

Mazina'igan

A Chronicle of the Lake Superior Ojibwe

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Tribes assert sovereignty, affirm relationship with ma'iingan

By Sue Erickson & Jason Kekek Stark

Odanah, Wis.—The region's first contemporary state wolf hunts are in full swing in both Minnesota and Wisconsin with media tallying the rising kill numbers daily, but many tribes have asserted their sovereignty in acknowledgment and affirmation of their well-established relationship with ma'iingan (wolf).

Tribal concern about the hunts in Minnesota and Wisconsin stem from biological/management issues and from a deeply felt connection to ma'iingan, a brother to the Anishinaabe people.

Tribes questioned the unilateral decision to hold these wolf hunts, actions taken by both Minnesota and Wisconsin with no tribal consultation on the matter. As co-managers of the natural resources in the ceded territories, where most of the wolf population resides, tribes expected to have input into such important resource management decisions.

In Wisconsin, the state set a total harvest figure to be 201 wolves. The current state harvest scheme will reduce the

population to a level the tribes consider ecologically unsound, culturally inappropriate and potentially unsustainable. The tribes' goal is for all suitable wolf habitat to be fully occupied and for the population to be at or above current levels, thus enabling wolves to perform their appropriate ecological and cultural functions.

The difference in tribal and state management goals makes it virtually impossible to reach consensus on harvestable surplus, an essential first step in determining quotas and issuing declarations. As a result, the tribes claimed every wolf in the Wisconsin ceded territory consistent with their treaty reserved right to have wolves on the landscape as necessary to effectuate the tribes' rights and goals for ma'iingan.

In recognition that the state does not have unfettered discretion to exercise its management prerogatives to the detriment of the tribes' treaty reserved rights, the state lowered the harvest limit to 116 wolves available to state-licensed wolf hunters, allocating 85 wolves to the tribes. This means the population will be reduced by about one-eighth rather than



Freshly off the federal endangered species list, ma'iingan has now become the target of hunters in Minnesota and Wisconsin. However, tribes have closed reservations to these hunts and objected to their unilateral enactment. (COR)

by one-quarter as originally intended in the development of the 2012 season.

Despite the reduction in numbers to be harvested in Wisconsin, many believe the imposition of a hunt so soon after

delisting is unwise and hasty, advocating for more long-term cooperative planning on the management of ma'iingan. With wolf mortality from poachers, road kills (See **The brotherhood**, page 2)

Report highlights reduced toxic emissions in Lake Superior basin

By Sara Moses, GLIFWC Environmental Biologist

Odanah, Wis.—Lake Superior is one of our greatest natural resources. The lake's unique ecosystem sets it apart among the Great Lakes. Recognizing that toxic chemi-

icals represent a threat to the Great Lakes, the International Joint Commission (IJC), which regulates waters shared by the U.S. and Canada, challenged the governments of these two countries to virtually eliminate the release of chemicals of concern into these waters, starting with Lake Superior. The rallying cry of the citizens who originally

brought this challenge to the IJC in 1989 was, "If not Lake Superior, where? If not now, when?"

The governments accepted the challenge and in 1991 created a Zero Discharge Demonstration Program (ZDDP) for nine toxic pollutants from sources within the Lake Superior basin. The ZDDP laid out a schedule to achieve zero emissions by 2020.

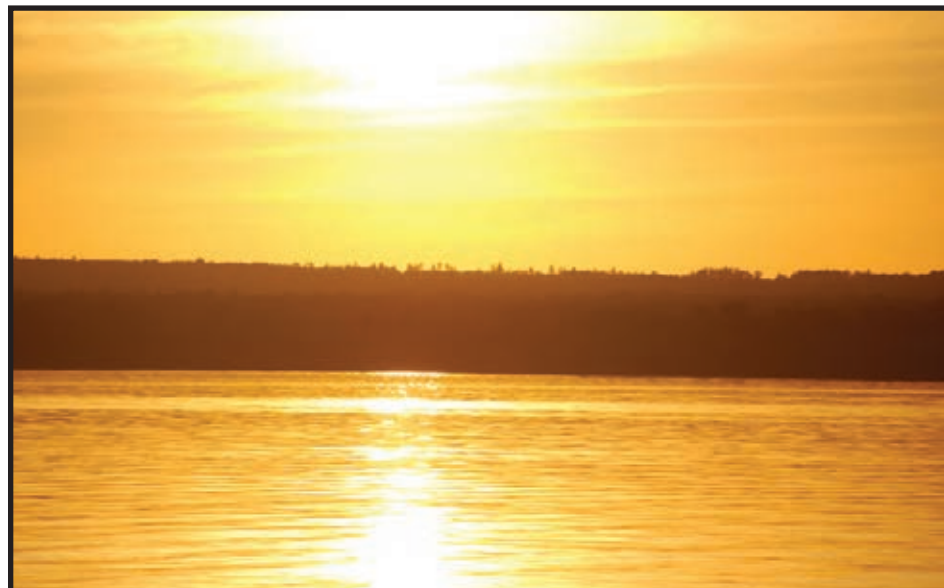
These "The Nasty Nine" include mercury, dioxin, PCBs and certain pesticides. Every five years, the Lake Superior Work Group's Chemical Committee releases the *Critical Chemical Reductions Milestones* report, which reviews the progress of the ZDDP. The latest report was released in October 2012.

Although the emissions of some chemicals are difficult to track, the report indicates that we have been largely successful in meeting the 2010 goals of the ZDDP. For example, mercury emissions in the basin have been reduced by 80% since 1990. The largest remaining source of mercury emissions within the basin is mining and metals production followed by coal-fired power plants. Continued or increased mercury emissions from these sectors could make it impossible to reach the goal of zero emissions by 2020.

In addition to reporting on emissions of "The Nasty Nine" and progress toward the ZDDP, the *Critical Chemical Reductions Milestones* report also looks at the current levels and trends of these contaminants in air, water, fish and wildlife. In general, these pollutants have declined in the Lake Superior ecosystem over the past 30 years in response to lower emissions, although there are exceptions.

The report also highlights efforts undertaken by the tribes, states, provinces and federal governments to help eliminate chemical releases to the environment.

Despite the impressive reductions in emissions of these toxic chemicals from within the basin, many challenges remain. As we approach 2020, the virtual elimination year, it will become more and more difficult to reduce emissions with fewer sources left to target for reductions. Even if virtual elimination is achieved, these contaminants will continue to be transported by air and water into the Lake Superior basin from outside sources. In addition, even as we make progress toward reducing emissions and removing these long used chemicals from the environment, there are new chemicals of emerging concern being emitted. Many (See **Reduced**, page 16)



Although there have been reductions in emissions of some toxic chemicals in the Lake Superior basin, many challenges still remain for Gichigami. (LP)

The brotherhood of ma'iingan and Anishinaabe

(Continued from page 1)

and those taken due to depredation added to the mix, the toll on the freshly delisted species could be harsh.

In Wisconsin wolf hunting cannot occur within the exterior boundaries of the Bad River, Lac Courte Oreilles, Lac du Flambeau, Red Cliff and Menominee reservations or in the designated Stockbridge-Munsee wolf zone. A tribal request to add a six-mile buffer around the reservations' boundaries to better protect "tribal" packs was denied.

However, in Minnesota, while wolf hunting is not allowed on tribal lands, the state allows wolf hunters on public or private lands within the exterior boundaries of the reservations.

In a letter to Minnesota's Governor Dayton, Fond du Lac Chairwoman Karen Diver clearly states her concerns after the tribe adopted a resolution declaring that "the Fond du Lac Band retains sovereign authority over the Ma'iingan population on the Fond du Lac reservation."

Diver's message states concerns similar to those of Wisconsin tribes: "The Fond du Lac Reservation Business Committee has found it necessary to

adopt this resolution in view of the Minnesota DNR Commissioner Landwehr's refusal to accommodate the Band's request that the State's wolf hunt not include lands within the Fond du Lac Reservation. We emphatically protest the paternalistic and unilateral manner in which the State of Minnesota implemented this hunt without prior consultation with the tribes or consideration of the unique cultural relevance of the wolf to us. It is puzzling to us that, despite the elaborate government-to-government protocols which we have established for the exercise of treaty rights in the ceded territories, somehow Minnesota DNR did not deem tribal interests on their reservations to warrant the same degree of respect."

Beyond biological concerns and issues relating to lack of consultation, the tribes maintain a unique and very dynamic relationship with ma'iingan, who is not only an important clan animal, but is considered a brother. An Ojibwe teaching holds that the destinies of Anishinaabe and ma'iingan parallel each other. The teaching as told in *The Mishomis Book* by Edward Benton-Banai appears below:

Editor's note: The following excerpt is reprinted with permission from The Mishomis Book, The Voice of the Ojibway by Edward Benton-Banai.

"In his travels, Original Man began to notice that all the animals came in pairs and they reproduced. And yet, he was alone.

He spoke to his Grandfather the Creator and asked, "Why am I alone? Why are there no other ones like me?"

Gitchie Manito answered, "I will send someone to walk, talk and play with you."

He sent Ma-en'-gun (the wolf).

With Ma-en'-gun by his side, Original Man again spoke to Gitchie Manito, "I have finished what you asked me to do. I have visited and named all the plants, animals, and places of this Earth. What would you now have me to do?"

Gitchie Manito answered Original Man and Ma-en'-gun, "Each of you are to be a brother to the other. Now, both of you are to walk the Earth and visit all its places."

So, Original Man and Ma-en'-gun walked the Earth and came to know all of her. In this journey they became very close to each other. They became like brothers. In their closeness they realized that they were brothers to all of the Creation.

When they had completed the task that Gitchie Manito asked them to do, they talked with the Creator once again.

The Creator said, "From this day on, you are to separate your paths. You must go your different ways.

"What shall happen to one of you will also happen to the other. Each of you will be feared, respected and misunderstood by the people that will later join you on this Earth."

And so Ma-en'-gun and Original Man set off on their different journeys.

This last teaching about the wolf is important for us today. What the Grandfather said to them has come true. Both the Indian and the wolf have come to be alike and have experienced the same thing. Both of them mate for life. Both have a Clan System and a tribe. Both have had their land taken from them. Both have been hunted for their wee-nes'si-see' (hair). And both have been pushed very close to destruction.

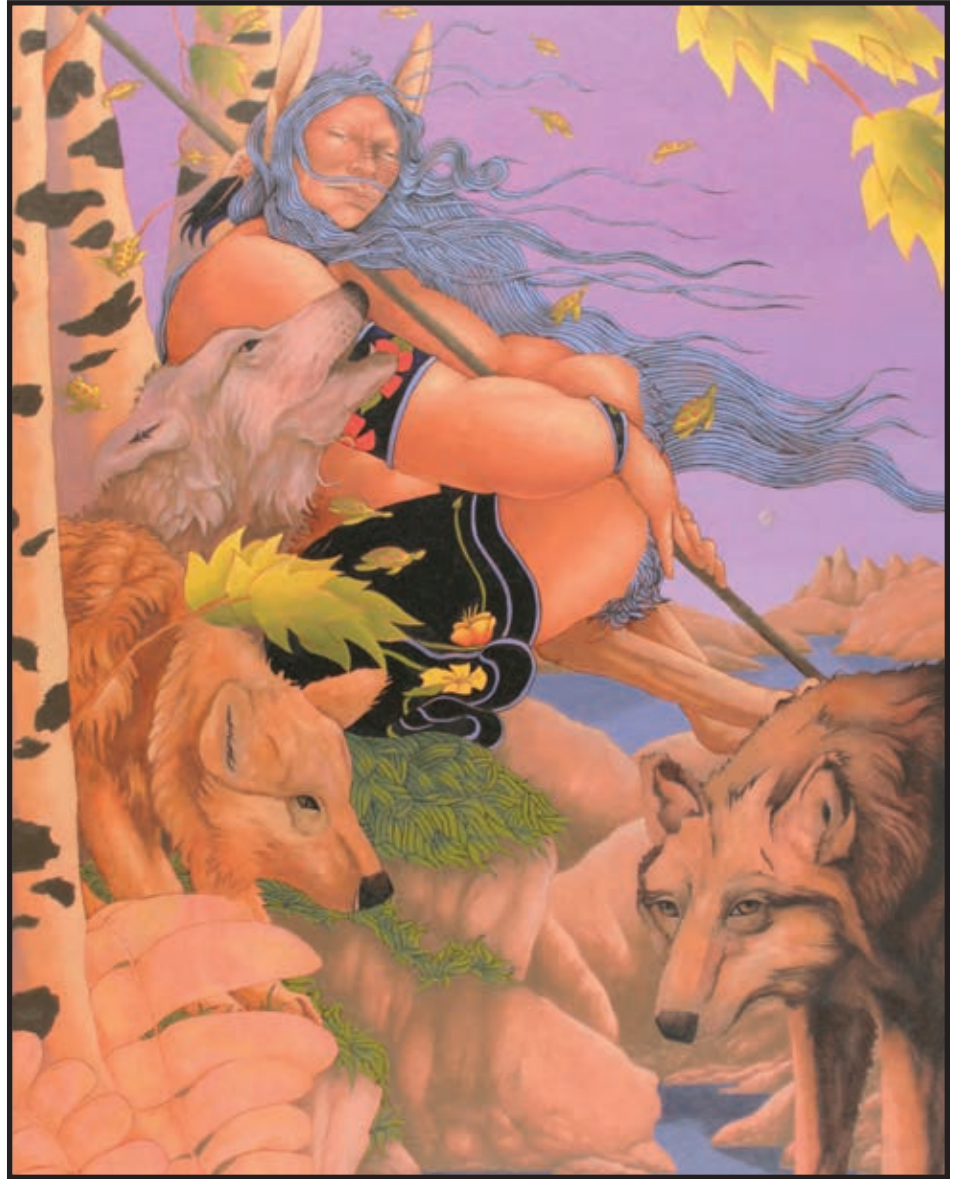
We can tell about our future as Indian people by looking at the wolf. It seems as though the wolf is beginning to come back to this land. Will this prove that Indian people will cease to be the "Vanishing Americans?" Will Indian people emerge to lead the way back to natural living and respect for our Earth Mother?"

A message from the teaching's author:

"Noongom (means now) is a critical time for our relative Maweengun (ma'iingan). In many, many ways Maweengun (ma'iingan) has shown continuing loyalty to the Anishinaabe people, across Turtle Island, to every Tribal Nation and to every individual. NOONGOM, NOW, WE MUST RETURN THAT LOYALTY BY FIGHTING, BY DEFYING THE HUNTING, THE EXTERMINATION OF OUR BROTHER/SISTER.

—Bawdwaywidun, aka Eddie Benton-Banai, Ojibwe Anishinaabe, LCO Rez, and Democrat, veteran, taxpayer

Niikaanag | My Brothers, My Friends



This artwork by Rabbett Strickland, Red Cliff, expresses the Anishinaabe relationship with ma'iingan and is incorporated into a poster available on an educational website: maiiingan.org.

GLIFWC's Peter David receives Wetlands Restoration Award

By Sue Erickson, Staff Writer

Madison, Wis.—The Wisconsin Wetlands Associated (WWA) recently honored GLIFWC Wildlife Biologist Peter David on October 25 with their annual Wetland Restoration Award. David's long-time personal and professional dedication to manoomin (wild rice) restoration earned him the well-deserved recognition.

"But as with many leading advocates for a cause, Peter's duties are oftentimes indistinguishable from his personal passion. Peter is the leading expert on wild rice in Wisconsin and has done more to protect, restore, manage, promote, research and educate about wild rice than any other person in Wisconsin. It bears repeating—than any other person," wrote Ricky Lein, WDNR Wetland Habitat Team supervisor, in his nomination letter.

Lein cited Peter's significant manoomin bed survey work, documentation and mapping of beds in addition to restoration initiatives as major contributions to the management of manoomin in Wisconsin. Successful in building partnerships in restoration projects, Peter's work has produced flourishing new manoomin beds as well as enhanced historic beds benefitting humans and wildlife alike.



Peter David, GLIFWC Wildlife Biologist. (photo by John Coleman)

In addition to hours of field work, including reseeding and aerial surveys, Peter has pushed for the development of a tribal-state wild rice management plan, a comprehensive document that considers all aspects of manoomin—research, regulation, management, ecology, restoration, and potential threats.

The Wetland Restoration Award aims at recognizing "on-the-ground wetland restoration work and efforts that promote wetland restoration including: private and public restoration projects; invasive species control projects; general wetland stewardship; research, programs or materials that encourage wetland restoration," according to the WWA.

The Wetland Restoration Award is one of three awards presented by WWA annually. This year the Wetland Protection Award recipients were Caroline Clarin and Alice Klink, and Mark Smith received the Wetland Enjoyment Award.

While Peter was honored to receive the award, he attributes successes to a team effort. "I feel more like it's the face of a successful program, than an individual award here. So many other people make this possible and make it work. I was happy to accept it on behalf of all of them."

Mazina'igan apologizes!

Lac du Flambeau's Hatchery Manager is Butch St. Germaine, not Chapman.

Federal Act would redefine standards for mining permits

By Sue Erickson
Staff Writer

Washington, D.C.—The National Strategic and Critical Minerals Production Act passed the House of Representatives in July with a 256-160 vote largely along party lines and is currently under consideration by the US Senate.

The Administration “strongly opposes HR 4402,” stating that the bill would “undermine and remove the environmental safeguards, for, at a minimum, almost all types of hardrock mines on Federal lands.”

Basically, the bill streamlines the mining permit process, requiring the lead agency (the agency to make the permitting decision) to maximize development of the mineral resources while mitigating environmental impacts.

The lead agency would be required to make permitting decisions within 30

months while engaging other agencies and stakeholders early in the process. The lead agency would also be responsible for setting timelines to be met during various stages of the permitting process.

The bill defines domestic mine projects that would provide strategic and critical minerals as “infrastructure projects,” a definition that would also speed the permitting process.

The bill would limit the ability of civil groups to mount legal challenges, requiring litigation to be launched within 60 days of the permit approval and places limitations on attorneys’ fees, stating that the federal government will not be responsible for attorneys’ fees in these civil actions.

In its objections to the bill, the Administration states that protection of the public would be “circumvented by the bill’s provisions,” which allows for National Environmental Policy Act (NEPA) review to be eliminated and circumvents public involvement in the process.

The bill also broadens the spectrum of minerals to be covered by the legislation. Currently, 17 minerals are considered to be “rare earth” minerals, but the bill covers minerals that support manufacturing, housing, transportation and other sectors along with minerals important for economic security and balance of trade.

The “Findings” in the bill indicate that “the availability of minerals and mineral materials are essential for economic growth, national security, technological innovation, and the manufacturing and agricultural supply chain” and is crucial to the country’s economic well-being.

The “Findings” also point out that the United States has increasing dependence on foreign minerals and lags as a competitor for mineral extraction, with the permitting process taking the longest of 25 nations considered to be major sources of minerals. The bill finds that in “the 2012 Ranking of Countries for Mining Investment, out of 25

major mining countries, the United States ranked last with Papua New Guinea in permitting delays, and towards the bottom regarding government take and social issues affecting mining.”

In its objection to the bill, the Administration stated it “strongly supports the development of rare earth elements and other critical minerals, but rejects the notion that their development is incongruent with environmental protection and public involvement in agency decision-making.” The Administration also sees the legislation as potentially threatening to hunting, fishing, recreation and other activities which also create jobs and support communities nationwide.

(To review the Act, go to: <http://www.govtrack.us/congress/bills/112/hr4402/text>. For the Administration’s statement of policy, go to: http://www.whitehouse.gov/sites/default/files/omb/legislative/sap/112/saphr4402r_20120710.pdf)

Water quality the focus of mining impact meeting

By Jennifer Burnett, GLIFWC Outreach Specialist

Marquette, Mich.—The Lake Superior Binational Forum held its second of three meetings about mining in the Lake Superior basin September 28 in Marquette, Michigan. With an increased interest in mining in the area, the Forum hopes these meetings will educate the public about ways to protect and restore Lake Superior’s environment and natural resources.

This meeting focused on nonferrous mining, also known as sulfide mining, while the first meeting was mainly about ferrous (iron) mining. This meeting also highlighted the Forum’s vision statement that “Water is life, and the quality of water determines the quality of life.” Many of the presentations discussed the possible ways that nonferrous mining can impact water quality in the Lake Superior basin.

