

Mazina'igan

A Chronicle of the Lake Superior Ojibwe

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Summer 2015

Fond du Lac spearers return to 1854 territory Long ogaa season, strong harvest across Ojibwe Country

By Charlie Otto Rasmussen, Staff Writer

The last time Blake Evanson fished Cadotte Lake he got skunked. So it was with good-natured skepticism on April 22 that he wondered aloud whether any fish swam in the small northeast Minnesota lake. Not long after sundown the Fond du Lac treaty harvester had his answer in a 14-inch walleye stuck to the end of his spear.

For the first time in some 20 years, Fond du Lac (FdL) members fished for walleye, or ogaa, in the 1854 ceded territory. Evanson's fish—taken from a jumble of boulders deposited in shallow, 41-degree water—was among the first of 86 walleyes taken aboard a pair of spearing boats.

In all FdL treaty spearfishermen harvested 190 walleye totaling 223.2 lbs from four 1854 ceded territory lakes including Cadotte, Fourmile, Tait and Caribou. A team of tribal conservation officers and creel clerks monitored and documented the harvest at each lake.

"Tribal leaders reserved this right for us in the 1854 Treaty. They gave up a lot, and it's important for us to be out there exercising these reserved rights," said Reggie DeFoe, FdL Director of Resource Management. "Those leaders wanted to make sure future generations could always get food, could always survive."

Fond du Lac authorities considered limited ogaa gill netting at Lake Vermillion this spring as well, but scratched the plan after resistance from the Bois Forte Band, which also fishes the sprawling 39,200-acre lake. "We're going to continue discussions with Bois Forte and Grand Portage about fishing at Vermillion in the future," DeFoe said.

The return to the 1854 territory was originally planned for spring 2014, but a late ice-out that stretched into mid-May prompted FdL officials to postpone the harvest until this year.

South into the Minnesota 1837 ceded territory, low walleye availability sharply reduced fishing participation on Lake Mille Lacs as state and tribal managers work to recover a fishery struggling from the cumulative impact of cleaner, warmer



Fond du Lac's Blake Evanson brings in a walleye from Cadotte Lake in the Minnesota 1854 ceded territory on April 22. (photo by Charlie Otto Rasmussen)

water, invasive organisms, and predation. Respecting the needs of local Ojibwe communities, Wisconsin treaty tribes relinquished their modest ogaa harvest allocations on the big lake prior to the season bumping Mille Lacs Band's quota from 3,101 pounds to 8,366. Mille Lacs Band members landed 7,463 pounds of walleye, plus 2,250 pounds of northern pike in a season that started April 2. Fishing by spear only, Fond du Lac members came within 2.8 pounds of their walleye (See Long season, page 6)

GTac withdraws its plans to mine in the Penokees Tribes celebrate with thanksgiving prayers/ceremonies

By Sue Erickson, Staff Writer

Lake Galilee, Ashland County—The sound of hand drums and singing echoed through still air surrounding Lake Galilee, Ashland County on the evening of April 23. A blustery wind seemed to have magically calmed, and only a few gentle ripples swept over the lake as a small circle of people gathered for a time of thanksgiving led by Bad River elder Joe Rose. It was also a night for harvest. Representatives from four Ojibwe tribes harvested six walleye symbolizing the treaty claim of all six Ojibwe tribes in Wisconsin.

A similar symbolic harvest and ceremony took place in 2014 at the lake's edge. At that time songs and prayers were offered up near the lake asking for protection for the lake and all the wetlands and waterbodies facing potential degradation from a huge ferrous mine proposed in the Penokee Hills.

However, this spring tribal representatives were able to return to Lake Galilee in a spirit of thanksgiving because Gogebic Taconite (GTac) withdrew its preapplication for its mining project on March 24.

In celebration and as a reminder to be thankful and acknowledge Gichi Manidoo for the positive turn of events, tribal leaders proposed a feast and ceremonies be once again offered, asking for the continued protec-



Bad River elder Joe Rose led the thanksgiving ceremony at Lake Galilee. (photo by Sue Erickson)

tion of Lake Galilee and the Bad River watershed and of nibi (water) in general.

