin that have spurred student involvement in science and math.

Damp, muddy and a little bit cold on March 5th, students were nevertheless involved in every aspect of sampling Naawonigami Lake, and they all stuck with the project—all were a part of the push, pull, slush and muck that is often part of scientific discovery.

GLIFWC was one of twenty-six tribal entities recognized for their participation in the Circle of Flight: Tribal Wetland and Waterfowl Enhancement Initiative which was awarded the Department of Interior's prestigious Partners in Conservation Award in 2010. Gathering at Lac du Flambeau's Lake of the Torches Resort and Casino on February 23rd, collaborators in the COF initiative were individually recognized as Tammie Poitra, Deputy Regional Director, BIA Trust Services, Midwest Region presented certificates to representatives. Above, accepting the award on behalf of GLIFWC were Peter David, wildlife biologist; Lisa David, manoomin biologist; Neil Kmiecik, Biological Services director; Mic Isham, GLIFWC Board of Commissioners chairman; Tom Maulson, Voigt Intertribal Task Force chairman; Tammie Poitra; James Zorn, GLIFWC executive administrator. (Photo by Sue Erickson)

Bad River Tribal Chairman Mike Wiggins delivered the annual State of the Tribes speech at the Capitol in Madison on April 12. Wiggins heralded cooperative efforts between the State of Wisconsin and tribes in recent years including development of the tourism industry and natural resources enhancement. Despite the need for more employment opportunities in northern Wisconsin, Wiggins made clear that tribes were cautious about new proposals like iron ore mining in Ashland and Iron Counties. "Balancing the notions of job creation and caring for the environment is a consideration the tribes take very seriously," he said. (Photo by Charlie Otto Rasmussen)

The US Forest Service selected Jonathan Gilbert, GLIFWC Wildlife Section leader and waabizheshi researcher for an Eastern Region Honor Award. The Honor Award is included in the "Protect Ecosystems Across Boundaries" category. Gilbert shares the award with fellow American marten researchers Wisconsin Department of Natural Resource Biologist Jim Woodford and the USFS's Dan Eklund and Tom Matthie. Gilbert has been working with state and federal biologists on a multi-year project to boost declining waabizheshi numbers in northwest Wisconsin. A number of GLIFWC officials attended the award ceremony in Milwaukee. Pictured from left: Fred Maulson, Neil Kmiecik, Jonathan Gilbert, Mic Isham and James Zorn. (Photo by Judy Gilbert)

Longtime Voigt Intertribal Task Force representative from Mille Lacs, Leonard Sam (r), accepts a blanket and framed resolution that highlights his service. Pictured left of Sam, Tom Maulson, VITF Chairman and Mic Isham GLIFWC Board of Commissioners Chairman. Sam sat on

Spearing traditions endure at Lac du Flambeau

(See Spearing traditions, page 11)

Fred and Mike Tribble, members of the Lac Courte Oreilles (LCO) Ojibwe Tribe, were cited for spearing on an off-reservation lake in 1974, and the LCO tribe filed a class action lawsuit against the State of Wisconsin. Following legal action that encompassed almost ten years, the 1983 *Voigt* decision ultimately affirmed the tribes' 1837 and 1842 Treaty rights to hunt, fish and gather off-reservation within the ceded territory. A series of court rulings further defining the scope of the rights continued until 1991 when both the State and the Tribes agreed not to appeal the final judgment.

Non-tribal members immediately misunderstood, and began to harass those who went to spear. The boat landing protests and courtroom battles in the late 1980s pushed the issue of American Indians' fishing rights into the mainstream media. The protests were always controversial, sometimes violent, and often made the headlines the next day. Ultimately, all the efforts made by anti-treaty supporters such as Dean Crist, former Wisconsin Governor Tommy Thompson, and groups such as Stop Treaty Abuse and Protect America's Rights and Resources were proven to have been in vain.

All treaty spearing and netting is regulated and the harvest is monitored by GLIFWC. GLIFWC wardens and creel teams monitor harvest nightly recording data on harvested ogaa.

Year after year as the tribes practice spearing in the spring, their harvest numbers are miniscule in comparison to the numbers reported to the DNR when sports anglers and tourists arrive with their hook-and-line poles and sonar.

Johnson adds, "For generations, we have been responsible and respectful stewards of the resources." Johnson's grandfather was legendary conservationist, hunter, and guide William J. Poupart; the Tribal Fish Hatchery in Lac du Flambeau bears his name.

Booj LaBarge is also known for his tireless spearing activities each spring. A record-breaking 56-inch muskellunge he speared on a reservation lake in 2007 is on display at the LdF Grade School. This year, he speared in the Wisconsin ceded territory lakes and also netted in Mille Lacs. "I do it to feed my family, elders, and let the world know that we'll always spear in LdF. We are the original inhabitants of these lands, waters."