Keweenaw Bay Indian Community’s mining technical assistant, Jessica Koski, gave a lecture on the unique role Native American tribes have in the mining process. Many tribes in the Lake Superior basin have off-reservation treaty rights in their ceded territories. Therefore they have interests and certain legal rights regarding the environmental impacts a mine may cause. One example is a tribe’s Class I air quality designation from the Environmental Protection Agency. With a Class I designation, those standards are enforceable in the reservation boundaries as well as in a 60-mile radius outside the boundaries.

The meeting was well attended with over 100 people and a nearly three-hour public question and answer and comment session. The entire meeting, including presentations and comment period, is available for online viewing at www.superiorforum.org.

The third Binational Forum meeting on mining will be held in March 2013 in Minnesota.



Jessica Koski, KBIC’s mining technical assistant, covered the many ways tribes in the Lake Superior basin are involved in the mining process. (JB)

Update: Mining in the ceded territory

By John Coleman, GLIFWC Environmental Section Leader

Wisconsin:

- Wisconsin’s Senate Select Committee on Mining, chaired by Tim Cullen, is hoping to have a new iron mining bill out of committee by mid-December. According to the chairman, the bill will be substantially different from the Assembly bill proposed last year. Senator Cullen has stated that the drafting of the bill will include participation by all political parties. At least one public hearing on the legislation is proposed.

Michigan:

- Kennecott Minerals is blasting through Eagle Rock to the orebody at its Eagle project. In October the company reached the ore body after tunneling for approximately a mile into bedrock. They continue to construct surface buildings and other mine infrastructure.
- The proposed 21-mile haul road for ore from the Eagle mine site to the Humboldt processing facility is still being reviewed by permitting agencies. The road would involve 22 stream crossings and would directly impact 25 acres of wetlands.
- Recently there was a spill of pit water and clay from the Humboldt Mill site into local wetlands. The spill occurred during construction of a wall to contain tailings that would be deposited into a pit lake at the site. The site is riddled with underground channels from historical mining, and the wall construction intersected some of the old workings.
- Orvana Minerals Corporation’s Copperwood project near Wakefield continues to work its way through the permitting process. The company has applied for a state mining permit, stream and wetland fill permit and a water discharge permit. The mining permit was granted, but the other permits are still under review. The company has not yet applied for a water withdrawal permit to take water from Lake Superior. The company has said that it is asking the local water utility to apply for the permit to supply process water for the mine.

Minnesota:

- GLIFWC and tribal staff continue to work with state and federal agencies to evaluate the proposed Polymet project. A second draft Environmental Impact Statement is scheduled to be released in the summer of 2013. In recent documents the applicant has proposed more complete capture of water leaking from the existing tailings basins. That water would be treated using reverse osmosis prior to discharge to area waterways or wetlands. Because the overburden and ore are expected to generate leachate containing substantial pollutants, the closure of the project at the end of mining is expected to require active water treatment.
- The Utac iron mine near Eveleth, Minnesota has applied to the Army Corps for a wetland permit to fill 1,200 acres of wetland bog. This area would be used for construction of a third tailings basin for taconite production. Several tribes are in discussion with the Army Corps to ensure that natural resources of interest to the tribes are adequately protected.

National Forest lands:

- The Ottawa and the Chequamegon-Nicolet National Forests are doing Environmental Analyses for prospecting for sulfide ores near Bergland, Michigan and near Medford, Wisconsin. Tribal staff have met with staff from both Forests to discuss these exploration proposals.



Permit info for treaty hunters and gatherers

By Jonathan Gilbert, PhD, GLIFWC Wildlife Biologist

Camping

Free camping is available for tribal members while exercising their treaty rights on **National Forests and Apostle Islands National Lakeshore campgrounds**. Free camping is not available on any state or county campground. Please note, these camping permits are only required at developed campgrounds which usually have a cost to stay. They are not required on dispersed campsites or if camping outside of camp sites.

What is required?

You will need a camping permit issued by your tribal conservation department. Show your tribal ID to the official and provide any information requested. The official will ask in which national forest you wish to camp and will provide you with a payment card and a copy of your camping permit. You may obtain a camping permit for each national forest. Generally you will be provided with up to two payment cards at a time.

What do I do at the national forest campground?

When you locate a campsite at the campground, you will find a fee payment envelope at the site. Please complete all required spaces on the fee payment envelope. Then instead of putting a check or money into the envelope, you will place the Camping Payment Card (which you obtained when you received your permit) in the envelope. Place the envelope in the fee payment tube located near the entrance to the campground.

Can I get additional camping cards?

There is no limit on the number of camping cards you obtain. Each time you return to the tribal permit office to obtain additional cards, you will be asked about your camping activity with the previous card.

Day fee use areas

Some areas on the national forests require a fee payment for the use of that area for the day. These are usually swimming beaches, trail heads, ski trails and some boat launches. Tribal members may obtain a free sticker for their car windshield if they are planning on visiting one or more of these places in the Chequamegon/Nicolet National Forest. The use of fee areas on other forests is very limited. Please note that these day-use stickers are not required to park in any place other than these day-use areas.

Gathering

Gathering activities fall into one of several categories so it is important to know what, how much and where you want to gather. Treaty gathering is permitted for the four national forests in the ceded territories and select Wisconsin state properties.

Wild Rice Permit—A wild rice permit is required to harvest wild rice. This is a separate permit from all other gathering permits.

General Gathering—A general gathering permit is required to gather most other plants. If you wish to gather balsam boughs, firewood, lodge poles, birch bark or ginseng, you must obtain a non-timber forest products permit (see next permit). If you wish to gather maple sap you must have a sugarbush permit. For everything else you only need a general gathering permit.



Wildlife Technician Micah Cain removes a white-tailed deer brain sample at GLIFWC's Odanah laboratory in November. GLIFWC is again sampling treaty-harvested deer for chronic wasting disease from heads collected at tribal registration stations. Jonathan Gilbert, GLIFWC wildlife section leader, said the testing service is available for any deer harvested in the ceded territory, but officials are especially interested in samples from in and around Wisconsin deer management unit 15 in Washburn County. The disease was detected in the region in spring 2012. For additional information or questions contact Gilbert at 715.682.6619 x2121. (photo by Charlie Otto Rasmussen)



GLIFWC Officer Brad Kaczak attaches tag to an otter caught off-reservation in northwest Wisconsin. River otters trapped by state and treaty harvesters require a CITES export permit to be sold on the international market. (COR)

Non-Timber Forest Product Permit (small scale)—If you want to gather a small amount of a non-timber forest products (e.g. balsam boughs, firewood, lodge poles or birch bark), you must obtain this permit. Non-timber forest product permits are specific for the property on which you are gathering. For example, if you wish to gather on the Chequamegon/Nicolet National Forest, you must obtain a permit for that forest (which allows you to gather any non-timber forest product from that forest). But if you want to gather on the Flambeau River State Forest, you must obtain a permit for that forest. Again, it allows any non-timber forest product to be gathered. There is no limit on the number of properties for which you can obtain a non-timber forest product permit.

Non-Timber Forest Product Permit (large scale)—If you want to gather a large amount of non-timber forest products, you will need a large scale gathering permit. This is a specific permit for a specific resource (e.g. firewood or balsam boughs) and for a specific location. You must obtain this permit from your tribe's conservation department. The tribe is required to consult with the property manager to coordinate this gathering activity with other management. When you request a large scale gathering permit, you must be prepared to provide information on what, when, where and who will be gathering.

Large Scale Limits: If you wish to gather more than the amounts listed below, you need a large-scale permit. For smaller amounts you need a small-scale permit.

1. Balsam boughs—5 tons
2. Firewood—10 cords
3. Lodge poles—75 poles
4. Birch bark—2 trees

Sugar Bush Permits—If you wish to create a sugar bush on national forests or state properties, you must have a sugar bush permit. The sugar bush permit is for a specific location and will have terms and conditions on the permit specific to this site. The sugar bush permits usually take a few weeks to a month to create; so if you are interested, the sooner you contact GLIFWC or your conservation department the better.

Ginseng—If you wish to gather ginseng, you must have a ginseng gathering permit. This permit is valid for all properties (national forests or Wisconsin state properties). If you sell any ginseng, you are required to keep a record of commercial transactions.

Hunting Permits

There are several types of hunting permits available to tribal members. The type of permit and other regulations such as tagging and registration depend on what and where you are hunting.

Migratory Bird Hunting Permit—This permit is required to hunt any migratory bird including ducks, geese and woodcock. This permit is valid for all three states. You are required to indicate whether you hunted migratory birds in the previous year and to answer any survey questions that may get asked.

Small game permits

General Small Game Permit—For most small game animals (e.g. ruffed grouse, snowshoe hares, etc.), all you need is a general small game hunting permit. This permit is valid in all three states and permits the harvest of any species for which a tag or registration is not required. It does not include waterfowl, turkeys or bobcats. These require separate permits.

Turkey Hunting—There are four different types of turkey hunting permits (found under the small game permit). There are two permits for spring turkey hunting and two permits for fall hunting. In spring and fall you may get a permit for turkey hunting in Wisconsin or Michigan (for which a carcass tag is NOT required), or for Minnesota (for which a carcass tag IS required). For all harvested turkeys, you are required to register your harvested turkey and obtain a registration tag.

Bobcat Hunting Permit—If you wish to hunt bobcats, you should obtain a bobcat hunting permit (found under the small game permit). You will be given a carcass tag for your bobcat, and you are required to register your bobcat after it has been harvested. If you intend on trapping a bobcat, please obtain a bobcat trapping permit. (See Permit info, page 10)

Restoring native plants in Michigan's Upper Peninsula, a community effort

LVD, KBIC join partnerships

By Charlie Otto Rasmussen, Staff Writer

Watersmeet, Mich.—Scott Herron sees a bright future for native plants—one illumined by the reddish, orange glow of firelight.

“Most invasive plants can’t handle fire,” said Herron, a Ferris State University ethnobotanist. “Native plants, however, have adapted to fire. We can restore some of these plant communities on a larger scale than what I see out there now.”

An organizer and featured speaker at the fourth Kinomaage Workshop, Herron said most Michigan restoration projects appear in the form of modest rain gardens, featuring just a few plants. Additional restoration is occurring on reclaimed brown fields—abandoned industrial sites—in places like Detroit. Land managers, he said, might go further, drawing from the well of traditional ecological knowledge to realize broader landscape restoration.

“If we use a holistic Anishinaabe model, we can move beyond single species restoration,” he said. That means the strategic application of fire on larger chunks of land, generating new growth across entire plant communities. “We’ve got firekeepers all across Anishinaabe Country. We can work together to revive some of those seed banks.”

Herron said it’s not enough to rely on government programs like the Great Lakes Restoration Initiative to pay for restoration projects; organization and funding on the local level is essential to pool all available resources to help ecosystems. Like reconstructing elements of native plant communities, interconnecting people is vital to restoration success.

To that end the Kinomaage (teachings from the earth) program is a working model. Launched by the non-profit Cedar Tree Institute, Kinomaage partners include the Lac Vieux Desert (LVD) Band, US Forest Service and individuals from tribal communities across Upper Michigan.

“We exist in between organizations,” said Jon Magnuson, Cedar Tree Institute (CTI) Director. “We’re a catalyst, a trigger for an emerging vision: to return the caretaker legacy of Native American communities across North America.”

That legacy is on display at Rice Bay on Lake Lac Vieux Desert where many of the three-dozen Kinomaage participants witnessed the full richness of manoomin harvesting, processing and reseeded—all done by hand. The LVD Band, Great Lakes Indian Fish & Wildlife Commission and other partners are 10 years into efforts to rejuvenate ancient manoomin (wild rice) beds on the lake’s north shore. With assistance from Herron, on Kinomaage’s second day LVD’s Roger LaBine detailed the life cycle of manoomin and its journey from a seed in the lake bottom to a table-ready food.

Herron poignantly ran down a list of native species required to both harvest and process manoomin: rice knockers made from giizhik (cedar), mashkiigwaatig (tamarack) and aagimaak (black ash) push poles, nooshkaachinaagan (winnowing trays) utilizing wiigwaas (birch bark) and wiigob (basswood).

“We need all of these plants to do this one activity,” Herron said, adding that native plant stewardship is fundamentally “ethnobotanical driven—not just for the sake of having a restored ecosystem.”



As part of the Zaagkii project, tribal youth have constructed 18 butterfly houses for monarchs to rest and shelter from severe weather. In this 2008 photo, KBIC’s Janelle Paquin applies a coat of primer to a butterfly house. (photo by Greg Peterson)



Professor Scott Herron demonstrates manoomin parching at LVD’s Old Village during the Kinomaage Workshop. Pictured to right: Sue Rabbitaille, Hiawatha National Forest native plants contractor, Ken Rabbitaille, and LVD member Melissa McGeshick. (photo by Charlie Otto Rasmussen)

Giizhik and pollinators

Through the Cedar Tree effort, The Manitou Project volunteers planted 10,000 northern white cedar seedlings throughout the Upper Peninsula in early summer 2012. LVD Band members placed 1,000 of those trees into western UP soil and also assisted in other areas including the site of the Duck Lake fire, which torched more than 21,000 acres.

The CTI also developed Zaagkii, the Wings & Seeds Project, with the Keweenaw Bay Indian Community and other Upper Michigan collaborators. Supporting the priceless work of insects—which are responsible for pollinating a great many wild plants—is the core of Zaagkii. Insects make contact with pollen dust as they visit plants to feed on nectar. As they move along, insects distribute pollen to plant reproductive systems across the landscape.

In Upper Michigan, the program has keyed in on two conspicuous pollinators: monarch butterflies and bees. Volunteers, tribal youth, and additional kids from the Marquette County Juvenile Courts program constructed and installed 36 bee shelters and 18 butterfly houses. The structures provide protection from severe weather. “Monarch butterflies are very fragile,” CTI’s Magnuson said. “They ride the thermal winds on incredible migrations across the continent, but access to adequate shelter is critical for them.”

Jan Schultz, the principal US Forest Service Zaagkii partner, frames the work ahead in pragmatic terms. “Every third bite of food (Americans consume) comes from pollination,” said Schultz, Region 9’s top botanist. “It’s jaw dropping.”

She said restoring native communities is a game of keeping as many “parts” as possible. That includes inventorying and preserving the original plants found on the landscape. Some plants represent the sole food source for native pollinators. For monarch butterflies, milkweed is a crucial host plant. Without nutrition from the leaves of milkweed, monarch larvae cannot develop into a butterfly.

“Keeping the pieces is huge,” Schultz said.

The Sault Tribe is slated to host the next Kinomaage workshop in April 2013. For more information see wingsandseeds.org.



In a pair of buckskin moccasins, Roger LaBine demonstrates manoomin jigging. (photo by COR)

Wisconsin manoomin season ends stronger than anticipated

By Lisa David, GLIFWC Manoomin Biologist

Odanah, Wis.—The 2012 Wisconsin ricing season ended on a higher note than earlier anticipated—likely due to a combination of factors.

The first of which involved the ricers themselves who appear to have put forth extra effort to locate rice beds. With 2012 being the third year in a row with below average manoomin stands across northern Wisconsin, extra effort was needed to replenish personal manoomin reserves.

Second, it also appears as though more harvesters are turning to the Commission's website to help guide their harvesting efforts. The site provided updated information on lake openings as well as crop abundance information at sites across the ceded territory. Pickers were able to avoid trips to unproductive locations and concentrate their efforts where success was most likely.

Finally, mild, cooperative weather this past fall also contributed to the increased harvest. The lack of rain and strong winds during the weeks of harvest meant less loss of ripe rice seed to weather events. Great weather during the long Labor Day weekend was especially welcome.

Preliminary analysis of respondents to the Wisconsin wild rice harvest survey indicates that 14 counties in Wisconsin had successful harvest, with a total of 57 different sites with reported harvest.

The top harvesting sites were both in Taylor County—Mondeaux Flowage and Chequamegon Waters Flowage (aka Miller Dam), while The Thoroughfare in Oneida County saw the most harvesting trips.

The 190 survey respondents averaged about 21 pounds per harvest trip, in comparison to only 9 pounds per trip in 2010. The majority of respondents harvested a total of 50 pounds or less this ricing season.

Sites of note were Radigan Flowage in Douglas County where low water levels



Mondeau Flowage, Taylor County, Wisconsin was among the top manoomin harvesting sites for 2012. (photo by Peter David)

left the seed-rich plants standing in mudflats that did not allow canoe passage. Upper Clam Lake, in Burnett County, showed the first significant response to restoration efforts that are underway there (see article

below). And Mud Lake (Oakland Township, Burnett County) was in the top 10 harvest sites indicating that the culvert repair project a few years ago may be rectifying water level issues.

Clam Lake rice beds heading towards recovery?

By Peter David, GLIFWC Wildlife Biologist

Odanah, Wis.—Upper Clam Lake in Burnett County, Wisconsin is a special place. The extensive manoomin (wild rice) beds found on the southern bays of the lake made this the number one off-reservation ricing harvesting lake in the state. Fishermen and waterfowl hunters also knew they could often find the quarry they sought on this productive lake as well, thanks in no small part to the food and habitat the rice beds provided. Then something happened.

After centuries of supporting rice—including good beds in 2006—the rice all but disappeared in 2007. Of course, manoomin is an annual plant, and occasional crop failures are an inherent trait of the species, so while the initial loss was noted by many, it didn't set off alarms. But time would show this was not just an annual failure. This was something different.

Unlike previous crop failures, this time the rice stayed absent: 2008; 2009; 2010. The lake was fundamentally different in a multitude of ways—from the aquatic plant community, to fish populations, to waterfowl utilization. The big question was why?

Initially several theories floated around—including possible contamination from a defunct cranberry operation upstream, a mechanical weed harvester run amok, and carp. While the latter factor seemed most likely, there were doubts about the carp theory as well; after all, carp, while non-native, were no newcomer to Clam Lake, having been present in the system for decades. Why would they suddenly have an impact now?

It's taken some time to put the pieces together, but it looks like the answer may have been found. And while it's always risky to oversimplify the complexity of ecological events, it looks like carp are indeed in the middle of it.

It is clear from looking at the carp themselves (thanks to sampling done by the DNR) that something created a "perfect storm" of carp production several years ago, because

"While the recovery witnessed so far is encouraging, the lake still has a long ways to go. Large beds of rice historically occurred in areas that cannot be easily fenced off from the carp."

there are tens of thousands of carp in the lake, and nearly half of them are from a single year-class of recruitment. The best guess at what caused this surge may not be intuitive, but the puzzle pieces suggest something like this: A winter-kill or possible disease event largely wiped out the bluegill population. Without bluegills—who are effective consumers of carp eggs—carp production bloomed, and when those carp grew to sufficient size, they hammered the rice and other aquatic plants by uprooting them, impeding their growth by increasing water turbidity, consuming their seeds, or some combination of the three.

One piece of evidence of the role of carp can be seen in the remarkable event that was observed this year in Clam Lake's southern-most bay. In an effort lead by the St. Croix Tribe, the openings to this bay have been netted off for the last two seasons of open water—with the nets going up in the spring before appreciable numbers of carp enter the bay. An initial response in 2011 was followed by a dramatic sight this year: an extensive bed of manoomin—and other aquatic plants—that hadn't been seen in half a decade (see photos below).

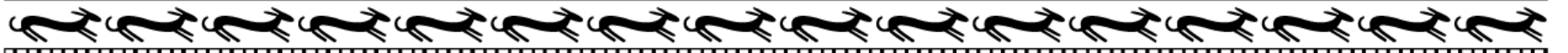
While the recovery witnessed so far is encouraging, the lake still has a long ways to go. Large beds of rice historically occurred in areas that cannot be easily fenced off from the carp. And while the tribe, state, lake association and other cooperators are also working to reduce the carp population through winter netting, it has been a challenge to put a sizable dent in such a massive population. But 2012 has provided a great shot of encouragement to all those who have committed themselves to bringing back the special qualities of Upper Clam Lake.



Upper Clam Lake's southern-most bay pre-2008 recovery of the manoomin beds. (photo by Peter David)



Upper Clam Lake's southern-most bay post-2012 recovery of the manoomin beds. (photo by Peter David)



Updated Water Quality Agreement includes significant changes

Focus on collaboration & prevention in the Great Lakes

By Jen Vanator

GLIFWC Great Lakes Program Coordinator

Odanah, Wis.—On September 7, the federal governments of the United States (represented by Lisa Jackson, Administrator of the Environmental Protection Agency) and Canada (represented by Peter Kent, Environment Minister) signed the Great Lakes Water Quality Protocol “Protocol,” renewing and updating their commitment to a 40-year old agreement outlining how the two countries will protect and restore the health of the waters of the Great Lakes.