Although GLIFWC member tribes opposed the proposed mine, the Bad River community especially

drew a collective sigh of relief. With a large mine poised at the top of the Bad River watershed, the community feared the impacts of mining run-off on the fishery and the cherished manoomin beds that flourish in the Kakagon Sloughs plus long-term issues with water quality in a system that feeds into Gichigami (Lake Superior.)

"We need to give thanks that our prayers were answered," stated Rose, Bad River, who also serves as a Voigt Intertribal Task Force representative and is an elected member of the Ashland County Board. "This demonstrates the effectiveness of ceremonies, prayers and grassroots activism. It is very important that we give thanks. The efforts of the people were realized, at least temporarily," he says. "but GTac is sleeping and may come back in another form."

The circle at the landing grew from the year before, and included representatives from Red Cliff, Lac Courte Oreilles, Bad River and Sokaogon/Mole Lake, plus a contingent of Bad River members and tribal youth. Three representatives from the Galilee Lake Association also joined the circle as Rose lifted his Pipe to acknowledge the Directions. Words were shared around a talking circle, many sharing their relief that the immediate worries of a mine had left and the need for continuing care of nibi and our land for the benefit of coming generations.

(See Tribes celebrate, page 19)



Tribes respond to Wisconsin's 3 bag rule

Question ability to effectively monitor state anglers

Note: Below is a letter from GLIFWC Executive Administrator James Zorn to the Natural Resources Board voicing specific concerns of the Voigt Intertribal Task Force and offering recommendations in light of the recent 3-bag emergency ruling and the sustainability of the resource. To view information about the emergency rule, go to: <http://dnr.wi.gov/About/NRB/2015/April/04-15-3B1.pdf>

Dear Natural Resources Board:

It has come to the attention of the Voigt Intertribal Task Force (Task Force) that the Department of Natural Resources (Department) is requesting that the Natural Resources Board (Board) adopt Emergency Board Order FH-17-14(E), which would set walleye bag limits at three-fish per day within the Ceded Territories, with various size limits to prevent a total harvest of more than 35% of the adult walleye population. Additionally, the Emergency Board Order would create a catch-and-release only walleye fishery within the Minocqua and Tomahawk chains. These comments are offered on behalf of the Task Force in the context of the Task Force's responsibilities under the *Chippewa Intertribal Agreement Governing Resource Management and Regulation of Off-Reservation Treaty Rights in the Ceded Territory*.

The Task Force is not in a position to support the Emergency Board Order with respect to the proposed three-bag limit for state anglers because: 1) it does not provide sufficient angler accountability by proposing adequate monitoring and enforcement of the changed regulations, 2) it does not ensure that state angling regulations can be changed quickly if circumstances change, 3) there are some waterbodies where the minimum size limit may need to be increased at the outset, and 4) there is no indication that this is an emergency situation. The Task Force also notes that should this Order be adopted, it will need to reassess its options in light of the new regulations, including potential modifications of its current walleye harvest declarations.

The Task Force does agree with the need to institute a catch-and-release only walleye fishery in the Minocqua and Tomahawk chains on an emergency basis. In February, the Task Force took action in support of the Lac du Flambeau Band's endorsement of the rehabilitation plan. As you know, that plan calls for both the state and tribes to prohibit the harvest of walleye in the Minocqua and Tomahawk chains, and no tribe has declared those lakes in its 2015 walleye harvest declaration. Although the Task Force supports a catch-and-release only walleye fishery in the Minocqua and Tomahawk chains, it wishes to ensure that there is sufficient enforcement effort to educate anglers and implement the catch-and-release requirement. The Task Force is also concerned about the causes of the walleye decline, and looks forward to working with Department to determine those causes.