As the 2011 "sports" season opens, the tribes' *ogaa* meat is harvested and stored frozen in plastic Ziploc freezer bags. The meat lasts, and over the year in the circle of Ojibwe life, is supplemented by fish caught in the summer, venison and other game, and wild rice harvested in the fall.

Here in the boreal forests of Waswaaganing (LdF), the traditions of the Lake Superior Ojibwe endure.

About the author: During the spearing controversies in 1989, the author (LdF member and the Tribe's Public Relations Director) worked temporarily as a Deputy Clerk of Court in the LdF Tribal Court. Tribal attorneys for the Voigt *case and then Tribal Judge Tom Maulson were also based in the same offices. Because of the events of that time and the struggles faced by other people in the community, the author has since been an advocate of spearing and has spoken about the subject at symposiums at the University of Arkansas-Little Rock, as well as in Minneapolis and San Francisco.*

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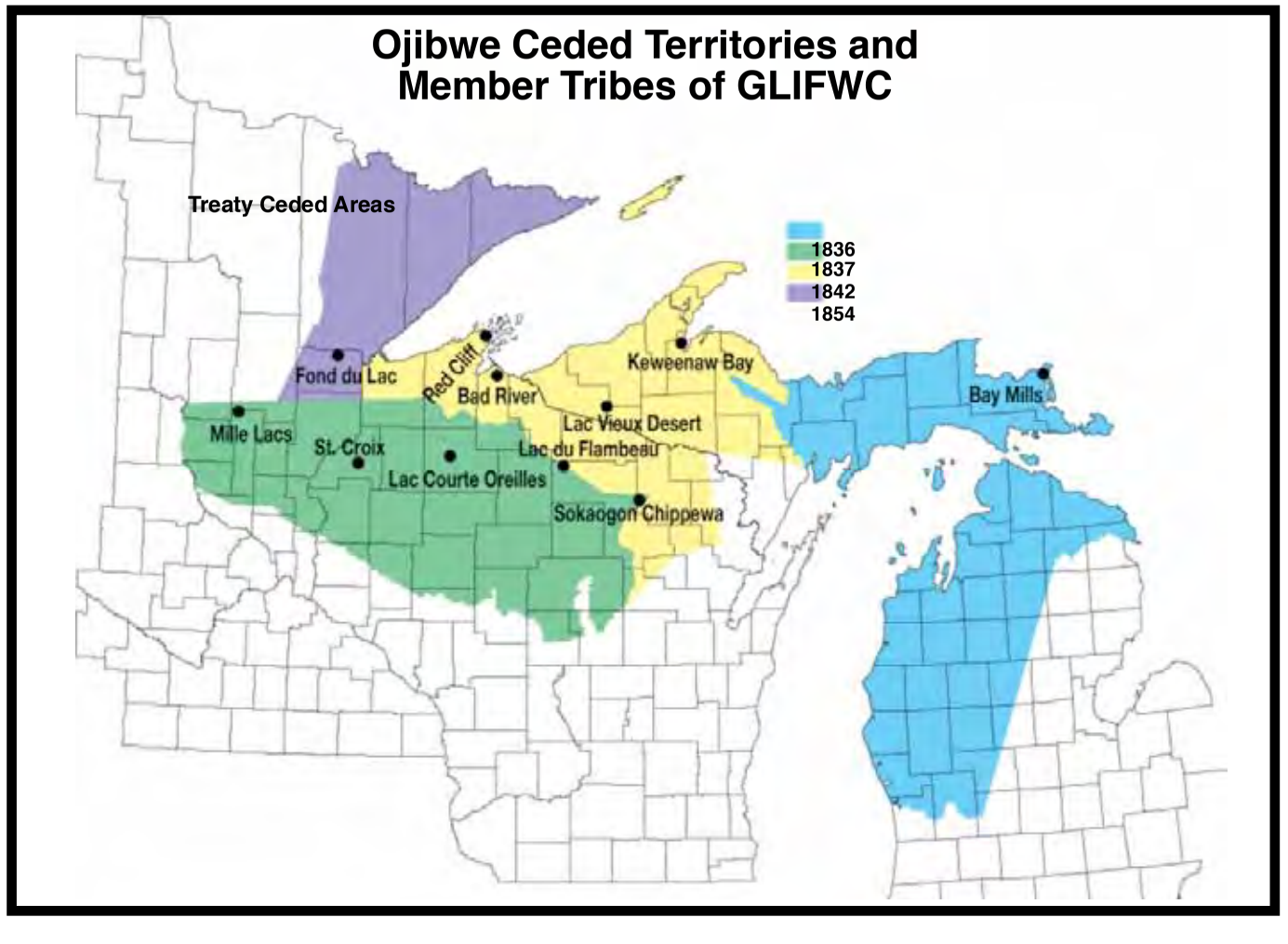
For more information see GLIFWC's website: **www.glifwc.org**.



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A Chronicle of the Lake Superior Ojibwe