First signed in 1972, the Great Lakes Water Quality Agreement (GLWQA) was last updated in 1987. The updates included in the Protocol are significant—they redirect focus on prevention, rather than cleanup; focus on collaboration with other governments, including Tribal and First Nations; respond to new emerging threats to the quality of water in the Great lakes that did not exist at the time of the last update; and update and shift management approaches.

While previous versions of the Protocol have focused on cleaning up damage caused by past activities, the Protocol focuses, instead, on prevention. Noting that it continues to

be necessary to resolve existing environmental problems, the Protocol goes on to say that it is equally necessary to anticipate and prevent future environmental problems. This new preventative approach finds its way into the Protocol’s focus on emerging threats and new precautionary management approaches. This can be seen in the shift in the implementation of the Lakewide Management Plans, known as “LaMPs.” The Protocol continues the use of LaMPs as tools to assess the status of each lake and address environmental stressors on the quality of water. However, the Protocol now requires each LaMP to establish Lake Ecosystem Objectives as assessment benchmarks and requires each LaMP to identify research, monitoring, and other science priorities for the assessment of future potential threats to water quality, rather than requiring plans only to monitor the progress of current remedial activities.

In developing and implementing programs under this new Protocol, the federal governments of the United States and Canada are required to cooperate and coordinate with state, provincial, tribal, and municipal governments, as well as First Nations, Métis, and public agencies and stakeholders. This includes when developing best management practices: general and specific objectives; programs for pollution abatement, control and prevention; and all “pertinent matters.” This new coordination requirement is especially significant with regard to tribes and first nations, which were not specifically mentioned in previous iterations of the GLWQA.

In addition to recognizing the importance of full cooperation and participation in programs to restore and protect the health of the Great Lakes, the Protocol recognizes that threats facing the Great Lakes have changed. Since 1987, new threats to the quality of water in the Great Lakes have emerged, and this new Protocol addresses the most serious of those threats. For example, aquatic invasive species (AIS) were not addressed at all in the last version of the GLWQA. Since the last update in 1987, AIS have become one of the preeminent threats to the health of the Great Lakes ecosystems, seriously impacting Great Lakes ecosystems from direct competition with native species for food and habitat, predation, and disease, and also by altering the food chain and webs.

Recognizing that these impacts can dramatically affect water quality, the Protocol requires the United States and Canada to focus on the prevention, reduction, and control of AIS in the Great Lakes. The Protocol requires the countries to develop prevention-based programs to eliminate new introductions of AIS, even in the absence of scientific certainty of any threat, the implementation of protective ballast water discharge programs, the implementation of proactive and coordinated risk assessments on various pathways, the development of regulation or management strategies based on risk assessments, the coordination and implementation of management strategies, education and outreach efforts, and the establishment of effective barriers to prevent the spread of AIS.

Another emerging threat to the quality of water in the Great Lakes is climate change. Increasing nearshore and surface water temperature is widely believed to be a culprit in the spread of algal blooms in several of the Great Lakes, including this summer’s blue-green (Cynobacteria) algal bloom on the banks of Lake Superior between Cornucopia and (See Water quality agreement, page 16)



Quagga mussels, one of many invasive species affecting the Great Lakes, have invaded all of the Great Lakes. (photo reprinted from <http://laketrek.blogspot.com/2012/01/invasion-of-great-lakes-quagga-mussels.html>)

Ceded Territory News Briefs

Elk harvested for ceremonial purposes

Clam Lake, Wis.—One spike bull elk was harvested by a Lac Courte Oreilles elder on September 14 near Clam Lake, Wisconsin under a ceremonial permit issued through the Great Lakes Indian Fish & Wildlife Commission. The elk was needed for a special Thanksgiving ceremony recognizing the gifts of Aki (Earth). The ceremony took place on September 17 on the Bad River reservation.

The intertribal hunt began following a ceremony, and within forty-five minutes the young elk showed himself for a clean shot. The elk was handled with respect throughout and also honored during the ceremony. All parts of the elk were used. Samples were also taken for CWD testing.

Biologists study Mille Lacs Lake walleye

Duluth, Minn.—A modeling subcommittee of the Minnesota 1837 Fisheries Technical Committee (MnFTC) met in late October to review assessment models and look at data pertaining to the abundance and health of walleye in Mille Lacs Lake. Both the Minnesota Department of Natural Resources and GLIFWC perform annual population assessments in the lake and share data. At this time, information is being analyzed. Findings will be shared during the annual meeting of the MnFTC in January. (See Cooperative fisheries surveys, page 9)

EHD found in southern Wisconsin deer herd

Madison, Wis.—Epizootic Hemorrhagic Disease (EHD) is a viral, often fatal disease carried by midges that affects white-tailed deer. It’s occurrence in Wisconsin was confirmed in September in Columbia, Rock, Dane, Sauk and Waukesha Counties, according to a Wisconsin Department of Natural Resources (WDNR) publication.

Mild EHD infections are most prevalent in the southeastern United States, but have occurred in almost all states. The WDNR will continue to monitor for the disease and asks that any white-tailed deer that appear sick or are dead be reported to the WDNR. Call toll free at 1-888-936-7463 or email at DNRInfo@wisconsin.gov.

Michigan contemplates wolf hunt

Lansing, Mich.—With wolf hunts underway in Minnesota and Wisconsin, Michigan is considering the same. Two bills to make the gray wolf a game species have been introduced, one in the House and one in the Senate. Michigan estimates the wolf population to be about 700 with most of the wolves residing in the western Upper Peninsula.

Act 168 opens Wis. state parks to hunting/trapping

The Wisconsin Department of Natural Resources sought input from the Voigt Intertribal Task Force at its November 1 meeting on the enactment of Act 168, which opens state parks in Wisconsin to hunting, fishing and trapping. The legislation will be effective on January 1. Current proposals suggest closing hunting and trapping within 100 yards of areas used for camping, picnicking or swimming, and an open season from October 15 through Memorial Day weekend.

Waterfowl die-off in Lake Michigan

Gulliver, Mich.—About 700 dead waterbirds have been discovered in September and October on the shores of Lake Michigan near Gulliver in Schoolcraft County. Among them were over 200 common loons. Researchers believe the deaths were caused by Type-E botulism. Similar episodes have been recorded in 2006 and 2007. (November 4, *the Mining Journal*)

GLIFWC to hold winter culture camp

Odanah, Wis.—GLIFWC’s winter cultural program, ISHPAAGOONIKAA, will be held in early 2013. This camp centers around the Medicine Wheel, focusing on Great Lakes Native American traditional ecological knowledge and treaty rights exploration during the winter moons. Dates and location still being decided.

Contact Heather Naigus, GLIFWC Youth Outreach Coordinator about upcoming youth activities at 906-458-3778 or hnaigus@glifwc.org. See also GLIFWC’s website www.glifwc.org or facebook www.facebook.com/GLIFWC. (HN)

—Compiled by Sue Erickson, Staff Writer



Exotic forest pests targeted by ANA-funded project

By Jim Thannum, Natural Resource Development Specialist and Sue Erickson, Staff Writer

Odanah, Wis.—In order to address issues related to exotic forest pests, especially the emerald ash borer (EAB), GLIFWC applied for and recently received a three-year grant from the Administration for Native Americans (ANA), ACF, USHHS. The impact of these pests in the ceded territories relates to tribal members' continuing ability under their treaty rights to gather miscellaneous forest products.

Ojibwe people continue to rely on a variety of forest products that have been traditionally gathered to use for spiritual, medicinal, cultural, subsistence, and commercial purposes. A few of these products include birch, maple sap, balsam boughs, ginseng, cedar, and ash. However, exotic pests brought in from foreign countries have already proved devastating in areas of the continental United States, threatening forest resources valued by tribal members. EAB particularly has already reeked havoc on the nation's ash trees.

Looking at the problem

Before June of 2002, EAB had never been found in North America. Its natural range is eastern Russia, northern China, Japan, and Korea. The emerald ash borer attacks all species of North American ash and was first thought to occur in southeastern Michigan. It has since spread to Ontario and Ohio in 2003, Indiana in 2004, Illinois in 2006, Wisconsin in 2008, Minnesota in 2009.



Emerald ash borer. (photo courtesy of David Cappaert, Michigan State University)

Emerald ash borer destroys the water and nutrient conducting tissues under the bark of ash trees. One-third to one-half of the branches may die in one year. Most of the canopy will be dead within two years of when symptoms are first observed.

Since its discovery, EAB has: 1) killed tens of millions of ash trees in southeastern Michigan, 2) caused regulatory agencies (USDA Animal and Plant Health Inspection Service—APHIS) to enforce quarantines in Michigan, Wisconsin and other states and establish fines to prevent potentially infested ash trees, logs or hardwood firewood from moving out of areas where EAB occurs.



Emerald ash borer (EAB) larvae feed on the inner bark of ash trees, disrupting the tree's ability to transport water and nutrients. (photo courtesy: Jeffrey Hahn, University of Minnesota) Inset photo: Larva of an emerald ash borer. The larvae are the destructive stage of the pest. (photo courtesy: David Cappaert, Michigan State University.)



Asian longhorned beetle. (photo credit: Kenneth R. Law, USDA APHIS PPQ.)

The Asian longhorned beetle (ALB) is native to eastern China, Japan and Korea and now has been accidentally introduced to the United States where it was first discovered in 1996. Alert workers have uncovered and reported ALBs in warehouses in Michigan, Wisconsin and other states.

ALB infestations have resulted in: 1) quarantines, 2) cutting down all healthy trees of the potential host species within a one-eighth to one-quarter mile radius of infested trees, 3) having all infested trees chipped and burned, 4) grinding stumps of infested trees to below the soil level, 5) increasing insecticide treatments.

As forest pests move into the ceded territory, they could be accidentally spread by individuals collecting and moving firewood including tribal members. Tribal members currently exercise firewood gathering rights under either:

- a formal Tribal/Forest Service Memorandum of Understanding (MOU) established in 1999, or
- tribal codes governing firewood harvest on state-owned lands.

The challenge is how to maximize opportunities for tribal members to harvest and utilize firewood to heat their homes and boil syrup while minimizing the spread of forest pests on public lands or into reservation communities.

What can be done?

A proactive approach and response plan will be developed with tribes to prepare for the spread of EAB and other exotic forest pests in the ceded territories. Furthermore, cooperation with state and federal partners is necessary given intergovernmental requirements established under stipulations, federal court orders, and interagency Memorandums of Agreement.

GLIFWC will first complete a report providing the scientific foundation to assess risks from EAB and four other forest pests upon five commonly harvested treaty forestry species (i.e. ash, balsam, birch, maple, oak) throughout the ceded territories. This will provide a comprehensive scientific foundation on which risk assessments will be based in year two and harvesting regulations revised in year three.

In the second year, GLIFWC will complete a risk assessment of threats to treaty resources from EAB and four other forest pests, integrating Traditional Ecological Knowledge (TEK) on ash use, ash quality needed for baskets and wood fuel harvest patterns as well as TEK information related to tribal use of balsam, birch, maple and oak. The activities of this objective will integrate scientific risk assessments and TEK provided by tribal elders and harvesters to enable tribes to more fully understand the pathways for introduction and spread of exotic forest pests and how these infestations may impact treaty forestry resources and the exercise of treaty rights.

In the third year, GLIFWC will work with member tribes to develop and recommend for tribal approval a system of regulations and plans that address preventing, introducing or spreading EAB and forest pests within the ceded territories. In addition, community outreach and education of forest resource threats and updated/revised "miscellaneous forest products" gathering regulations will be provided in tribal communities.

Preventing the spread of EAB when harvesting firewood:

- Adult beetles are metallic green and about 1/2-inch long.
- Adults leave a D-shaped exit hole in the bark when they emerge in spring.
- Woodpeckers like EAB larvae; heavy woodpecker damage on ash trees may be a sign of infestation.
- Firewood cannot be moved in designated areas of Michigan, Minnesota, and Wisconsin because of the EAB quarantine.

Why there may be an increased need for gathering firewood.....

The *Energy Information Administration (EIA)* projects average household expenditures for heating oil and natural gas will increase by 19 percent and 15 percent, respectively, this winter (October 1 through March 31) compared with last winter. Projected household expenditures are 5 percent higher for electricity and 13 percent higher for propane this winter. Average expenditures for households that heat with heating oil are forecast to be higher than any previous winter on record.

Source: <http://www.eia.gov/forecasts/steo/>

Searching for aquatic invasive species

By Dara Olson, GLIFWC Aquatic Invasive Species Coord.

Odanah, Wis.—Aquatic invasive species (AIS) degrade aquatic ecosystems and treaty resources by outcompeting and displacing native species. Because of this, GLIFWC staff have worked cooperatively with other agencies to identify the presence of AIS in ceded territory waters since 2004.

In 2012, GLIFWC staff surveyed 31 lakes in northern Wisconsin and the western Upper Peninsula of Michigan for AIS in coordination with management partners including tribal natural resource departments, national forests, Wisconsin DNR, county AIS coordinators and various other local partners. Two hundred five invasive species sites comprising 23 species were mapped in 2012. In addition, manoomin was documented on five lakes and two native species of special concern were also documented.

AIS surveys targeted lakes with significant tribal oga (walleye) and manoomin (wild rice) harvest, as well as large lakes with lots of boat traffic or lakes close to infested waters.

Because the majority of AIS are spread by watercraft, boat landings are one of the most likely areas for introduction of AIS. Consequently, boat landings are a focus of GLIFWC's AIS surveys.

Sixty-three landings were surveyed for aquatic and terrestrial invasive species. A total of 162 plankton samples were collected and will be analyzed this winter for the presence of zebra mussel veligers and spiny or fishhook waterfleas.

Chinese or banded mysterysnails were found in over half of the lakes surveyed and purple loosestrife was found on half of the lakes. A small, pioneer population of Eurasian water-milfoil (EWM) was found on Wisconsin's Anvil Lake in July. Partnering agencies were notified and a "rapid response" was organized to hand-pull the EWM.

Early detection of invasive species before they become large, environmentally damaging populations makes eradication feasible and reduces the need for treating with herbicide.

For more information on invasive species distribution, see GLIFWC's GIS maps on GLIFWC's website at <http://maps.glifwc.org/>.

Cooperative fisheries surveys in Mille Lacs Lake

By GLIFWC
Inland Fisheries Staff

Odanah, Wis.—For many years, the Minnesota Department of Natural Resources (MnDNR) has used a fall gill net assessment survey to help monitor the walleye population in Mille Lacs Lake. The bottom-set gill nets used in this survey are 6-feet deep and include five 50-foot panels of 0.75," 1.0," 1.25," 1.5," and 2.0" bar mesh.

A variety of different habitat types are included in the survey, which is standardized to ensure that the same locations are sampled at the same approximate time and water temperatures each year. The resulting data are used in a variety of different ways and are an important component of the stock assessment models that are updated each year by state and tribal biologists.

In the early 1980's the fall gill net assessment survey included 32 different nearshore locations around the perimeter of Mille Lacs Lake. In 1998, eight offshore sampling locations were added to the survey, and 12 additional offshore locations were subsequently added in 2002.

Earlier this year, state and tribal biologists began exploring the idea of deploying suspended standard dimension nets near some of the deeper netting locations to look at how well walleye are being sampled by the bottom-set nets that have historically been used by MnDNR.

In late summer, state and tribal biologists agreed on how this additional sampling would occur and made plans for this work to be completed in conjunction with the fall gill net assessment survey. A total of 21

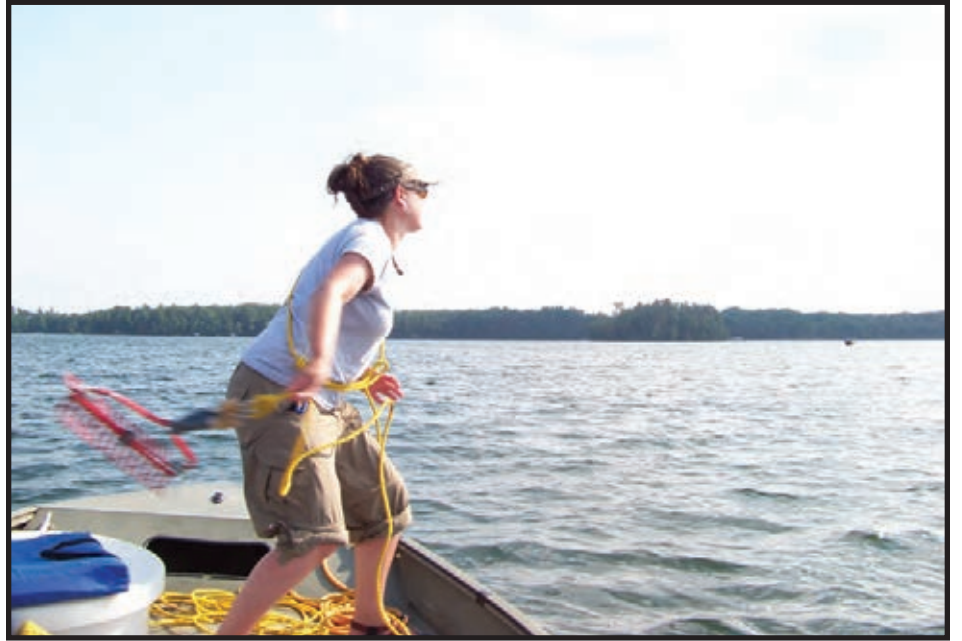
locations in Mille Lacs Lake were sampled with suspended nets during the fall of 2012.

Participants in this cooperative project included personnel from the Mille Lacs Band, Fond du Lac Band, MnDNR, and GLIFWC. State and tribal personnel worked together on all aspects of the project, which included setting and lifting standard and suspended nets, processing catches and collecting biological data from captured fish, and data recording.

Although the catch rate for walleye from the suspended nets was much lower than that observed in the standard bottom-set nets, this type of sampling will need to be repeated before any conclusions can be drawn with respect to the results.

Looking ahead, state and tribal biologists are also planning to work together on a mark-recapture population estimate for adult walleye in Mille Lacs Lake during the spring of 2013. As with the mark-recapture studies from 2002, 2003, 2004, and 2008, results from the 2013 survey will provide an up-to-date estimate of adult walleye abundance that is independent from the model-generated estimates that are relied upon to determine annual harvestable surplus levels.

State anglers and tribal harvesters should expect to see some walleye that are marked with plastic tags which stick out from the side of the fish next to the dorsal fin. These tags will be yellow in color and will have "MNDNR" plus a number printed on them. Tribal and GLIFWC creel clerks will document tag numbers as they are encountered in tribal catches. Likewise, MnDNR will be collecting similar information from state anglers through its annual creel survey on Mille Lacs Lake.



Sampling a lake for aquatic invasive species, Dara Olson, GLIFWC's aquatic invasive species coordinator, tosses a rake to pull in plants and debris for analysis. (photo Sam Quagon)

Aquatic plant management workshop planned

On December 5, 2012 research scientists will be addressing tribal concerns on how aquatic invasive (or nuisance non-native) plants are being dealt with in ceded territory waters. The half-day workshop convening at the Lac Courte Oreilles Convention Center is open to all tribal representatives, natural resource staff, and interested tribal members.

Informal presentations will allow plenty of opportunity for tribes to get questions answered on the process of aquatic plant management. Highlighted will be the interaction of manoomin and invasives such as Eurasian watermilfoil and curly leaf pondweed.

Speakers will discuss treatment and management options for these invasive plants from mechanical removal to chemical herbicide applications, concentrations and dosages, and the effects of chemicals on aquatic systems.

If you are interested in learning more about this free workshop or plan to attend, please contact Sue Lemieux, GLIFWC at 715.682.6619 to be added to the participant list. An accurate head count will ensure that we have an adequate amount of meeting materials for all participants.

GLIFWC assessment crews survey ceded territory waters for juvenile walleye

By Mark Luehring, GLIFWC Inland Fisheries Biologist

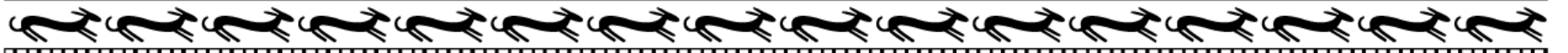
Odanah, Wis.—GLIFWC assessment crews and partners from Bad River, Fond du Lac, Mole Lake, St. Croix, and US Fish and Wildlife Service conducted fall electrofishing surveys on ceded territory waters in Michigan, Minnesota, and Wisconsin. During the fall, juvenile walleye (age 0 and age 1) are found feeding in nearshore lake habitat at night. Electrofishing crews sample these fish to determine year-class strength from natural reproduction or to evaluate stocking efforts.