The concerns of the Task Force about the proposed three bag limit stem from a gradually declining trend in walleye abundance within the Ceded Territories (from 1989-2015, the estimated number of total ceded territory adult walleye declined by around 200,000 fish). The State of Wisconsin must take appropriate measures to ensure that walleye will continue to thrive in this region for many generations to come. It is fully within the purview of the Department to regulate non-treaty harvest, however its regulations must not diminish the resource or cut into the tribal share. *Lac Courte Oreilles Band v. Wisconsin*, 707 F.Supp. 1034, 1059 (W.D.Wis. 1989). Effective management requires regulation to sustain healthy walleye stocks, including a population density of no less than three adult spawners per acre. *Id.*, 1046. Accordingly, the Task Force recommends that the Board takes appropriate measures, regardless of whether it adopts Emergency Board Order FH-17-14(E), by directing the Department to: increase state angler accountability by instituting appropriate monitoring and enforcement; ensure that the regulations are responsive

to potentially rapidly changing circumstances; and impose the appropriate length regulations for each body of water (i.e. a limit that will be protective of, or allow the achievement of, the three adult spawner per acre benchmark). Additionally, the Department should ensure that it is adequately addressing a variety of factors that may be leading to walleye declines. This should include active enforcement of water quality standards, improved standards for shoreline development, and enforcement to prevent users or developers from disturbing walleye spawning grounds.

Recommendation #1: Increase state angler accountability. The off-reservation spear-fishery is completely monitored. Each tribe harvests up to a specified number of fish from a certain number of water bodies, with each fish counted, and a sample measured and sexed. Creel teams ensure that the tribal take is documented accurately and that each tribe stays within its quota. Tribal conservation enforcement officers actively monitor spear fishing activities.

In contrast, state angling is incompletely monitored. Creel clerks randomly select state anglers in a handful of lakes, requesting their voluntary participation in surveys. Shortly after the Court Decision, the Department began conducting up to 40 creel surveys within the Ceded Territories per year. Data collected from those creel surveys are statistically expanded to estimate the number of walleye taken by state anglers in all ceded territory walleye lakes.

The Department is now proposing to institute very different regulations on walleye. The Task Force is troubled that this regulatory change is being proposed at a time when the Department's budget is proposed to be cut. The Task Force is concerned that it will be difficult for the Department, if these budget cuts are instituted, to effectively enforce and evaluate the effectiveness of these new regulations.

The Task Force recommends that state fishery biologists be charged with developing a plan, in partnership with tribal fishery biologists, to evaluate the changed regulations. Such a plan would include angling creel surveys and adult walleye population estimates. Benchmarks to determine whether the changed regulations are adequate include three adult spawning walleye per acre in naturally reproducing lakes and a total exploitation rate of no more than 35% of the adult walleye population.

The Task Force further recommends that sufficient monitoring and enforcement take place so that the Department can: 1) proactively evaluate these new regulations and the impact they have on the number and size of walleye that inhabit, and are being harvested from, Ceded Territory waters, and 2) effectively enforce fishing regulations and prosecute violators.

Recommendation #2: The Board should adopt mechanisms to respond quickly to changing circumstances. Current Department of Natural Resource regulation provides that modifications in daily bag limit and size limits to curtail state angling can be made, almost immediately, in response to tribal harvest. *See* NR 20.36. A similar regulation could be instituted to immediately change state angling in response to low population density or over-exploitation. Within the proposed regulations, there are five types of length standards, each more restrictive. The Department should have the ability to immediately impose the next most restrictive standard if the population fails to maintain or reach the benchmark of three adult spawning walleye per acre.

Recommendation #3: The length regulations proposed for each body of water should be sufficiently protective, at the outset. The Task Force recommends that the length regulations imposed for each water body be designed to achieve the benchmark of three adult spawning walleye per acre. The Task Force notes that many water bodies with naturally reproducing walleye within the Ceded Territories are failing at this measure, which is a standard emphasized by Judge Crabb in her *LCO* case opinions. Prior to adopting length regulations applicable to lakes within the Ceded Territories, the Task Force recommends that the Board provide an opportunity for the state fishery biologists and tribal fishery biologists to consult on the appropriate length regulation for individual lakes.

Finally, the Task Force is doubtful that the three-bag limit portion of the regulation change constitutes an "emergency." While the closure of walleye harvest on the Minocqua and Tomahawk chains does seem to be necessary to begin to rehabilitate walleye populations there, no similar emergency exists on all other ceded territory waterbodies.

The Task Force remains committed to removing obstacles and building partnerships to promote sound biological ceded territory resource management. I have asked Philomena Kebec (715-682-6619, extension 2106, or pkebec@glifwc.org) and Joe Dan Rose (at extension 2119, or jdrose@glifwc.org) to assist in facilitating communication and coordination on this matter. As always, please do not hesitate to contact me if you have questions.