In 2012, GLIFWC crews surveyed 119 lakes, including ten joint surveys with Wisconsin DNR and two with Michigan DNR. Surveys in Wisconsin included some of the large flowages such as the 13,545-acre Turtle Flambeau Flowage and the 15,300-acre Chippewa Flowage. In Minnesota, GLIFWC, USFWS, and Fond du Lac crews collaborated to survey about 75% of the shoreline on Mille Lacs Lake. In Michigan, the Portage and Torch Lake system in Houghton County were surveyed in conjunction with Michigan DNR.

Biologists use the data collected in the fall surveys to index year-class strength and classify walleye populations as sustained through natural reproduction or stocking. These surveys also provide an early indication of potential decline in walleye populations. If fall surveys show failed natural reproduction several years in a row, biologists know some management action may need to be taken to protect the walleye population and restore natural reproduction.

The data from the 2012 surveys won't be fully entered, proofed, and finalized until mid-December, but early reports indicate that, as in most years, some waters had good year-classes while others had weaker year-classes.

GLIFWC's inland fisheries section would like to say miigwech to the electroshocking crew members!



2011-2012 furbearer season successful

By Sue Erickson
Staff Writer

Odanah, Wis.—Figures for the 2011-2012 off-reservation furbearer season for ochig (fisher), nigig (otter) and gidagaa-bizhiw (bobcat) in Wisconsin topped the past three seasons for all species, according to a report from Jonathan Gilbert, GLIFWC Wildlife Section leader. (See table)

The trapping season for otters and bobcats began October 1, 2011 and November 1 for fishers, while the bobcat hunting season started on September 7. All seasons closed on March 31, 2012. All harvested animals must be tagged and registered at a tribal registration station by 5:00 pm of the third working day following the harvest.

In Wisconsin 64 otters were harvested off-reservation in the 2011-2012 trapping season, an increase of 36 otters from the previous year. Trapping permits for otter were obtained by 100 tribal members, eleven of those trappers were successful, with six of those being from Lac Courte Oreilles. The most otters were harvested from Burnett County (18), followed by Sawyer County (11).

Tribal trappers in Wisconsin harvested a total of 175 fishers, primarily from management Zones A and B. The most fishers were taken from Burnett County (29), although harvest was spread over 12 counties.

The number of bobcats harvested by trapping and hunting totaled 65, an increase of 26 bobcats from the previous season. Bobcat harvesting was spread over 11 counties, with the most harvested from Sawyer County (12), followed by Douglas County (10).

In 2010 GLIFWC received authority to operate a furbearer export program related to the Convention on International Trade of Endangered Species (CITES). The CITES program requires that all otters and bobcats to be exported be registered and tagged with a CITES tag. A CITES tag is not required for otters and bobcats used for personal purposes. The program applies to both on and off-reservation harvests of these species. During the 2011-2012 furbearer season 26 otters and 16 bobcats were registered with the tribal CITES program.

For persons interested in learning to trap, GLIFWC offers Trapping Education classes periodically (check GLIFWC website under "Outreach programs and classes"), with a class slated at St. Croix, December 8-9.

Season	Fisher Harvest	Otter Harvest	Bobcat Harvest
2006-2007	354	65	35
2007-2008	181	19	14
2008-2009	133	26	31
2009-2010	156	23	24
2010-2011	145	28	39
2011-2012	175	64	65

Permit information for treaty hunters

(Continued from page 4)

Big game permits

Deer Hunting Permit—You must obtain a deer permit and associated carcass tags if you wish to hunt deer. For each carcass tag you obtain (the number is set by your tribe), you will receive a stamp on your hunting license. This permit is valid for all three states. Once you harvest a deer, you are required to register it by the 3rd working day. There is no limit on the number of deer one may harvest.

Black Bear Permit—You must obtain a bear permit and associated carcass tag if you wish to hunt bears. For each carcass tag you obtain, you will receive a stamp on your license. Once you harvest a bear, you are required to register it by the 3rd working day. This permit is valid in all three states.

Permits are available at your tribal conservation departments or the local GLIFWC registration site. If you have questions or need more information, contact GLIFWC at (715) 682-6619.

Trapping Permits—As with hunting, there are several different trapping permits available depending on what, when and where you are trapping.

General Trapping—General trapping permits are required if you wish to trap any species for which there is no tag or any registration requirement. Species such as muskrats, beaver, fox, coyote etc. are included in this permit. In order to trap any fisher, otter, bobcat or marten you must have a specific permit for these species.

Fisher Trapping Permit—If you wish to trap fishers, you must obtain a fisher trapping permit and associated carcass tags. You will receive a stamp on your license for each carcass tag you receive. When you trap a fisher, you are required to register it by the 3rd working day after harvest. This permit is valid in all three states.

Otter Trapping Permit—If you wish to trap otters, you must obtain an otter trapping permit and associated carcass tags. You will receive a stamp on your license for each carcass tag you receive. When you trap an otter, you are required to register it by the 3rd working day after harvest. This permit is valid in all three states.

Bobcat Trapping Permit—If you wish to trap bobcats, you must obtain a bobcat trapping permit and associated carcass tags. You will receive a stamp on your license for each carcass tag you receive. When you trap a bobcat, you are required to register it by the 3rd working day after harvest. This permit is valid in all three states.

Marten Trapping Permit—If you wish to trap martens, you must obtain a marten trapping permit and associated carcass tags. You will receive a stamp on your license for each carcass tag you receive. When you trap a marten, you are required to register it by the 3rd working day after harvest. This permit is valid in Michigan and Minnesota only.

Fur industry looks for another good year

Beaver—Last season, Fur Harvesters Auction's (FHA) highly regarded beaver collection produced superior results, especially on the better grades, and they anticipate prices will continue to do well.

Wild Mink—FHA predicts quality, seasonal mink will see good demand.

Otter—Otter prices dropped unexpectedly last spring. FHA believes the drop was not the fundamental lack of demand or over supply, but probably a lack of liquidity with the otter buyers. They expect prices to bounce back.

Fisher—FHA predicts clear, (color 1 & 2) excellent quality females will do very well. Large males are mainly used for trim and should sell at recently established levels. Low quality and damaged skins will continue to struggle. (*Trapper & Predator Caller Magazine* predicts prices around \$70-\$75 with the potential of reaching \$90 for a high quality pelt.)

Muskrat—FHA predicts excellent demand. Drought conditions across much of North America will limit supply. A good target item for trappers.

Raccoon—FHA says raccoon is likely the best value. The trade is slowly awakening to this fact. (*Fur-Fish-Game Magazine* predicts \$8-\$10 for early, heavy northern raccoons, with the very best select skins getting \$20.00.)

Red Fox—FHA expects prices to remain favorable, suggesting this is another good item for trappers. Good demand for well-marked cross and silver fox. (*Fur-Fish-Game Magazine* predicts prices around \$30-\$40 for skins.)

Coyote—FHA predicts heavy westerns should see decent demand, as will better colors in the heavy easterns. Off color, seconds and damages will continue to be cheap. Low grades will have little to no value with no reward for skinning low grades. FHA encourages trappers to be very selective on what they put up. (*Fur-Fish-Game Magazine* predicts the high quality pale skins to move at \$75-\$85 with ordinary pales moving around \$50-\$60; semi-heavy types at \$25-\$35.)

Bobcat—Expect another strong year, according *Trapper & Predator Caller Magazine*, pelts have exceeded \$200 in 2011 and 2012. The five year average is about \$178.

For information from a local buyer, Groenewold Fur and Wool Company, see www.gfwco.com.

—Compiled by Sue Erickson, Staff Writer

"The 2011-2012 fur marketing season was spectacular, surpassing the previous year's historical sales by 47%. Price increases and a substantial jump in shippers made this all possible... We feel conditions will remain for yet another great season. The key now is a timely start to winter in the two major fur consuming nations of China and Russia. If this happens the wheels will be in motion for the January 2013 round of auctions."

— *Fur Harvesters Auction Inc., Wild Fur Market Forecast, October 2012*

Fall waterfowl season brings new opportunities to 1837 & 1842 ceded territory hunters

By Peter David
GLIFWC Wildlife Biologist

Odanah, Wis.—The fall off-reservation waterfowl season offered some new or expanded hunting opportunities to tribal hunters in the 1837 and 1842 ceded territories, including an increased bag limit with no duck species restrictions, an earlier start to the duck season, and the first ever Sandhill crane season.

Although the duck bag limit increased from 30 to 50 ducks, and restrictions on black ducks, pintails and canvasbacks (no more than nine each in 2011) were removed, biologists don't anticipate this change will significantly affect total tribal harvest. Like state-licensed hunters, tribal waterfowl hunters currently average less than two ducks harvested per hunting trip, so increasing the bag has relatively little impact. Nevertheless, for the fortunate hunter who happens to be in just the right place at just the right time, this increase could allow more ducks to make it to the family dinner table.

Tribal duck hunters will also have more days to pursue their quest, as the duck opener was moved up 11 days to September 4 this year. This change may have lured more hunters out in the early season, as only Canada geese could be taken during this period in previous years.

Finally, the first ever Sandhill crane season made it onto the books in 2012. Since this is a new hunt, phone-in registration of all Sandhills harvested is required, and while

the number of birds registered so far—just two—is very small, the expanding populations of Sandhills could provide another reason for tribal waterfowl hunters to take to the field.

Despite these changes and others that have been made over the years, it has remained challenging to create a tribal waterfowl season that provides a true subsistence harvesting opportunity. As noted above, waterfowl hunting success tends to be quite limited under existing hunting provisions, and subsistence harvesting requires a certain level of efficiency to be attractive to individuals trying to provide for themselves, their families and others in the community. Providing more opportunity to hunt using methods of limited efficiency doesn't really enhance the subsistence harvest. For this reason, GLIFWC continues to work with tribal representatives and the US Fish and Wildlife Service to try and improve tribal regulations each year.

One more opportunity that will be explored for next fall is a tundra swan season. Tundra swans are relatively abundant birds and are currently hunted in several states outside the ceded territory. One challenge that tribal managers will face is protecting the much less common, but nearly identical looking trumpeter swans. However, through careful timing of the season and limiting the hunt geographically to areas heavily used by tundra swans but with relatively little trumpeter presence, it may be possible to add this species to the list of waterfowl available to tribal hunters.



Good news for lake trout recovery

GLIFWC assessment nets haul in a record number

By Bill Mattes, GLIFWC Great Lakes Biologist

Silver City, Mich.—As Gichigami (Lake Superior) begins to cool down, namekos (lake trout) seek out rocky reefs to spawn. Reefs pepper the shoreline of Michigan's Upper Peninsula, and from Union Bay reef just outside of Silver City to Big Bay Reef near Marquette, the GLIFWC crew of Mizhakwad ply the waters to set nets which provide an annual assessment for lake trout spawning stocks.

The assessment identifies discrete stocks and determines lake trout distribution, relative abundance and biological characteristics in the 1842 Treaty ceded area within Michigan waters of Lake Superior. These waters are important to the inter-tribal commercial fishery which provides about 40 part and full time jobs to tribal members. Adikameg (lake whitefish) are the primary fish sought in the fishery; however, lake trout are likewise important to the fishery. Lake trout provide a high-end meal at local restaurants and are sold as a smoked fish product.

Ecologically, lake trout are important—they are a key predator on the invasive species rainbow smelt and are the key prey of the invasive sea lamprey. Without lake trout, smelt numbers would increase, and sea lamprey would find other fish to prey upon. Both would be bad for whitefish as smelt are known to prey on young whitefish, and sea lamprey will switch to whitefish as prey in the absence of lake trout.

At Union Bay reef, near Silver City, Michigan on the western end of Michigan's Upper Peninsula, the crew of Mizhakwad handled a record 586 lake trout, of which 495 were tagged and released during the October 15 to 18, 2012 assessment. This is good news. Waters adjacent to Union Bay reef were stocked with 1.9 million lake trout between 1965 and 1995 in an effort to rehabilitate lake trout in Lake Superior. In 1988, the first year GLIFWC assessed the stock at Union Bay, 135 of the 336 lake trout handled were hatchery fish; in 2012 only 3 of 586 were hatchery fish—indicating that wild lake trout have returned in abundance to Union Bay reef!

Since 1985, GLIFWC and its member tribes have worked cooperatively with the State of Michigan to assess the lake trout stock and limit mortality by setting lake trout harvest quotas for the inter-tribal fishery in Michigan waters of Lake Superior. Further monitoring and assessment and continued cooperative management should ensure namekos remain sustainable into the future for generations of fishers to come.



The crew of Mizhakwad (clockwise from bottom left). Dave Parisien boxes the net; Sam Quagon prepares to record data; Mike Plucinski captains the boat, and Ed Leoso awaits the first fish. (photo by S. Ben Michaels)



Ed Leoso removes namekos to be tagged and released at Buffalo Reef near Gay, Michigan. (photo by S. Ben Michaels)

Keeping track of name' (lake sturgeon)

Population going up near Bad River

By Bill Mattes, GLIFWC Great Lakes Biologist

Odanah, Wis.—The trend is positive for name' (lake sturgeon) near the mouth of the Bad River. Relative abundance, which is the number of name' captured divided by the amount of net set, has trended in a positive direction since 1995 (see graph).

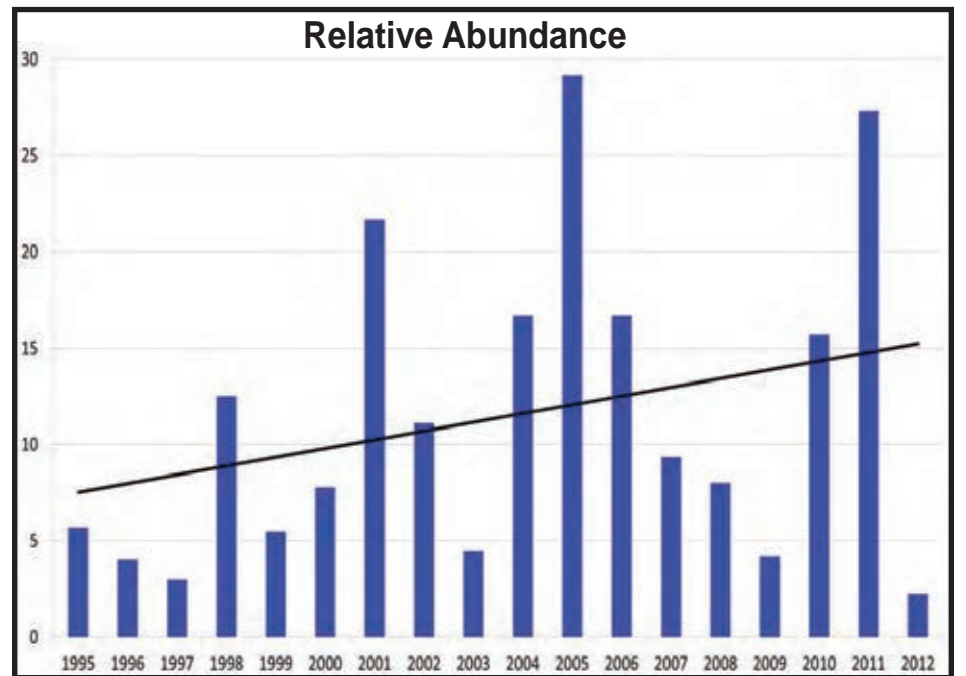
During this time, Great Lakes Technician Mike Plucinski has led the efforts to assess name' by setting asab (gill nets) in Gichigami (Lake Superior) near the mouth of the Bad River. The study was initiated in 1994 in anticipation of the Lake Superior Technical Committee's lake sturgeon rehabilitation plan, which directs agencies "to collect information on the biological characteristics of lake sturgeon in an effort to develop workable management strategies." (http://www.glf.org/pubs/SpecialPubs/2003_02.pdf). The work is done in cooperation with the Bad River Natural Resources Department and the Ashland Fishery Resources Office, and focuses on studying the biology and distribution of name' in and around the Bad River Reservation's boundary with Lake Superior.

Plucinski's crews captured, tagged, and released 476 name' off the mouth of

the Bad River during the summer assessments, which run from late-June to early-September. Captured name' are scanned for passive internal transponder (PIT) tags, which are small glass cylinders inserted into fish prior to release. Those without a PIT tag received one courtesy of the GLIFWC staff members. In addition to the PIT tag each fish gets an individually numbered Floy tag. The tags individually identify a fish so that its movement and growth can be tracked over time.

Fish tagged by GLIFWC staff have been recaptured during assessment netting near the mouth of the Bad River, by Wisconsin DNR nets set for lake sturgeon in Chequamegon Bay near the Ashland breakwall and for lake trout off the mouth of the Bad River. Tagged name' have also been caught by fishers fishing from Marble Point (five miles east of the Bad River mouth) to LaPointe, Wisconsin on Madeline Island to Houghton Point in Chequamegon Bay.

In 2010 a fish tagged as a juvenile was recaptured during the spring spawning run for the first time since the surveys began. Name' do not spawn for the first time until they are between 7 and 14 years old for males and females, respectively. Fish captured during the summer surveys are generally less than seven years old.



Relative abundance (solid bars) and trend line for name' sampled off the mouth of the Bad River, Wisconsin by GLIFWC crews during 1995-2012.



Jessica Raikes, Northland College intern, removes a juvenile name' from a gill net set off the mouth of the Bad River. (photo by Mike Plucinski)



What Tsagaglallal sees today

GLIFWC's Northwest counterparts recover Columbia River fisheries

By Sue Erickson, Staff Writer

Portland, Ore.—This year Tsagaglallal (She who Watches) watched as a record number of sockeye salmon returned up the Columbia River since the Bonneville Dam first blocked their passage in 1933. She has been watching from her high perch on a rocky hillside as the indigenous people of the Columbia River basin have struggled to recover their once abundant fishery under threat from a series of dams erected over the years. These power-generating dams have blocked the fish from their spawning grounds, resulting in a dramatic decline in returning salmon and Pacific lamprey—food relied upon by Tsagaglallal's people for centuries.

Tsagaglallal watched as the fishery faltered and her people's traditional fishing grounds, such as the popular Celilo Falls, were flooded over and lost. But this year, she must have smiled in her heart to watch greater numbers of salmon return up the great gushing Columbia River.

She could also smile to see in-lieu fishing sites finally completed for the treaty fishers—long promised by the federal government in compensation for the flooding of traditional fishing areas. In-lieu sites are designated areas for tribal fishers only and include boat access roads, parking, boat ramps, docks, fish cleaning tables, net racks, drying sheds, restrooms, shelters and mechanical buildings. The last of 31 sites was completed and dedicated in 2012. "The sites are a good sign of progress and show that we can accomplish these things when we work together," says Sara Thompson, public information officer for the Columbia River Inter-Tribal Fish Commission (CRITFC).



Tsagaglallal (She who watches) an ancient petroglyph in the rocky hills of the Columbia gorge. (photo by Sue Erickson)

Tsagaglallal "She who Watches"

Back when the world was young, there was a woman named Tsagaglallal (suh-GOG-la-lall) who was the chief of all who lived in this region. This was a time when the animals lived, spoke, and acted like humans and the humans were not yet real. When it was time for the world to change, Coyote came to this place and asked the inhabitants if they were living well or ill. Each in turn sent him to Chief Tsagaglallal, who lived up on the basalt cliffs overlooking her village and the river. From there she watched the village and all its happenings.

Coyote climbed up to the house on the rocks and asked Tsagaglallal, "What kind of life do you give these people? Do you treat them well or are you one of those evil women?"

"I am teaching them to live well and build good houses," Tsagaglallal responded. To see the true nature of her heart, Coyote asked Tsagaglallal what her greatest wish could be.

"I desire to be able to watch over my people forever, she said. "Soon the world will change and women will no longer be chiefs," responded Coyote. But being the trickster that he was Coyote found a way to grant her desire by changing her into a rock. He then promised "Tsagaglallal: "You shall stay here and watch over the people and the river forever."

Tsagaglallal still watches over her people, eternally gazing on the source of their health—the Columbia River—with her large watchful eyes.

—oral story from tribal elders along the Columbia River



CRITFC staff work inside the mammoth Bonneville Dam, designed to bring migrating salmon into the system for monitoring purposes. Amid a constant roar of water, Agnes Strong and Crystal Chulik, record salmon statistics as a handler calls them out. Scale samples are taken for age composition and a fin clip for genetics. (photo by Sue Erickson)

Committed to the recovery of the fishery on which the tribal culture depends, CRITFC and its member tribes have been involved in salmon recovery since its inception in 1977 and more recently to the recovery of Pacific lamprey, also a traditional food used at feasts and ceremonies.

CRITFC, representing four Columbia River tribes, is testimony to their commitment to return of the salmon and the recovery of the Columbia River fisheries. Between the tribes and CRITFC, 450 staff work towards the goal of fish recovery in the Columbia basin. Numerous hatcheries run successful programs, putting fish back into the system, while also watching the genetics of the strains they raise and release. Thompson mentions the Snake River fall chinook as an example. Once on the brink of extinction, today there is potential the species may be delisted. Tribes have used state-of-the-art hatchery management practices to rebuild the run while maintaining the integrity of the population.

CRITFC maintains a genetics laboratory outside of Boise, Idaho, that completes genetic testing for the tribes. There is some thought that the contributions of hatchery fish may contribute to the genetic ability to adapt to warmer temperatures, which could be a significant attribute in the future.

Yes, climate change is another issue confronted by the recovering salmon. Things are changing, Thompson says, like the spring run-offs are later. Freshet timing is off, changing the timing of the salmon run. The spring chinook run, spurred by flows and temperatures has become later and later. This is a story in progress; the ability of the fish to adapt to changing climate has yet to unfold.

While hatchery production has aided in the resurgence of salmon, installation of fish ladders at dam sites as well as dam removal in some areas have also played a large role.

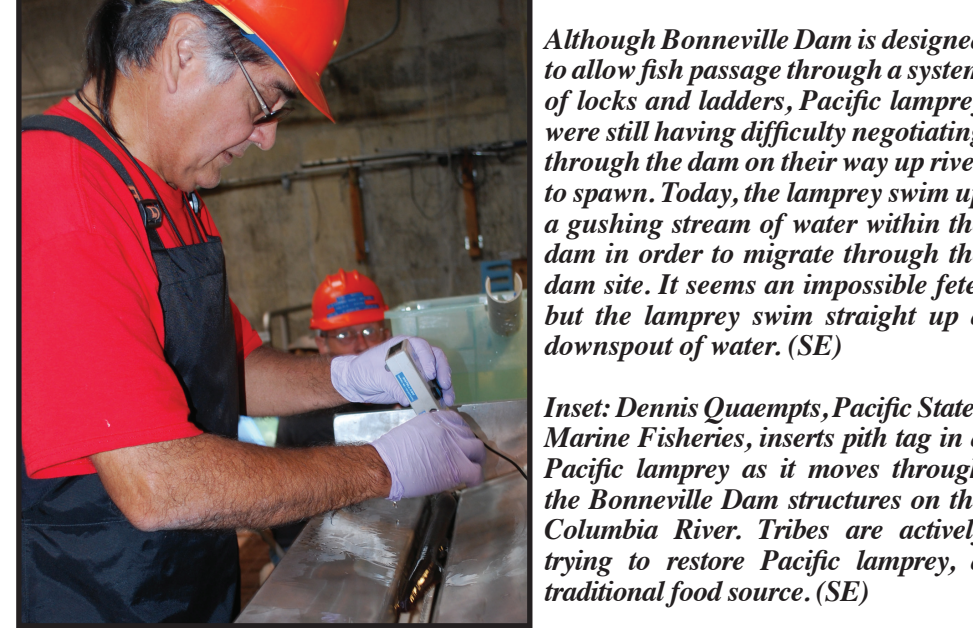


A Bonneville Dam fish ladder allows passage for salmon up the Columbia River to spawn. Accommodations for the fish have resulted in stronger runs being seen upriver. (SE)

At the gigantic Bonneville Dam which stretches between the states of Washington and Oregon on the Columbia River, passage for adult fish is part of the design after the original lock was replaced in 1993. The structure features two powerhouse and 18 spillways allowing adult fish to pass through the dam and head up the river to spawn.

According to Ben Hausmann, supervisory fisheries biologist at the Bonneville Dam site, fish issues now dictate how the dam is run, and it currently accommodates passage for nine months out of the year, allowing passage for spring, summer and fall runs. Special sluiceways with a rapid flow also form a juvenile by-pass system allowing the youngsters to move out quickly.

Bonneville also tries to accommodate passage of Pacific lamprey, a species estimated to be 450 million years old. Like the salmon, they have been cut-off from their spawning grounds by dams, and their numbers seriously diminished. Hausmann says the lamprey had difficulty transversing the passages designed for salmon, seemingly unable to negotiate a 90 degree angle. Consequently, special passageways have been created, including a fast-flowing, 30-foot stream of water that the snake-like lamprey miraculously climb up—a phenomenon difficult to imagine.



Although Bonneville Dam is designed to allow fish passage through a system of locks and ladders, Pacific lamprey were still having difficulty negotiating through the dam on their way up river to spawn. Today, the lamprey swim up a gushing stream of water within the dam in order to migrate through the dam site. It seems an impossible feat, but the lamprey swim straight up a downspout of water. (SE)

Inset: Dennis Quaeempts, Pacific States Marine Fisheries, inserts pith tag in a Pacific lamprey as it moves through the Bonneville Dam structures on the Columbia River. Tribes are actively trying to restore Pacific lamprey, a traditional food source. (SE)

Inside the Bonneville dam, CRITFC maintains staff hard at work monitoring fish as they pass through the system and gathering data on both salmon and Pacific lamprey—the necessary task of establishing a comprehensive data base. A complex system of spillways guides a certain number of returning fish through the monitoring spillways where they are momentarily delayed for the necessary measurements, like length, girth and weight. Scale samples are taken for age composition and a fin clip for genetic research. In the case of the Pacific lamprey, a pith tag is also inserted.

But dams are not the only issue plaguing salmon recovery today. CRITFC now faces sea lions! It all began in the mid-2000s, Thompson says, and was triggered by high run of chinook that were followed by the hungry sea lions. They found an ideal spot at Bonneville's second powerhouse to catch breakfast, lunch and dinner where salmon converged to head up-river. Comprised of male sea lions who feast on sturgeon come February and salmon later in the year, these voracious fish predators put a significant dent in salmon numbers.

Because they remain protected under the Marine Animal Protection Act, the tribes have no removal authority but are involved in the decision-making in regard to the sea lion issue, Thompson says. Some repeat offenders are removed, perhaps relocated to a zoo; otherwise, CRITFC participates in hazing the animals—a perfect job for college interns who create an unpleasant disturbance for the picnicking sea lions by using cracker shells or seal bombs, a type of underwater bomb, to keep them downstream of the dam and away from the vulnerable fish.

While so much effort goes towards protecting and recovering the fishery, CRITFC's end goal is to provide a plentiful harvest for tribal fishers. Known as the Salmon People of the Columbia River, tribal society there dates back thousands of years. The tribes' reliance on salmon and Pacific lamprey is an inseparable part of their culture and existence—economic, subsistence, and spiritual. Much as their forefathers did, tribal fishermen still use scaffolding along the steep banks of the Columbia gorge to fish, using large, long-handled hoop nets to scoop the fish from



Tribal fishing scaffolds with hoop nets used by tribal fishermen in the Columbia River—a traditional form of fishing. (SE)

the running water. Sadly, one of the most popular traditional fishing grounds at Celilo Falls no longer exists—a magnificent falls lost in flooding when the Dalles Dam was closed. Celilo Falls is now Celilo Lake. The roar of the mighty falls lost forever.

Part of CRITFC's role involves assisting with marketing tribally caught fish. Currently, commercial fishing and fishing techniques is dependent on the size of fish runs. If it is plentiful, tribal members can sell fresh fish, usually at local, over-the-bank fish stands where purchasers eager for the taste of really fresh fish can find it.

CRITFC sponsors a Tribal Fish Expo in the summer focused on marketing. "We highlight safety," Thompson says, "demonstrating things like proper techniques for icing fish and ways to improve quality."

CRITFC offers another necessary service to its tribes—that of enforcement. While CRITFC's administrative office is downtown Portland, CRITFC enforcement is stationed along the Columbia River, convenient for boat launch and on-water patrols. CRITFC officers patrol about 150 miles on the Columbia in an area designated as Zone 6 extending from below the Bonneville dam up river to the McNary Dam. Enforcement also maintains an East Office and a Celilo Village Office. With a force of 13 officers and six support staff, CRITFC shares federal and state jurisdiction in Washington and Oregon with full criminal jurisdiction in the river corridor. According to CRITFC Captain Jerry Ekker. "Our goal is to keep our fishers safe on water and on land." Safety is a focus of CRITFC's member tribes, and they recently passed rules requiring safety gear on boats as well.

While monitoring the fishery is a primary task, CRITFC enforcement also is responsible for protection of the resources, monitoring and maintaining the in-lieu fishing sites, and, uniquely, protecting archeological sites. "With 10,000 years of proven occupation on the Columbia, there are many areas of archeological and his-



Officer Christine Teger and Captain Gerry Ekker stand beside one of CRITFC's three patrol boats, the Rod Henry, named after a former officer. CRITFC's enforcement emphasizes safety for the tribal fishermen, and officers patrol about 150 miles of the Columbia River. (SE)

CRITFC member tribes

Established in 1977, the Columbia River Inter-Tribal Fish Commission employs 110 staff and focuses on the main stem of the Columbia River system, while its four member tribes manage the tributary systems. Under *US v. Oregon*, the tribes have co-management authority implemented through a ten-year fisheries management agreement between the tribes and the state with conflict resolution procedures in place.

CRITFC provides technical services for the management of the fisheries, including enforcement, and acts as a coordinating agency for its member tribes.



Family business built from the ground up

Peterson Fish Market celebrates 20 years

By Sue Erickson, Staff Writer

Hancock, Mich.—Although Gilmore and Pat Peterson celebrated the 20th year of their successful fish market in 2012, Gilmore actually has spent a lifetime aboard commercial fishing tugs on Lake Superior and has weathered Gichigami's many moods while making a living for his family.

A Red Cliff tribal member and a fourth generation commercial fisherman, Gilmore learned the trade from his father Wilfred, the same as Wilfred learned from his father. Today, Gilmore's three sons, Chris, Joel and Matt, ply the waters aboard the tugs Three Sons and more recently, the Charleen. Through the seasons they bring in the all-important catch of whitefish and lake trout that support their families—all of whom work at the Peterson's Fish Market in Hancock, Michigan and the adjacent "fish and chips" café, Four Suns. "We all work here," says Pat, Gilmore's bride of 43 years, "sons, daughter-in-laws, grandkids; we all work here processing fish or in the café." Petersons employ nineteen people about two-thirds of those are family.

It's hard work for all, says Pat, pleased the business has grown as a result of that hard work. "We started here twenty years ago, with twenty dollars in the till. We made twenty dollars the first day, and I thought—well, at least we have twenty more dollars than we had in the morning."

The Petersons are committed to regularly supplying fish to restaurants, grocery stores, their own Four Suns café, and keeping a stock in their store where locals and tourists stop in to buy fresh or smoked fish.



Gilmore Peterson and his fishing tug, Three Suns. Gilmore has spent his life fishing on Gichigami. (photo submitted)

Once the fish are in, hours of filleting keep family members busy with flashing knives and packing.

Trained in the federal process for safe food handling, Petersons attend to all the necessities of making sure the fish are processed properly from start to finish so they can deliver a clean, healthy and delicious product to their customers.

The work is intense and constant, seven days a week and sometimes requiring eating on-the-run. While some filet and pack fish for shipping, other family members are busy at the unique and nautical Four Suns café, serving up delicious meals of fresh whitefish and lake trout to customers who enjoy their meal on an expansive, open deck. The café



Four Suns Fish & Chips expanded to add a dining deck where patrons can enjoy the view and fresh air along with the fresh fish. Starting with one small trailer, the fish and chips shop has taken on new dimensions and will be adding more kitchen space and an indoor dining room. (photo by Sue Erickson)



Caught in the morning—on the filet table by noon. Peterson's grandson Derek and son Matt filet the morning's catch at Peterson's Fish Market, a family operated business in Hancock, Michigan. (photo by Sue Erickson)

attracts a bustling business, with a spreading reputation for delectable fish. They even had a couple customers arrive by helicopter.

And there are more plans down the road. Chris is avidly pursuing "green" products—ways of dealing with waste and using the entire fish, possibly for pellets, fertilizer or even fish oils. The café will expand and provide more indoor seating and a larger kitchen, and Pat foresees a gift shop.

The Petersons are part of a long tradition of commercial fishing among Wisconsin's Lake Superior tribes. Avid subsistence fishermen prior to European settlement, the Lake Superior Ojibwe quickly found Gichigami's fish to be a valued trade item once explorers penetrated to this inland sea. Tribal fishermen traded fish harvested from birch bark canoes, using gill nets made from twisted and knotted strips of willow bark.

As more and more settlers pushed into the Lake Superior region, non-Indian commercial fishing began to take hold with the use of large boats and massive nets. In fact, the 1930s fishing boom, coupled with the introduction of the lake trout-killing sea lamprey via shipping, nearly devastated the lake trout population by 1960 and severely diminished other Lake Superior species, such as whitefish.

Since that time state regulations have been in place to aid in the recovery of the fishery with stricter limits on commercial fishing. State regulations were applied to tribal fishermen as well, despite their treaty-retained right to hunt, fish and gather in ceded territories and Lake Superior. In order to assert the treaty right, Red Cliff's former tribal chairman and commercial fisherman Richard Gurnoe went to court. In 1972, the Wisconsin Supreme Court affirmed the treaty right for signatory tribes to commercially fish Lake Superior and to self-regulate that fishery in the Gurnoe decision.

Ultimately, the treaty tribes formed the Great Lakes Indian Fish & Wildlife Commission (GLIFWC) to jointly manage the Lake Superior tribal commercial fishery as well as off-reservation inland hunting, fishing and gathering activities in the ceded territories.

Tribal commercial fishermen in Lake Superior primarily target adikameg (whitefish), but also fish for lake trout, siscowet, herring, and salmon. Tribal commercial fishing is regulated through tribal codes as well as through negotiated agreements with the state of Wisconsin for the Wisconsin waters of Lake Superior. Quotas are set and adhered to. GLIFWC and tribal fisheries biologists monitor the fishery through annual assessments and work with state, federal and tribal agencies on restoration and enhancement efforts as well as participate in the Great Lakes Fishery Commission, an international convention. GLIFWC wardens as well as tribal wardens enforce tribal codes on tribal commercial fishing activity and cite violations into tribal court. Many of the tribes maintain hatcheries stocking species such as oga (walleye), asaawe (perch), namekos (lake trout), and coaster brook trout.

GLIFWC staff also assist with marketing efforts, providing training in fishing handling techniques to assure high quality products that meet federal safety standards.

The tribes and GLIFWC are watchful of Gichigami, thankful for the sustenance it has provided through generations. Maintenance of a strong fishery with healthy fish, free from pollutants, is important to the fishing tribes. Consequently, both tribal and GLIFWC staff work to preserve and enhance this tremendous resource, watchful for potential negative impacts from developments and invasive species.

The family-owned and managed Peterson's Fisheries is one of several fish businesses run by tribal families. They are inter-generational family businesses, proud of their products, built battling Gichigami's variable moods, and stem from an ancient lifestyle that has long supported the native people on Gichigami's shores.

Essential Ojibwemowin
adikameg—whitefish



Enforcement news briefs

By: Sue Erickson, Staff Writer & Heather Naigus, Eastern District Warden

GLIFWC officers assist in marijuana bust

Ten GLIFWC officers were among about 200 federal, state, county, and tribal law enforcement personnel involved in the investigation and August 29 bust of a marijuana growing operation in Wisconsin. Found in the Chequamegon-Nicolet National Forest (CNNF), the large-scale operation about 60 miles northwest of Green Bay near the town of Lakewood was eradicated. Seven people were arrested in conjunction with the bust.

Multiple cultivation sites containing thousands of marijuana plants made eradication a major effort. The bulk of the plants were destroyed and others retrieved for evidence, according to Great Lakes Indian Fish & Wildlife Commission's (GLIFWC) Chief of Enforcement Fred Maulson.

GLIFWC officers assisted with perimeter control during the operation. GLIFWC has assisted with similar busts over the past three years, including the 2011 eradication of another CNNF marijuana grow site in Ashland County, Wisconsin.

Because of the increased incidence of marijuana cultivation within the ceded territories, Maulson says GLIFWC officers receive additional training focused on increased awareness and the potential of confrontation with growers.

GLIFWC officers participate in training

Ten GLIFWC officers traveled to South Carolina this fall to participate in a five-day course on "man tracking" offered by the Federal Law Enforcement Training Center.

GLIFWC officers also assisted with "observation-and-tactical" training during the Native American Fish and Wildlife Society's Midwest Region annual conference at the Bay Mills reservation in Michigan last September.

Moccasin making class

GLIFWC Officers Mike Popovich and Lauren Tuori were pleased to partner with Rosalie Gokee, LCO Legal Department secretary, for a Moccasin Making class in Lac Courte Oreilles (LCO) this fall. Youth gathered for the workshop over the weekend and were treated to an educational experience that counted towards college credit at the LCO Ojibwe Community College (LCOOCC).

GLIFWC provided food and support while Gokee instructed the kids in constructing moccasins from start to finish. Gokee also educated the LCO and Bad River participants on the cultural history and relevance of moccasins and Native Americans.

Described as an amazing experience by the participants and staff, GLIFWC sends a big MIIGWECH (thank you) to Gokee and all who participated. This free workshop was sponsored by a grant through the partnership of LCOOCC and GLIFWC Law Enforcement Division. GLIFWC looks forward to continuing to build upon this workshop in the future

GLIFWC Warden Heather Naigus, appointed Chair of Great Lakes Law Enforcement Committee

GLIFWC would like to congratulate Eastern District Warden, Heather Naigus, who became the Chair of the Great Lakes Law Enforcement Committee (LAW) this fall.

LAW is a committee of the Great Lakes Fisheries Commission that serves to protect, enhance and promote the safe and wise use of the natural resources in the Great Lakes for present and future generations. LAW is made up of law enforcement representatives from resource agencies around the Great Lakes, including Canada.

Editor's note: See News Briefs, page 7 for upcoming events.



A new airboat became part of the GLIFWC Enforcement Division's arsenal of rescue equipment this fall. Manufactured by Diamondback Airboats in Florida, the 24-ft. boat is capable of going on land, water and ice, and can reach speeds over 50 miles-per-hour on ice. Four GLIFWC officers participated in a three-day training that was part of the purchase deal. Trained officers include Dan North, Tom Kroplin, Steve Amsler, and Jim Stone. Currently, at the GLIFWC main office in Odanah, Wisconsin, the airboat is mobile and available on an as-needed basis 24 hours, round the clock. (photo submitted)

2012/2013 GLIFWC enforcement youth activities/education

Class	Date	Place	Contact
Trapper Ed.	December 8-9, 2012	St. Croix	Brad Kacizak 715.562.0030
ATV	Dec. 15-16, 2012	Mille Lacs	Robin Arunagiri 715.889.0734
Snowmobile	February 7-9, 2013	Bad River	Vern Stone 715.292.8862
ATV/ Snowmobile	Feb. 16-17, 2013	Mole Lake	Roger McGeshick 715.889.3200 Adam McGeshick 715.209.7217
Trapping 101	March 4-5, 2013	Mille Lacs	Robin Arunagiri 715.889.0734
Boater Safety	May 11-12, 2013	Lac Courte Oreilles	Mike Popovich 715.292.7535 Lauren Tuori 715.292.8343
Boater Safety	May 18-19, 2013	St. Croix	Brad Kacizak 715.562.0030
ATV	June 6-8, 2013	Bad River	Vern Stone 715.292.8862
Boater Safety	June 10-12, 2013	Lac du Flambeau	Jonas Moermond 715.562.0026 Riley Brooks 715.562.0300
ATV/ Snowmobile	June 17-19, 2013	Lac du Flambeau	Jonas Moermond 715.562.0026 Riley Brooks 715.562.0300
ATV/ Snowmobile	June 18, 21-22, 2013	Red Cliff	Mike Soulier 715.209.0093 Jim Stone 715.292.3234
Boater Safety	July 18-20, 2013	Bad River	Vern Stone 715.292.8862
Hunter Safety	July 20-21, 2013	Lac Vieux Desert	Matt Kniskern 715.292.5320
Hunter Education	August 12, 19-20, 2013	Lac du Flambeau	Jonas Moermond 715.562.0026 Riley Brooks 715.562.0300
Hunter Education	Aug. 18, 24-25, 2013	Mole Lake	Roger McGeshick 715.889.3200 Adam McGeshick 715.209.7217
Take a kid fishing	Aug. 19, 2013	Mille Lacs	Robin Arunagiri 715.889.0734
Hunter Safety	Aug. 24-25, 2013	Lac Courte Oreilles	Mike Popovich 715.292.7535 Lauren Tuori 715.292.8343
Hunter Safety	Aug. 24-25, 2013	St. Croix	Brad Kacizak 715.562.0030
Hunter Safety	Aug. 27, 30-31, 2013	Red Cliff	Mike Soulier 715.209.0093 Jim Stone 715.292.3234
Hunter Safety	September 6-7, 2013	Mille Lacs	Robin Arunagiri 715.889.0734
Hunter Safety	Sept. 12-15, 2013	Keweenaw Bay	Steven Amsler 715.562.0034 Matt Kniskern 715.292.5320
Hunter Safety	Sept. 24-28, 2013	Bad River	Vern Stone 715.292.8862
Trapper Ed.	October 19-20, 2013	Mole Lake	Roger McGeshick 715.889.3200 Adam McGeshick 715.209.7217
ATV Safety	October 25-26, 2013	Mille Lacs	Robin Arunagiri 715.889.0734
ATV/Snow.	December 7-8, 2013	St. Croix	Brad Kacizak 715.562.0030
Snowmobile	Dec. 19-20, 2013	Mille Lacs	Robin Arunagiri 715.889.0734

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



Lauren Touri, GLIFWC conservation officer (far right), works with Lac Courte Oreilles (LCO) youth during a moccasin making class taught by Rosalie Gokee, LCO. (photo submitted)

GLIFWC's Mr. Manoomin, a music man at heart

By Sue Erickson, Staff Writer

Grand Rapids, Minn.—When manoomin (wild rice) dishes appear at GLIFWC feasts or on the tables of staff at holidays, there's a good chance it came from Jim Merham, a White Earth tribal member known regionally as a manoomin processor. Annually, GLIFWC purchases manoomin from Jim as well as maple syrup, both used for gifts or feasts as well as for a small stash for staff who want to purchase a pound or two of the "good berry."