/s/James E. Zorn, Executive Administrator



GLIFWC, Sokaogon/Mole Lake, and St. Croix electrofishing crews completed assessments on two lakes in Minnesota and Michigan and 19 in Wisconsin, where GLIFWC also assisted the WDNR on three additional lakes. Pictured is GLIFWC crew member Bill Soulier. (photo by Butch Mieloszyk)

On the cover

The cover features a woodland style dancer on ledger art. Ledger art originates on the plains and was prevalent during the 19th century as many native artists had access to accounting ledger books. The image of this ogichidaa (warrior) emerges at a good time for Anishinaabe people as the battle to keep the environment clean and protected is brought forth. Note the map in the background is of the ceded territories. The style and image also reflect upon the relationship that Ojibwe and plains people have had for centuries. Mügwech to Isaiah Stewart for his artistic abilities.

No walleye harvest on Minocqua Chain

By GLIFWC Staff

The Wisconsin Natural Resources Board (NRB) approved a cooperative plan devised by the state, tribes and the Headwaters Chapter of Walleyes for Tomorrow that prohibits keeping any walleye from the Minocqua Chain of Lakes, Vilas County for the next five years. The plan was put into effect through an NRB emergency rule in response to poor recruitment and a corresponding decline in adult walleye numbers throughout the five-lake chain, a phenomenon noted in both tribal and state annual walleye population assessments. Little natural walleye reproduction has been observed in the Minocqua Chain over the past decade, according to Joe Dan Rose, GLIFWC inland fisheries biologist.

Prior to the NRB rule, the rehabilitation plan was approved by the Voigt Intertribal Task Force by a 8-2 vote. Dissenters, however, were not necessarily against the plan but rather concerned that some issues, such as the need for adequate enforcement, had not been explicitly addressed in the proposed plan.

The walleye harvest closure will extend from 3-5 years and is only one aspect of the cooperative rehabilitation project, which will include continued state and tribal population assessments to help determine if and when the population density goals for adult walleye identified in the plan have been met. The study also incorporates improvement of spawning habitat on Minocqua Lake, water quality testing, and assessment of natural reproduction. Previously initiated stocking efforts will also continue.

The rehabilitation goals for the project are to improve natural reproduction and reach a density of three adult walleyes per acre in Minocqua and Kawaguesaga Lakes, and to reach a density of two adult walleyes per acre in Tomahawk Lake. At that point, some harvest opportunity could be reinstated.

GLIFWC inland fisheries staff will be working with the state, tribes, and Walleyes for Tomorrow as the project progresses to coordinate and share data from assessment work on the chain.

Lawsuit against MNDNR fails

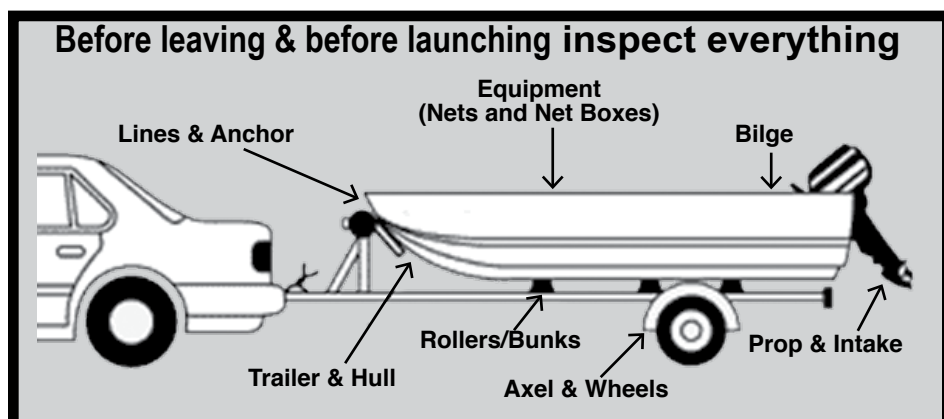
By Philomena Kebec, GLIFWC Policy Analyst

In response to an ongoing decline in the walleye population of Mille Lacs Lake, the Minnesota 1837 Ceded Territory Fisheries Committee determined that it would take several years of significantly reduced mortality from all sources to increase and stabilize the population. In 2013, the combined walleye harvest quota for the state and tribes was reduced by 50% from the previous year. In 2014, the quota was reduced further and both parties took steps to control their harvest accordingly.