GLIFWC's first contact with our "Mr. Manoomin," supplier of wild rice, came at one of the early, frosty ceremonies at Sandy Lake, Minnesota in December 2000. Hearing about the sunrise ceremony to take place on the radio, Jim arrived around 5:30 a.m. on a morning that sparkled with frost-laden branches, and then he waited and waited until everybody else, apparently with a different concept of sunrise, arrived around 8:00 a.m. or after. Since that morning, he has been a regular at the annual ceremonies commemorating the tragic events at Sandy Lake, at one time the home of his ancestors before they were removed to White Earth.

Currently, a resident of Grand Rapids, Jim learned many of his native skills from his grandparents at White Earth, participating as a youth in full-blown family ricing camps each fall with grandma and grandpa, aunts, uncles, cousins, sisters and brothers. Similarly, he learned to tap the maples in the spring. He still participates in both activities, but has brought them to a new level—with automation and technology.

He is able to tap from 1,700 to 2,500 maple trees, using a mechanized hose and vacuum system within a large maple stand. However, after two poor springs, he has now brought his equipment home and plans to tap locally. Changing weather patterns have made for poor maple sap runs which rely on a "freeze-at-night—thaw-in-the-day" pattern.

Come fall, he returns to White Earth to rice, then heads back home to start up his processing. "Once that starts, I'm at it all day until its done, non-stop." Currently, he has five parchers. Jim processes manoomin for individuals and for the White Earth tribe—this year that turned out to be 9000 pounds of finished rice—11,000 pounds short of what the tribe had hoped for. As with maple sap, the manoomin harvest was poor this season.

A conscientious harvester himself, Jim has no patience for the "early birds"—people who begin ricing before its ready. "They bring it to me to process two weeks before the rice is even ready. I won't do it. They have to wait. You have to wait until the rice is dark brown, almost black and falls easily," he says. He also gets impatient with folks that pound the rice, breaking the stalks and harming the plants, conscious that such harvesting techniques destroy chances for regeneration.

Jim also harvests birch bark, strips basswood like his Grandma told him and in the 1960s built 22 wiigwaas jiimaan (birch bark canoes). Years ago he used a 14-foot birch bark canoe when trapping, but traded it for a new Remington. He also brain tans hides, another skill taught by Grandma on the rez. By trade, Jim is a carpenter and cabinet-maker. In fact, he traded a custom bathroom cabinet for a parcher and huller when he was starting up rice processing.

But with all that said, Jim is really a man of music, in love with his several guitars and those country tunes—and that's where he spends his spare hours.

Actually, Jim, his brother Gerry and sister Elizabeth performed as the Merhar Trio, traveling to performances in the U.S., Canada, France and Germany. Jim's father, who worked in the mines as a master electrician, took his kids about 80 miles to Bemidji every Saturday for guitar lessons and then followed through by making them practice an hour to an hour-and-a-half every day. Jim started playing in 1952.

His dad's effort panned out as the trio became professional, eventually landing in Nashville, playing back-up for some of the big names in country music. But the musical threesome had not been in Nashville long when Uncle Sam drew Jim's name for the draft, and he was off on a two-year tour in Vietnam. He returned to Nashville for about a year once back in the States, but the life there didn't appeal to him anymore, so he headed home to Minnesota. Brother Gerry, however, spent twenty-five years as a staff musician



GLIFWC's Mr. Manoomin strikes up a tune on one of his Fender guitars. Jim Merham, White Earth, performed country music professionally when he was young and still loves to play and sing when not processing manoomin or tapping that sweet maple sap. A new challenge is the steel guitar, a Jackson Commemorative, that has your hands, feet and knees going simultaneously.

for the Grand Ole Opera. Gerry was a steel player for Loretta Lynn, played back-up for the Luovin brothers and was on the same t.v. show as Johnny Cash.

Even though he wasn't part of the Nashville scene anymore, Jim continued to play. "I've played in every little honky-tonk around here over the years," he comments and he still plays at local events or fund-raisers for the Food Shelf or Toys for Tots. Sometimes there's a little get-together just to jam—a couple guitars, and his son on the drums.

In the middle of Jim's living room stands a shiny steel guitar—new and obviously his pride and joy. This instrument represents his current challenge as a musician. A "Jackson Commemorative," this steel guitar features four foot-pedals, four knee-levers, plus a full set of strings—offering a fantastic range of sound options. Jim is working on mastering this complex instrument and having fun doing it. But he also has his old reliable Fender electronic guitars at hand, ready to strike a tune at anytime. And if you stop by, he'll probably do just that.

Reduced toxic emissions in the Great Lakes basin

(Continued from page 1)

of these chemicals are not yet monitored in the environment, and their potential impacts on our natural resources and our health are unknown.

The ZDDP has resulted in significant reductions of emissions of critical chemicals from within the Lake Superior basin. It may be tempting to some to point out that the sources within the basin are small compared to the amount of these chemicals entering the Lake Superior ecosystem through atmospheric deposition from out-of-basin

sources. But, it has been shown that local and regional decreases in contaminant emissions directly result in lower contaminant levels in the environment, fish, and wildlife. Further, the success of this demonstration program can serve as a model for other regions and provides confidence that programs aimed at reducing contaminant emissions elsewhere could be successful.

Both the full report and a short summary version of the report can be found on the U.S. Environmental Protection Agency website at www.epa.gov/glnpo/lakesuperior.

Water quality agreement

(Continued from page 7)

Little Sand Bay in Wisconsin. Shifting water temperatures can also encourage the growth of some AIS and alter the turnover rate of the water columns, causing water depleted of oxygen to remain in the depths longer than previously. There have also been links between climate change and severe weather events, such as the flooding in Duluth earlier this year, which can dramatically increase the amount of sediment and chemicals released into the Lakes. The Protocol attempts to address these concerns by requiring the United States and Canada to coordinate efforts to identify, quantify, understand, and predict the impacts climate change may have on the integrity of the water in the Great Lakes.

The Protocol alters the management of the agreement, creating a Great Lakes Executive Committee (GLEC) to head implementation. In addition to the two federal governments, membership in the GLEC could include representatives from tribal, state, provincial, and municipal governments, first nations, Métis, and public

stakeholders. There will also be a Great Lakes Water Quality Board and a Great Lakes Science Advisory Board to provide policy and research advice to the International Joint Commission on the health of the water of the Great Lakes. Outside of the Protocol, the Great Lakes Advisory Board is a stakeholder board recently established by the Environmental Protection Agency to advise the EPA Administrator, on Great Lakes protection and restoration policy, long-term goals and objectives for Great Lakes protection and restoration, and annual priorities to protect and restore the Great Lakes that may be used to help inform budget decisions.

Every three years, a Great Lakes Public Forum will be held to seek input and advice from the public on the state of the Lakes, on binational priorities, and the progress of the Protocol on achieving its objectives. While the International Joint Commission will provide a progress report to the two countries every three years, the effectiveness of the Protocol will be assessed by the two countries every nine years.





Gearing up for year 2 in the "Mino Wiisinidaa!" Project

Food demos on rez coming to a location near you

By LaTisha (McRoy) Coffin, ANA SEDS Coordinator

Odanah, Wis.—The "Mino Wiisinidaa! (Let's Eat Good!)—Traditional Foods for Healthy Living" project staff have been hard at work collecting, testing, and finalizing traditional food recipes and getting ready to host a cooking demonstration near you!

Starting in January 2013, the project staff will be hosting cooking demonstrations with the following tribal communities: Mille Lacs, Fond du Lac, Red Cliff, Bad River, St. Croix, and Lac Courte Oreilles. Each tribal community will be hosting around three cooking demonstrations, except Mille Lacs, Fond du Lac, and St. Croix, who will host four because of their community size. In September 2013, the project staff will then host three cooking demonstrations with: Mole Lake, Lac Vieux Desert, Bay Mills, Keweenaw Bay, and Lac du Flambeau.

During the cooking demonstrations, the project staff will be preparing traditional foods and recipes as well as answering nutritional questions. The focus groups for these demonstrations include tribal youth, elders, and families. By working with various tribal health and youth departments, the project staff hopes to introduce better eating habits with families, especially with traditional Anishinaabe foods. The project staff will be distributing a survey during the demonstrations in order to better understand tribal perspectives on traditional foods, and survey participants will be entered into a drawing for great kitchen-related prizes.

Over the summer, the project staff met with a number of tribal elders new to the "Mino Wiisinidaa!" project and are finalizing new recipes for the cooking demonstrations. Franny Van Zile and Fred Ackley, Sr. of Mole Lake discussed the health benefits of wild rice and shared their recipe for Mole Lake "lobster," using fish fillets and paprika. Bill and Patty Chosa from Keweenaw Bay spent two days cooking with the project staff and prepared healthy recipes with ingredients not used every day, such as chia seeds, bulgur wheat, and silken tofu. (See "Makin' the change," page 22)

Finally, the project hired a new community dietician: Owen Holly Maroney. Originally from South Carolina, Maroney graduated from Virginia Polytechnic Institute and State University before working with Purdue University as a Nutrition Research Assistant. (See "Nutrition education is her game" below)

Elder participation needed!

The Mino Wiisinidaa! Project seeks to include participation from Bay Mills, Lac Vieux Desert and St. Croix tribal elders as we develop our inventory of traditional foods recipes. We are especially interested in fish recipes and welcome donated recipes. In addition to traditional recipes, the program is looking for tribal members who harvest and prepare a variety of traditionally-used foods.



Popped wild rice, see recipe to the right. (photo by LaTisha Coffin)

Congratulations

Preliminary survey winners

The "Mino Wiisinidaa! (Let's Eat Good!)—Traditional Foods for Healthy Living" project distributed a preliminary pre-demonstration survey to a number of tribal offices, including food distribution offices and nutrition departments. Approximately 70 surveys were returned, with completed surveys being entered to a drawing for one of three Cuisinart Mini Prep Food Processors. Here are the winners:

Joe Matrious, Sr.—Danbury, Wisconsin
Carol Saari—Ashland, Wisconsin
William Campbell—Mora, Minnesota

Thank you for your participation in our preliminary survey!

Want a chance to be entered into a drawing? Attend an upcoming cooking demonstration in your tribal community and fill out a survey! Be on the look-out for details in your community.

—LaTisha Coffin

Contact us with recipes!

The project staff will be continuously gathering recipes throughout the next two years of the project, and the project will culminate with a recipe book at the end of the third year. If you interested in working with the project staff or would like more information about the "Mino Wiisinidaa!" project, please contact Owen Holly Maroney at (715) 682.6619 ext. 2147, or by email: ohmaroney@glifwc.org. Also, LaTisha Coffin at (715) 682.6619 ext. 2128, or by email: lmcroy@glifwc.org.

The "Mino Wiisinidaa! (Let's Eat Good!)—Traditional Foods for Healthy Living" grant is funded by the Administration for Native Americans (ANA), ACF and U.S. Department of HHS.

Granola with Puffed Wild Rice and Dried Blueberries

(Makes about 7 cups)

- 3 cups old-fashioned rolled oats
- 1 cup raw **pumpkin** seeds, hulled
- 1 cup raw **sunflower** seeds, hulled
- 1¼ cup raw **walnut** halves, left whole or coarsely chopped
- ¾ cup pure **maple syrup**
- ½ cup **sunflower** seed oil
- ¼ cup packed light brown sugar or **maple sugar**
- 1 tsp. coarse **salt**, plus extra to taste
- ½ cup dried **blueberries**
- ½ cup dried **cranberries**
- 1 cup puffed **wild rice**



Heat oven to 300°F.

Place oats, pumpkin seeds, sunflower seeds, walnuts, syrup, sunflower seed oil, sugar, and 1 teaspoon salt in a large bowl and mix until well combined.

Spread granola mixture in an even layer on a rimmed baking sheet. Transfer to oven and bake, stirring every 10-15 minutes, until granola is toasted, about 45 minutes.

Remove granola from oven and season with more salt to taste.

Let cool completely then add dried berries and puffed wild rice.

Store granola in an airtight container for up to 1 month.

Tips:

Experiment with different nuts and seeds and dried fruit to develop your own recipe. Try maple syrup glazed roasted pecans.

For puffed wild rice, use ⅓ – ⅔ cup oil in sauce pan and heat for about 10 minutes over medium-high heat. Add ¼ cup of wild rice to oil, in small manageable batches (two small batches). The wild rice will immediately pop. Use a slotted spoon to scoop out wild rice before it burns. Drain on paper towel and cool. Makes about 1 cup of puffed wild rice.

Bold=Indigenous foods

Nutrition education is her game

By Sue Erickson, Staff Writer

Odanah, Wis.—New on the scene with GLIFWC's Mino Wiisinidaa! (Let's eat good!) program is Community Dietician Owen Maroney. Starting with GLIFWC on September 7, Owen plunged right into the second year of a three-year healthy eating grant program already in full swing.

Owen grew up in Charleston, South Carolina and attended Virginia Tech, Blacksburg, Virginia where she obtained a degree in nutrition. She moved somewhat northward to spend two years with Purdue University's Nutrition Science Program. Her work there was more on the technical side, examining bio-markers in blood and urine in order to better understand the relationship between what a person has consumed and how it appears in the body.

She was attracted to the position with GLIFWC because of its community orientation that offers her more time interacting with people. She says she enjoys working with diverse communities, especially with nutrition education because it's so important to long term health. Sharing recipes with and from tribal members and eventually doing demonstrations on the reservations will provide her with many opportunities for interaction.

Currently, Owen resides in Ashland. She likes to run, enjoys cooking at home, and hopes to explore the northland's diverse opportunities for outdoor activities. She may even give cross-country skiing a try this winter.



Owen Maroney. (photo by SE)



New language resource targets Native pre-teens and teens

By Sue Erickson
Staff Writer

Maadaadiziwin (The Journey) tells the story of an Ojibwe boy's travels into manhood as he strays from and returns to the traditional teachings of his grandfather. His many adventures and learning experiences are related entirely in Ojibwemowin.

In comic format Hudson Gauthier's narrative provides insights into the unique relationship of the Anishinaabe and the natural world.

Dramatically illustrated by Valetina Kaquatash throughout, the story is a visual adventure as well.

Designed as tool for those learning Ojibwemowin, the 20-page comic requires the reader to translate from Ojibwemowin; no English translation is provided.

The project was funded by the Human Rights Fund of the Duluth Superior Area Community Foundation and produced in collaboration with UW-Stevens Point and the Red Cliff Band of Lake Superior Chippewa.

Copies of **Maadaadiziwin** are available for \$8.00. Contact Andy Gokee at UW-Stevens Point, email agokee@uwsp.edu.



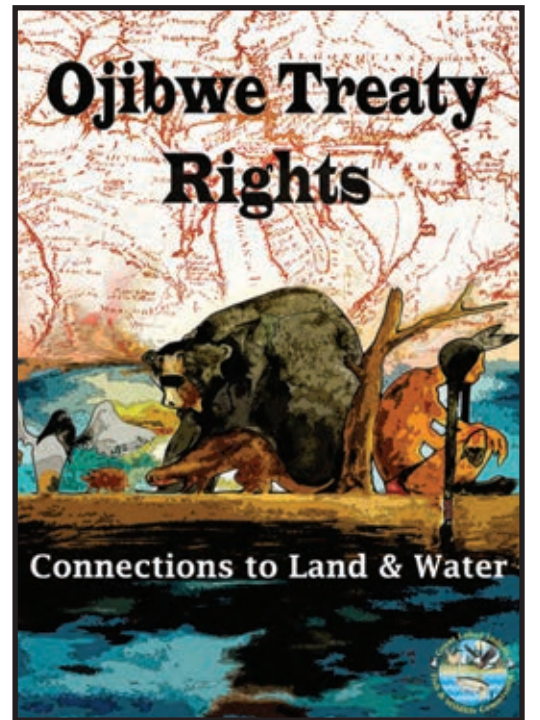
Treaty rights DVD from GLIFWC *Treaties: Connections to Land & Water*

Ideal for classroom use, an 18-minute DVD with study guide discusses Ojibwe treaty rights in the context of the 21st Century, revealing the deep connection to natural resources that continues to characterize Ojibwe culture and lifeways today.

Along with an explanation of the nature of the rights and regulation, the discussion also includes personal commentaries from tribal members involved in the exercise of off-reservation treaty rights. DVD plus *Treaties Study Guide* are available through GLIFWC for \$12.00.

Also available and compatible with the DVD are the 2011 posters featuring the Ojibwe Flood Story with artwork by Ojibwe artist Wes Bellanger (see page 20). One copy of the poster is free. Additional copies are available for \$2.00 each, plus postage fees.

To order the DVD and/or the poster contact GLIFWC at PO Box 9, Odanah, WI 54861; email lynn@glifwc.org or order online at www.glifwc.org.



Plants Used by the Great Lakes Ojibwa

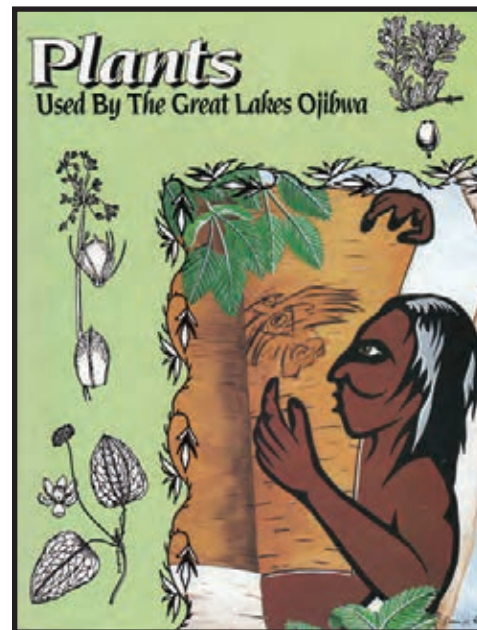
The book, "Plants Used By The Great Lakes Ojibwa," is available in abridged and unabridged versions through GLIFWC's Public Information Office.

The unabridged version includes a brief description of the plant and its use, a reproduced line drawing, and a map showing approximately where each plant is distributed within the ceded territories. This version also includes tables which are sorted by the Ojibwe, scientific, and common names so that looking up a particular plant is made easier.

The abridged version only includes the tables mentioned above, no maps or line drawings.

The unabridged versions are \$20.00 each and the abridged versions are \$6.25 plus postage (please call 715.685.2108 for postage fees). Plant books can be ordered online at <http://www.glifwc.org/publications/index.html#Books>. Or you can mail your order to GLIFWC, Public Information Office, P.O. Box 9, Odanah, WI 54861.

Additional shipping charges apply to orders shipped outside the US. Please call for pricing.



Mazina'igan Digital Flipbook

Beginning with this edition, you will have the option of receiving *Mazina'igan* as a digital flipbook. Instead of receiving a copy in the mail, you will receive an email notice with a link to the digital flipbook.

This online edition will be a full-color flipbook that can be read online, downloaded to a PDF, or printed. There is an option to view pages of *Mazina'igan* as full pages, thumbnail images or use the zoom feature to zoom into your favorite section. An additional benefit is that flipbooks are environmentally friendly, and they save postage and printing costs.

To view an example of a recently completed flipbook, go to <http://www.glifwc.org/publications/SparringFlipbook/index.html>.

If you choose the online edition, you will be notified via email—approximately a week before the *Mazina'igan* is mailed—that the *Mazina'igan* is available to view online. The email will contain a link that will allow you to view the *Mazina'igan* on GLIFWC's website. If you would like to sign-up to receive *Mazina'igan* electronically, please email lynn@glifwc.org or phone 715.685.2108.

CRITFC

(Continued from page 13)

torical significance to the tribes. We patrol known sites and places considered to be an archeological site to discourage theft and desecration," Ekker says.

CRITFC member tribes maintain tribal courts and many violations are cited into tribal courts, but CRITFC enforcement also works with state courts and three federal district courts.

With no lack of issues—from sea lions and dams to climate change, CRITFC and its member tribes continue to be committed to the protection and preservation of a sacred fishery, central to a lifeway that stretches back centuries to times when the people were blessed with abundance.

There are signs of hope as salmon runs strengthen and tribes work with state and federal resource managers to tackle issues such as the Pacific lamprey as co-managers. Co-management has been strengthened through the Columbia River Fish Accords that provide for a tribal/state/federal partnership responsible for the management and protection of salmon and other natural resources in the Northwest. According to CRITFC, the agreement allows for "on-the-ground management and creates reasonable certainty and stability for fish populations and communities. It allows managers to help the basin's fish populations more in the next ten years than they've been able to in the past."

Tsagaglalal still watches over her people.

(For more information on CRITFC and its member tribes, see www.critfc.org.)



CRITFC's Buck Jones holds up a beautiful steelhead salmon coming through the system at Bonneville Dam. 2012 had a record number of sockeye salmon—the highest return since the dam was built in the 1930s. (SE)

Weshki-ojibwemojig—The new speakers

By Amik (Larry Smallwood)

Transcribed by: Michelle Goose

Edited by: Mike Sullivan & Larry Smallwood

The following insights on the evolution of the Ojibwe language were given to us by Larry “Amik” Smallwood from the Lake Lena community of Mille Lacs, Minnesota. This teaching was collected as part of the Administration for Native Americans funded language project, “Gidaadizookaaninaanig—Our stories.”

The goal of this project is to document and preserve stories of traditional Anishinaabe cultural practices from speakers of the language. Each story and/or teaching is recorded, transcribed and translated with the speaker’s approval and guidance.

These teachings will then be compiled into an Ojibwe language resource book with accompanying audio CD of each speaker. 4,000 of these books will be printed and distributed to the GLIFWC member tribes at no cost to the communities. The distribution of this material is scheduled for the summer of 2013. This project is coordinated by Wesley Ballinger, ANA language specialist.



Amik. (artwork by Wesley Ballinger)

Geget igo niibowa niwanendaan iw, niwanendaan iniw ikidowinan. Aaniish naa gaawin endaso-giizhik indaabajitoosiinan geyaabi gaagiigidoyaan. Mii wenji-wanendamaan. Mii zhihga ezhiwebak noongom ow. Gegaa wanitooyang iw, gidinweneninaan gaa-miinihoowiziyang. Eshkam igo ani-bangiishenhwagizi aw netaa-objiwemod waanda-objiwemod. Ongow dash gaye weshki-objiwemojig beminizha’ang iw Ojibwemowin. Geget nimirwandaan izhichigewaad iw. O’ow dash eta gaawin odayaanzinaawaa ingiw weshki-objiwemojig iw, baapi’idiwin. Anooj ko gii-inaajimo Anishinaabe gii-minawaanigozid, apane gii-paapid. Wa’aw noongom, weshki-objiwemod gaawin odayaanzin iw ow izhinikaade...izhinikaadang aw chimookimaan iw “humor.”

Indeed I have forgotten a lot; I have forgotten many words. After all I don’t use them everyday anymore when I speak. That is why I forget. This is what is happening now. We’ve almost lost it, our language that was given to us. Good Ojibwe speakers, really good speakers are becoming fewer. But there are these, new speakers those that are pursuing Ojibwe. I really like that they are doing it. But there is just one thing that the new speakers do not have, humor. The Anishinaabe told about all kinds of things when they had a good time, always laughing. The new second-language speaker today doesn’t have that what is called, what the Whiteman calls “humor.”

Miinawaa gaye aw noongom weshki-objiwemod, owanitoon iw akeyaa Anishinaabe gaa-pi-izhitwaad. Gaa-pi-izhichiged. Owanitoon ge iw keyaa izhichiged aw Anishinaabe asemaaked, zagaswe’iwed. Meta go iw menezid aw geyaabi, weshki-objiwemod. Ke ge, giniimi’idiwininaan iwidi keyaa Misizaaga’iganing miinawaa oodi iwidi Agaaming ezhinikaadeg, “St. Croix” miinawaa imaa “Lac du Flambeau” miinawaa imaa Odaawaa-zaaga’iganing bebangiishenhwagiziwag gekendang iw niimii’idiwin. Begish aw weshki-objiwemod biminizha’ang iw keyaa ezhitwaayang. da-aabajitooyang iw keyaa manidoo gaa-miininang da-aabajitooyang gagwejmangwaa iw bimaadiziwin.

Ke gaye bezhig mii iw niimii’idiwin apane aabijichigaadeg omaa objiwemowin, miinawaa awiya wiindaawasod miigiwed iw izhinikaazowin, booch da-nitaa-objiwemod. Miinawaa ge iw maajaa’iwewin maajaa’ind aw Anishinaabe, booch da-nitaa-objiwemod aw ezhichiged. Miinawaa onaaganan achigaadeg, baa-apagizomind aw Anishinaabe,

booch da-objiwemod. Mii iniw gekendanzig a’aw netaa-objiwemod mashi. Maagizhaa naagaj oga-biminizha’aan iw Ayaawag wiin go bangii ezhichigegiw iw Geget onishishin iw biminizha’amowaad objiwemowin geget onishishin iw oshki-objiwemowaad. Baataniinad dash iw nawaj ge-gikendamowaad aw asemaa aabaji’ind. Pegish biminizha’amowaad i’iw.

And also today the new Ojibwe speaker is losing the way the Anishinaabe here practiced their spirituality, what he did here. He is losing the way he offered tobacco, and had ceremonies. That is all the new speaker is still lacking. See at our dances over in Mille Lacs and over there, over on the other side of the river (Wisconsin), St. Croix and Lac du Flambeau and over in LCO the ones that know the dances are becoming fewer. I wish the young speaker would pursue the way we practice our culture, to use what the manidoo gave us to use when we ask them for life. See another thing is at the dance, Ojibwe is always used, and when someone names children when they give a name, they have to speak good Ojibwe.

And also the funeral, when the Anishinaabe is sent off, the person doing it has to speak good Ojibwe, and when a dish is set, and the Anishinaabe sends it up to the creator, he has to speak Ojibwe. These are what the ones who can speak Ojibwe good do not know yet. Maybe they’ll pursue it later. There are those who do a little of that. It is great that they are pursuing the Ojibwe language, indeed it is great they are speaking Ojibwe for the first time. There is more that they should know about the use of tobacco. I hope they pursue it.

Awenen ge-gaagiigidod imaa niimi’idiwigamigong? Awenen ge-gaagiigidod? Awenen ge-izhichiged iw da-wiindaawasod? Awenen ge-izhichiged iw maajaa’iwewin? Awenen ge-apagizomaad asemaan? Pegish biminizha’amowaad nawaj iw. Miinawaa ge aanind ikidowag ingiw nawaj gechi-aya’aawijig, “Gego ozhibii’angen imaa mazina’iganing gego”. Aaniish ge-izhichiged a’aw da-gikendang awiya ozhibii’igaadesinog imaa mazina’iganing? Nashke noon-gom, chi-wewaasa gidaamin. Giningweshkoo-giningweshkaagonaan aw Chimoookamaan. Ge-wiin mewinza a’aw Anishinaabe, gii-oodenaawichigewaad bebesho gii-taawag.

Kina awiya gii-objiwemod imaa kina awiya gii-pizindang. Mii gaa-onji-gikendamowaad wiinawaa gegoo. Noongom dash, chi-wewaasa bakaan gibaa-daamin. Baataniinad bakaan gaagiigidowin objiwemong iw, asemaa apagizomind. Pegish nawaj biminizha’ang aw weshki-objiwemod.

Who will do the speaking in the dance hall? Who is going to speak? Who is going to do naming ceremonies (for children)? Who is going to conduct funerals? Who is going to speak for/send the tobacco? I hope they pursue more of that.

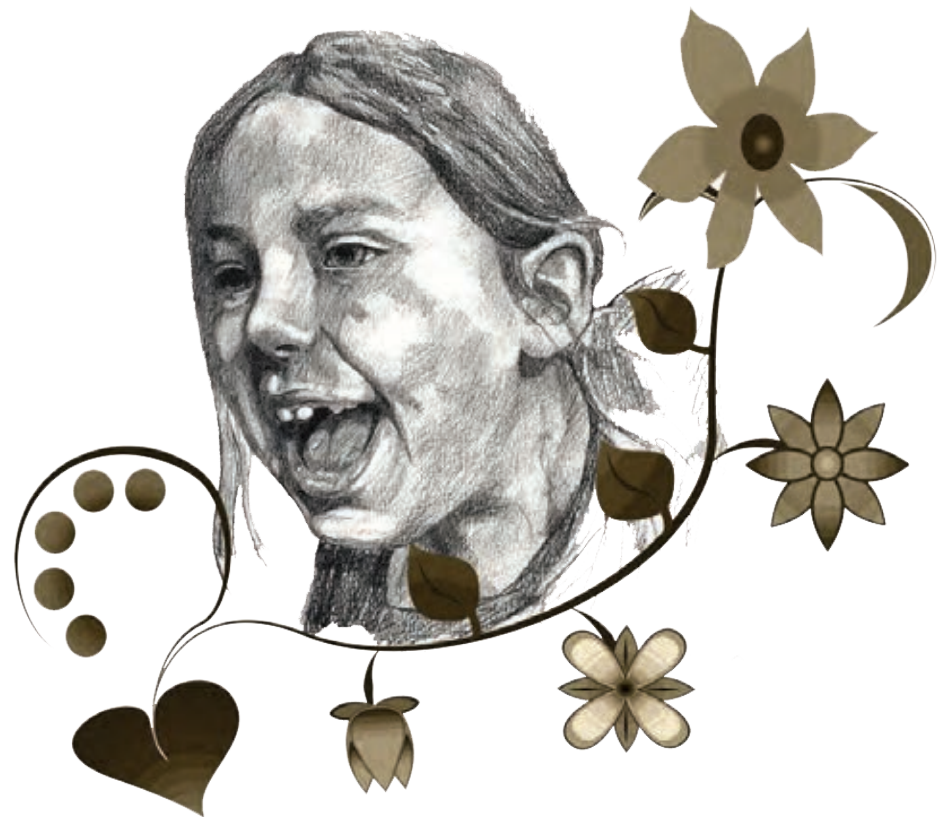
And some say, more elders, “Don’t write it in a book, don’t!” What is someone to do to know it if it isn’t written in a book? See today, we live far away. We are being infested by the Whiteman. The Anishinaabe long ago also, when they made their communities, they lived close to one another. Everyone there spoke Ojibwe; everybody listened to it. That is how they came to know things. But today we live far away in different places. There are many different speeches in Ojibwe for when tobacco is sent. I wish the young speaker would pursue more of that.

Miinawaa ge bangii niigaan aw Anishinaabe weshki-objiwemod bakaan da-ni-inwe. Da-mayagitaagozi aw weshki-objiwemod. Gaawin odayaanzin iw oga-ayaanzin iw “Indian accent” izhinikaadeg. Mii ganabaj eta minik waa-izhi-wiindamawagwaa ongow weshki-objiwemojig, da-biminizha’amowaad iw nawaj objiwemowin apagizomind aw asemaa, da-gaagiigidong. Mii eta wiin igo imaa minik waa-ikidoyaan jibwaa-nishkimag awiya gaawin niwii-nishkimaasiin awiya.

And also in the future, the young Anishinaabe Ojibwe speaker will sound a little different. The new speaker will sound strange. He doesn’t have it, he won’t have what is called the “Indian accent.” Maybe that’s as much as I want to tell these new Ojibwe speakers, to pursue more of it the language for when tobacco is being talked for, for speaking. That is as much as I want to say before I make someone mad; I don’t want to make anyone mad.



Leech Lake’s Marlene Stately and GLIFWC Language Specialist Wesley Ballinger review the transcript of a traditional Anishinaabe story. Along with a dozen other elders, Stately is sharing stories and teachings with GLIFWC that provide insights into Anishinaabe cultural practices. The effort is part of the Administration for Native Americans-funded Gidaadizookaaninaaning (Our Stories) project. (photo by Charlie Otto Rasmussen)



“The Anishinaabe told about all kinds of things when they had a good time, always laughing.” Portrait of Animikiins Stark, Bad River tribal member, lynx clan. (artwork by Wesley Ballinger)



Squanto:

The Patuxet Indian who helped make Thanksgiving happen

By Sue Erickson, Staff Writer

Tisquantum, known as Squanto, was a Patuxet Indian who helped the people of the Mayflower survive the first winter in what they called the "New World." He had a lot to do with making the "first Thanksgiving" happen.

Squanto spoke English so was able to talk with the pilgrims. He could speak English because English explorers kidnapped him from his home in what is now the state of Massachusetts. After years of travel, probably as a slave, Squanto got home to find few of his tribe remained. They had died from a terrible sickness, and the village was empty. Squanto and explorer Thomas Dermer were confronted by people from the neighboring Wampanoag tribe, and Squanto was taken captive by them.

When the pilgrims landed at the site of the old Patuxet village in 1620, the Wampanoag leader Massasoit sent Squanto to talk with the new people. Squanto became friends with the pilgrims who were having a very hard time living in this new land.

It was Squanto who showed them how to plant corn and fertilize it with fish. He showed them how to get sap from the trees and how to catch eels. He showed them what plants could be eaten or used for medicine and which could make you sick. He also helped get trade going between the settlers and the area's tribes.

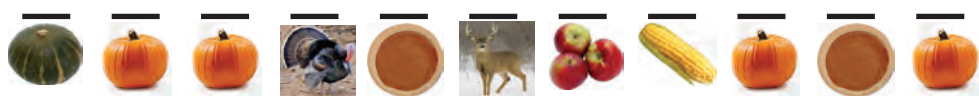
In the fall of 1621, the new settlers were happy to have a good harvest and decided to have a feast. Their crops had grown well, and they had enough food for the winter—thanks to all the helpful tips from Squanto. Some of the men went out to shoot birds for the meal, probably wild turkey and geese.



1911 illustration of Tisquantum, or Squanto, teaching the Plymouth colonists to plant mandaamin (corn) using fish. (illustration from Wikipedia.com)

Thanksgiving secret message decoder puzzle

Decode and solve the secret Thanksgiving phrase. Fill in the blanks with the letter that matches each picture in the box below.



= G	= I	= Z	= E	= M
= W	= A	= C	= H	= N

Essential Ojibwemowin
müigwechiwi-giizhigan—it is thanksgiving

The shots from the hunters' guns were heard in the Wampanoag village and they thought their might be some kind of attack taking place. So, Massasoit with ninety warriors came to the new settlement only to find a big feast was going on.

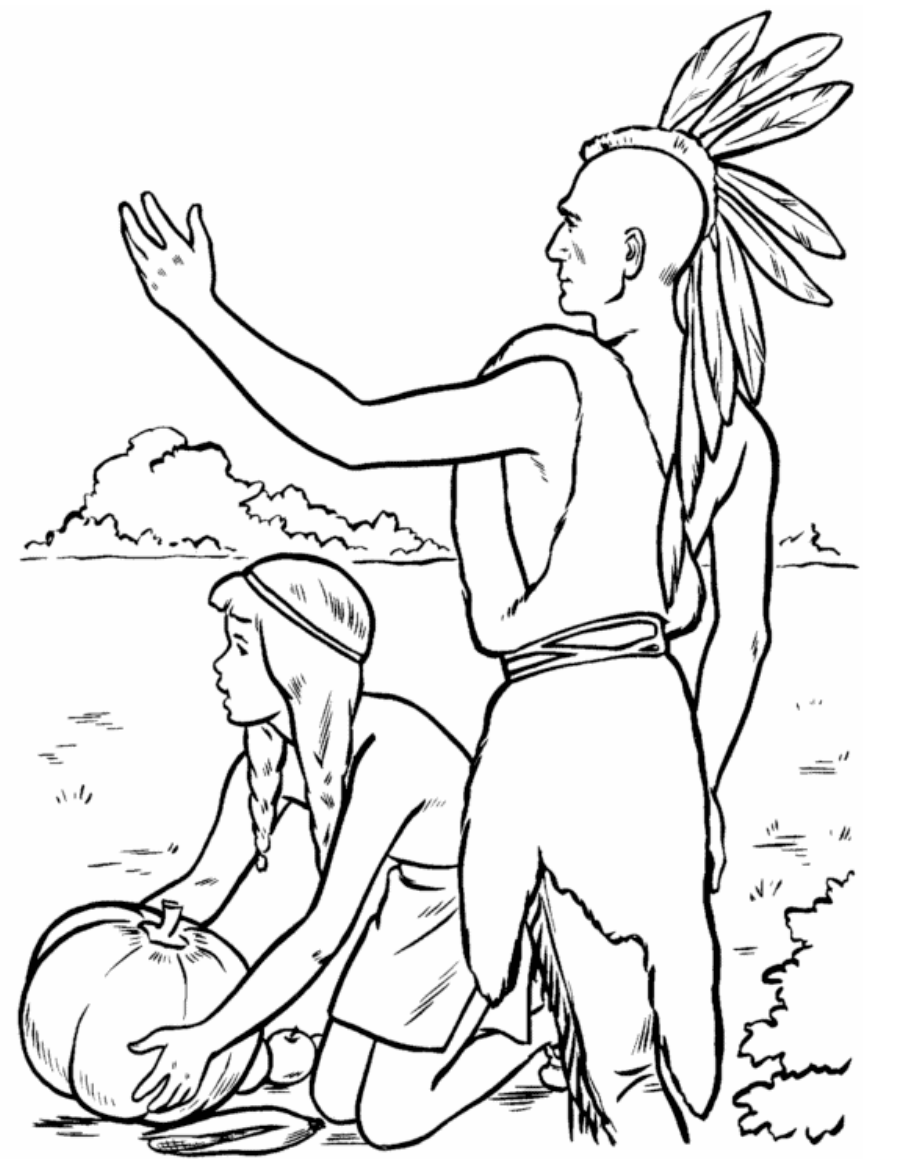
Although they had lots of food on the table, there wasn't enough for ninety more people! So, Massasoit sent his men to hunt deer to add to the feast. They came back with five deer and stayed for three days.

This is considered the first Thanksgiving. A year later, in 1622 Squanto himself died of a fever. The governor of the colony at the time, William Bradford, wrote that Squanto's death was "a great loss."

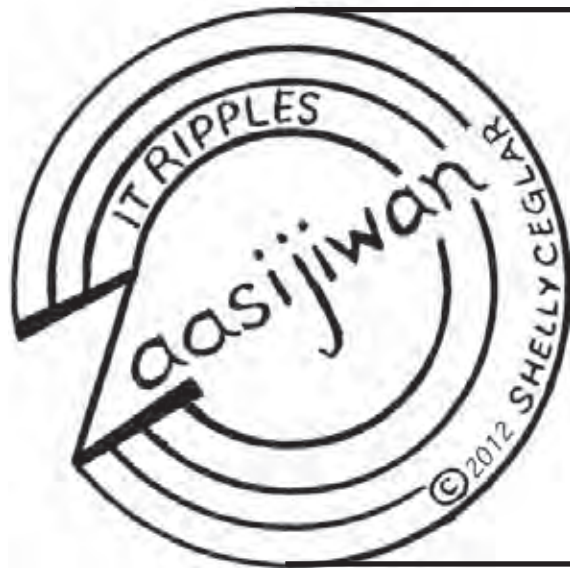
The pilgrims and the Wampanoag had an agreement to protect each other, but it only lasted about 50 years. Many of the Wampanoag people were killed in a war with England called King Phillips War. The Wampanoag lost the war and many of the men were taken as slaves. Others fled the area. As more and more English settlers arrived in New England, land was swindled and diseases also took many Wampanoag lives. Few of the Wampanoag remained.

(Information for this account was taken from *Squanto, Friend to the Pilgrims* www.socialstudiesforkids.com/articles/ushistory/squanto.htm)

Wampanoags/People of the First Light
 The descendants of the Wampanoags still live in their homeland, now known as Martha's Vineyard. There are two federally recognized Wampanoag tribes, the Wampanoag Tribe of Gay Head, also known as the Aquinnah Wampanoag, and the Mashpee Wampanoag.



The pilgrims may have perished if it weren't for the kindness and assistance given them by the Native Americans. (reprinted from USA-Printables, history coloring pages)



Biboong—When it is Winter

Biboong, ninitaa-jiibaakwe. Nimbigishkizhaag ingiw opiniig.
 Nindoonzwaag ingiw opiniig jiibaakwe-gizhaabikiziganing. Ninzaasakokwaanaag ingiw giigooyag.
 Nindaashkibidoon i'iw gichi-aniibiish. Nininikonaag ingiw gichi-oginiig.
 Ningibozwaa o'ow miinibaashkiminasiganibiitoosijiganibadagwiingwezhiganibakwezhigan.
 Nimbiibaagimaag nindabinoojiiyag idash ninaabem. Nindikid, "Ambe omaa! Daga, namadabig!
 Wiisinig! Minopogwad." Ikidowag, "Miigwech!"

(When it is winter, I am skillful at cooking. I cut them those potatoes to pieces.
 I boil them those potatoes on the stove. I fry them those fish.
 I tear it apart that cabbage. I slice them those tomatoes.
 I bake this blueberry pie. I call to them children and husband.
 I say, "Come here! Please all of you sit! All you eat. It tastes good." They say, "Thank you!")

Bezbig—1 **OJIBWEMOWIN (Ojibwe Language)**

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

VII's
 Verbs—Inanimate—Intransitive.
 (Action words-non-living-no transfer of action to an object.)

The "It is..." verbs.
 It is cold.—**Gisinaa.**
 It is windy.—**Noodin.**
 It freezes.—**Mashkawadin.**
 It is snowing.—**Zoogipon.**
 It is winter.—**Biboon.**

For complex sentence-use b-form conjugation:
 When it is winter—add an ending "g"—**Biboong.**
 If a verb ends in a "d", change the d to a "k"
 It is a good day.—**Mino-giizhigad.**
 When/if/while it is a good day, I'm happy.
 —Mino-giizhigak, niminwendam.

Niizh—2 *Circle the 10 underlined Ojibwe words in the letter maze. (Translations below)*

A. Gigizhebaa-wiisini nishwaaso diba'iganek endaso-giizhik.
 B. Nawaakwe-wiisini ishkwaa ashi-bezhigo diba'iganek.
 C. Onaagoshi-wiisini naano diba'iganek. Giin dash?
 D. Wegonen waa-wiisiniyan baanimaag?
 E. Wegonen waa-wiisiniwaad ingiw bineshiiyag megwaayaak?
 Miinikaanan niwii-ashamaa.
 F. Biboonibineshiiyag: Gijigijigaaneshiyyag idash diindiisiwag.
 G. Migiziwag aangodinong idash gaagaagiwag. Mashkawiziwag.

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

Niswi—3

IKIDOWIN ODAMINOWIN (word play)

Down:

1. It is cold weather.
2. after
3. one
5. every
7. you

Across:

3. It is windy.
4. S/he cooks.
6. It is sunny.
8. no

Niiwin—4

VII's It is verbs. Negation

1st: Gaawiin & add zinoon or sinoon.

Daashkikwaadin.—There is a crack in the ice.
Gaawiin daashkikwaadin**zinoon.**
 —No, there is no crack in the ice.
 Gii-wendad.—It was easy.
 Gaawiin giwendasinooon.—No, it wasn't easy.
 Baswewemagad.—It is an echo.
 Gaawiin baswewemagasinoon.
 —There is no echo.
 Waaseyaa.—It is sunny.
 Waaseyaag, abaaso. When it is sunny, s/he warms up.
 Miikawaadad.—It is beautiful.

Goojitoon! Try it!
 Translation below.

1. Biboon. Gaawiin dagwaagin _____ noongom.
2. Biiwan _____, gaawiin niminwendanzii. Ninzegiz.
3. Biboong, _____ zanagasinoon. Ozhitaag!
4. Ashi-naano diba'igaans ishwaa niizhwaaso diba'igane _____, nimaajaa. Nindizhaa anokiwwining.
5. Gaawiin baswewemaga _____ omaa noongom.

Translations:

Niizh—2 A. S/he eats morning-food/breakfast when it is 8:00 o'clock every day. B. S/he eats noon-food/lunch after when it is 11:00 o'clock. C. S/he eats evening-food/supper when it is 5:00 o'clock. You also? D. What will you eat later? E. What will they eat, those birds in the woods? Seeds I will feed them. F. Winter birds: chickidees and bluejays. G. Eagles sometimes and ravens. They are tough/have inner strength.

Niswi—3 **Down:** 1. Gisinaa 2. Ishkwaa 5. Endaso 7. Giin. **Across:** 3. Noodin 4. Jiibaakwe 6. Waaseyaa 8. Gaawiin

Niiwin—4 1. It is winter. No it is not autumn (Dagwaagin**zinoon**) now. 2. When it is a blizzard (biiwang), no I am not happy. I am afraid. 3. When it is winter, no/**gaawiin** it is not difficult. Get ready! 4. When it is and-5/15 minutes after 7:00 o'clock (**diba'igane d>k**), I leave. I go to the workplace. 5. No, there is not an echo (baswewemagas**inoon**) here now/today.

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



Makin' the change

Dropping 300 points off the cholesterol count

By Sue Erickson
Staff Writer

Odanah, Wis.—When Bill Chosa, Keweenaw Bay tribal member, finally went to the doctor about ten years ago, he found out his cholesterol was a whopping 487. He had been chomping his way towards 200 pounds and a heart attack or stroke.

“I told Bill, ‘please you have to let me help change your eating habits,’” relates his wife, Patty. Bill’s family has been plagued with diseases such as diabetes, cancer, lupus and gluten intolerance.

The writing on the wall didn’t look good for Bill if change didn’t happen, and a lot had to do with what he was putting in his mouth.

That’s when the Chosa’s eating choices began to change, slowly at first. “No cookies, no cakes, no cheese, no chips... no diary, little or no meat,” says Patty, but rather lots of fiber! By trial and error the couple began finding healthier, more natural alternatives for breakfast, lunch, dinner and snacks.

“The Creator did not design us to eat the way we do. Native people don’t have the gene to metabolize simple carbohydrates. Look at what the Creator gave the Native Americans to eat... fiber and protein, even the meat, like venison, is lean,” points out Patty.

With a commitment to change, Patty and Bill created a new eating lifestyle—

one that features vegetables and high protein beans and lentils. Patty makes a substitute for cheese, makes waffles and breads using no white flour, uses honey for a sweetener. She says pumpernickel rye is the healthiest bread because it has a low glycemic index, allowing the sugar to dissolve in the blood stream slowly, keeping you full and the glucose level down.

In six weeks, Bill’s cholesterol level dropped to 159. The doctor couldn’t believe it. Bill’s weight has also leveled off around 158.

Change was slow at first and required a fair amount of experimenting. With patience and commitment over the years, they have created a very pleasing menu without the use of boxed or canned goods.

“We have also made dishes that were quickly crossed off the menu,” Bill says. But through trial and error and some research, they have learned to cook tasty meals without sugar, cheese, preservatives, food coloring and a gamut of undecipherable chemical ingredients.

Happy to share what they have learned, the couple taught an eight-week healthy cooking class at Keweenaw Bay. “We just showed people how to cook with healthy ingredients and cook it so it tastes good, too,” Patty explains.

While diet is important, Bill also notes he walks two to three miles a day and drinks lots of water—also significant elements in makin’ the change.



Dishing up an elegant butternut squash dessert with tofu topping, Bill and Patty Chosa shared healthy cooking recipes and a meal with GLIFWC’s Administration for Native American’s healthy foods program this fall. Dessert came after a lunch featuring maple lentils over wild rice and a tasty millet casserole. (SE)

Walking the red (meat) road

By Charlie Otto Rasmussen, Staff Writer

Odanah, Wis.—When it comes to healthier living choices, hunting and eating white-tailed deer is one of the easiest you’ll ever make. Walking ceded territory forests, combing its hills, and negotiating vast wetlands equals great exercise and lungfuls of fresh air. With a smidge of tobacco and some good luck, treaty hunters have the opportunity take home food better suited to native people than anything found on grocery store shelves.

“As a red meat, venison is a healthy alternative to beef. Venison is higher in protein than beef—even higher than chicken,” said Owen Maroney, GLIFWC ANA SEDS Community Dietician. Protein is required for muscle function and growth.

Wild venison handily beats commercial beef in leanness and purity. A standard three-ounce serving of venison—about the size of a deck of cards—delivers approximately 160 calories. With the same cut of beef, tack on another 30-50 calories. The sure way to avoid

2012-2013 off-reservation deer hunting closures

Territory	Closure
Michigan 1836	January 6, 2013
Michigan 1842	December 31, 2012
Wisconsin 1837/42	January 6, 2013
Minnesota 1837	December 31, 2012



Waawaashkeshi. (reprinted from <http://blog.audubonguides.com/tag/whitetail/>)

Fresh Venison

Contributed by: Ruth Holmes, St. Croix Ojibwa

- 3 pounds venison steak
- 1/2 cup flour
- 1 tsp. salt
- 1/4 tsp. pepper
- 1 tsp. oil
- 1 cup water

Preheat oven to 350°. Dip venison in flour, salt, and pepper. Brown in frying pan with a little bit of oil, just enough to prevent sticking. Brown on both sides.

Put into cast iron Dutch oven. Add a little bit of water (additional water may be added if meat becomes dry). Bake one hour, or until tender. Calories per serving: 241. (Reprinted from Tribal Cooking: Traditional Stories and Favorite Recipes, Minwanjigewin Nutrition Project, Great Lakes Inter-Tribal Council, Inc. 1996.)

meat manipulated by steroids and growth hormones is to pull on your boots and get on the trail of all-natural waawaashkeshi in the northwoods of Minnesota, Wisconsin and Michigan.

“Hormones are used to increase the size of animals as fast as possible. This benefits the meat industry by increasing desired production with keeping costs low,” Maroney said. “The fear is that these hormones are in the meat we eat.”

For many Americans, the tinkering of commercial food in recent decades coincides with a drop in overall wellbeing. Health experts have long-recognized that the highly processed modern diet is bad for most people and worse for American Indians. The US Centers for Disease Control reports that diabetes disproportionately affects native people compared to the rest of the population. Type 2 diabetes—by far the most common type—is associated with poor diet, obesity and inactivity. Again, hunting and eating venison gets you on the right path.

While venison makes a great primary source of protein and other nutrients, Maroney suggests prudent steps to help prevent contaminants from spoiling a good meal. When butchering venison, wash your hands frequently and thoroughly clean the work space, knives, grinders and other utensils before and after use. In the kitchen, the internal temperature of meat should hit 165-degrees Fahrenheit to eliminate potentially harmful bacteria.

Maroney said lead exposure from bullets should be taken seriously, but hunters and their families can dramatically reduce the risk of ingesting lead by taking a few precautions. Think copper: while more expensive, copper-wrapped bullets fragment considerably less than traditional soft-point or rapid expanding bullets. When butchering a whitetail, trim liberally around the wound channel to help remove random lead particles.

“Lead is a toxin that builds up in our bodies over time,” Maroney said. “Significant exposure over years is a concern for women and children, but by taking a few precautions there is little worry about eating venison.”

And a lot of upside!

Veteran boughers go deep into the woods for Christmas profits

By Sue Erickson, Staff Writer

Red Cliff, Wis.—When Bayfield dons its festive garb of garlands and wreaths for the Christmas season, holiday shoppers can thank the efforts of a veteran bough-picking team from the nearby Red Cliff reservation. Pickers Larry “JR” Deragon Jr., Marty Duffy and Tammy Duffy have bough-picking down to a science after nineteen years in the woods gathering balsam boughs and making profits for their own Christmas giving.

Backpacking tons of carefully picked boughs out of regional forests, this team’s products are sought after by local craftsmen as well as buyers who ship out nationwide. In fact, you may see their boughs crafted into wreaths at such stores as Walmart and Kmart.

It’s taken nineteen years to develop a reputation that buyers can depend on. That means buyers know they will get quality boughs picked to their specifications, and they know that the team will have them when needed.

Making bough gathering profitable requires some expertise. For one, buyers want boughs picked about 18”-23” long or, as Deragon measures, about an arm’s length. They also want the thickness of the twig to be slightly less than a beginner’s pencil. That thickness is still flexible, but produces less waste as the boughs are shaped into garland or Christmas wreaths. And, importantly, you have to pick so not to damage the tree, which would also damage future bough availability.

Obviously, balsam gathers also need to know locations of balsam stands. This Red Cliff team picks under tribal, US Forest Service (FS) and county permits, so has a wide-ranging territory for gathering. Permits from the FS are granted under a Memorandum of Understanding between the FS and most GLIFWC member tribes. “We rotate, allowing for new growth,” Deragon explains. “Now we are going back to areas we picked fifteen years ago.”

The team is also methodical when they begin gathering, oftentimes going deep into the woods a half-a-mile to one mile. They sweep the site back to the entry point, gathering and bundling along the way. “We work with the whole stand and develop a method in advance,” Deragon says, “and we can usually estimate if it’s a two or three-day job.”

Only the snapping of small branches and rustle of leaves and twigs underfoot break the silence as the team focuses on the work.

“It’s constant work. We never stop picking. We don’t even bring water in, because we don’t have time. If we do stop picking, we’re hauling the boughs out on our backs—70 to 80 pounds per bundle.” Some days they pick, bundle and truck from dusk to dawn. “If we are hauling, we don’t look up. You just push forward looking down and keep going.”

But the work doesn’t end there. Transportation to the buyer is next and that can be near or far. This year prices are ranging around 20-23 cents per pound, and the team has sold locally as well as to a buyer in Iron River. Transport takes time and gas money as well as some tricky stacking, as their trailer is loaded with over a thousand pounds of boughs. Like other haulers, they have to abide by weight restrictions, but even then getting the pile of boughs stacked to the max and secured is a trick in itself. Problems have been encountered over the years, Deragon relates, like the time the trailer tipped over on its side, or flat tire episodes while transporting a load—all part of a learning experience.

Other tricks of the trade have been adopted along the way, like bundling and tying in a unique manner. This allows buyers to identify stolen bough bundles if they arrive at their places. This has happened to Deragon, who keeps readied bundles by his home prior to transport. “I woke up one morning to find about fifteen bundles missing from my yard,” he relates. Considering the hours and effort entailed in gathering boughs, this can be devastating; however, they have been able to successfully track down some thieves.

For the most part boughers have a certain sense of brotherhood in the woods, and there’s also a certain competitiveness, according to Deragon. While everybody is looking for the good spots, if someone runs into difficulty, such as a flat tire, other bough pickers



Loading up, Larry “JR” Deragon, a Red Cliff member and veteran bough-gatherer, plans to add more boughs to this stack of bundled boughs before cashing in. Red Cliff’s Marty and Tammy Duffy join Deragon to make up a team that has been gathering boughs for nineteen years. (photo by Sue Erickson)

are sure to help. They also occasionally expand the team to include other family members who maybe in need of some extra dollars. “Whatever we do, we do it as a team and divide the profits evenly,” says Deragon.

“This team is a conscientious team,” says Red Cliff Conservation Officer Mark Duffy. “They don’t leave trash; they don’t damage the trees; they have all their permits; and they are helpful to others.”

Since their work takes them deep into the woods, they also make sure that somebody else knows where they are in case they run into trouble. At least someone would know where to look if they don’t come home.

Trouble with a broken down vehicle is one thing, but deep in the woods you can also encounter other problems, like injuries or a run in with the local wildlife. Deragon has been shot at, has played peek-a-boo with a few bears out there as he moves balsam branches aside; he’s stepped on a slumbering bear and once was circled by a pack of timber wolves at Sand River. So, trouble can happen and caution is needed.

The season starts around October 1 and continues for about five to six weeks. Deragon sees the season as getting shorter and warmer. “Used to be we would be out there thigh-deep in snow. Now there is no snow.” But once the season ends, the team doesn’t quit. They are out there scouting for the next year’s spots, laying the groundwork, making sure they know where to go when the first of October comes round once again.

In the meantime, they may also gather birch poles or willow. Currently, birch poles are going for as much as \$5.00 per four-foot pole, and the season runs from August through April. Gathering birch poles may follow a logging cutback in a birch stand, so the gathers can come in and take the by-product.

Whatever is being gathered, the process turns the gatherers into lean, mean, workin’ machines. Deragon says the local physician has noticed that balsam gathers lose about 20 to 25 pounds during the season—an opportunity to make some bucks, enjoy nature and shed a few pounds!

Menominee tribe joins effort to prevent ginseng exploitation

By Charlie Otto Rasmussen
Staff Writer

Keshena, Wis.—Following authorization by the US Fish & Service on October 1, the Menominee Nation became the first tribe in the United States with international export authority for the valuable native plant, ginseng.

“This is a great example of a successful partnership and it helps streamline federal regulations,” said John Welke, Wisconsin Department of Natural Resources commercial enforcement coordinator. “Law enforcement authorities throughout the state are becoming very aware of this plant.”

The move—which affirms tribal sovereignty—comes as natural resource officials work to stem the tide of wild ginseng theft from forests across Wisconsin and other states in Middle America. From private woodlots to large national forests, criminals with little more than a backpack and an eye for suitable habitat are looking to cash in on a worldwide market demand for ginseng. Consumers look to the plant’s root for health and physical performance benefits. Demand for ginseng in Asian countries is notably on the rise, and buyers are willing to pay top dollar.



Ginseng.

“A number of factors go into the wholesale price of ginseng. How good is the quality, is it fresh and green or has it been dried?” Welke said. Three pounds of fresh ginseng root yields about one dry pound worth up to \$600. “The quality of ginseng in Wisconsin is among the highest in the world. Anytime there is high commercial value, people are going to take advantage of it.”

Joining those states that host wild ginseng populations, Menominee officials will use authority vested in Convention on International Trade in Endangered Species of Wild Fauna and Flora—commonly known as CITES—to regulate and verify legal ginseng harvest. CITES provides protections for natural resources worldwide that have a

high potential for exploitation. In the case of wild ginseng, CITES regulators promote sustainability and must demonstrate that the harvest and export of the plant does not harm the resource.

“Ginseng is very much susceptible to overharvest and the unsustainable harvest that is occurring,” said Alexandra Wrobel, GLIFWC wild plant ecologist. Illegal harvesters typically do not have the plant’s best interest in mind, potentially causing irreversible damage to the species. “It’s important to follow sustainable harvest guidelines for the future benefit of ginseng as well as other plant species.” Only mature plants with three or more leaf prongs may be dug during the harvest season, which runs September 1 to November 1 in Wisconsin. CITES regulations prohibit the harvest and sale of young ginseng roots under six years old.

Woodlands from Lower Michigan’s 1836 ceded territory, west through Wisconsin and into the Minnesota 1837 territory host small, scattered ginseng populations. The plant grows low on the forest floor and is distinguished by greenish-white flowers and red berries. Where harvest seasons exist, a permit is required to dig wild ginseng.

In the Ojibwe language, ginseng is called *jiisens*. A powerful medicine, *jiisens* is of special importance to traditional Ojibwe healers. State and federal officials are currently exploring ginseng CITES authority for GLIFWC enforcement officers. To date GLIFWC already exercises CITES powers for the bobcat and river otter.

The DNR’s Welke encourages anyone witnessing suspicious activity—whether in private or public woodlands—to contact authorities by phone 800-TIP-WDNR or email le.hotline.wisconsin.gov.