The Minnesota Department of Natural Resources (DNR) instituted regulations for 2014 that would significantly reduce the angler harvest of walleye from Mille Lacs Lake. The tribes made a significant cut to their walleye harvest in 2014 as well.

Various citizen groups have criticized the DNR management of Mille Lacs Lake, which included these reductions in angler harvest. Many of these same groups have historically opposed tribal harvests because tribes have the right to use different methods for harvesting fish. Save Mille Lacs Sport Fishing, Inc. and several other groups and individuals filed a lawsuit challenging the emergency angling rules developed by the DNR for Mille Lacs Lake in 2014. Before the Minnesota Court of Appeals, Save Mille Lacs Fishing argued that the DNR failed to consider the public trust doctrine and a 1998 amendment to Minnesota's Constitution, promoting the preservation of the state's hunting and fishing heritage when adopting those rules.

In its decision released in February 2015, the Court rejected the petitioners' challenge, finding that the emergency rule was consistent with the constitutional amendment and the public trust. The Court also found that the DNR did not act arbitrarily when enacting the rule; it held the required public hearings and made the rules based on scientific information. Judge Hudson concurred in the judgment, but found that the petitioners lacked standing to challenge the emergency rules.



Tribes night hunt case returns to District Court

By Sue Erickson
Staff Writer

The plaintiff tribes in the treaty night hunting case are pleased with the U.S. Supreme Court's denial of Wisconsin's petition for review, a decision which came down April 20. This denial is favorable to the tribes because it will return the case to District Court for further consideration. In its petition to the United States Supreme Court, the state attempted to convince the Court to reverse a Seventh Circuit Court decision on the tribes' night hunting case that was favorable to the tribes. The Seventh Circuit Court of Appeals found that sufficient circumstances had changed to warrant another look at the original 1990 deer night-hunt decision in the *Lac Courte Oreilles v. Wisconsin* case. The case will now go back to Judge Barbara Crabb in the U.S. District Court, Western District of Wisconsin, for further consideration.

"The tribes are actively seeking more opportunity for our members through a highly-regulated, treaty night hunt for deer," states Mic Isham, Lac Courte Oreilles tribal chairman. "For me



Colette Routel.

the justices have ruled for tribal sovereignty, our continued ability to exercise sovereignty through self-regulation. We also continue to work with the state to address legitimate safety issues in our night hunt plan. We are hopeful that the final order will give our communities the opportunities we seek."

Colette Routel, professor at William Mitchell School of Law, has served as lead attorney on behalf of the plaintiff tribes.

Latest Michigan moose survey reveals potential downturn

By Charlie Otto Rasmussen, Staff Writer

Marquette, Mich.—For the first time in nearly two decades, the Upper Michigan moose herd may be backsliding. Michigan Department of Natural Resources (DNR) researchers completed their biannual population assessment last winter, calculating a dip from 451 to 323 moose in the core range of the western Upper Peninsula.

"We've monitored this population for many years and this is only one point over time," said Chad Stewart, DNR moose specialist. "But there are some things that are concerning."

The biggie centers on calf numbers. Stewart said the 2013 survey resulted in a ratio of 57 calves for every 100 cows. In 2015 that quotient slid to 43-to-100. The adult moose population consisting of bulls and cows appears steady, Stewart added.

"So we seem to have this loss at the calf level. What might be driving that is unclear," Stewart said. "It may include climatic conditions, wolf predation, or landscape and environmental factors."

Only continued research and time will provide greater clarity on the future of Michigan's small moose herd. Following winter population surveys every two years, DNR wildlife officials advise Michigan Natural Resources Commission policy-makers on whether to move forward with the moose hunting season first proposed in 2011. "It was an easy call to not recommend a hunting season this year," Stewart said.

Core moose range is centered in Marquette, Baraga, and Iron Counties where 59 moose from Ontario were turned loose in the mid-1980s. A scattered population consisting of less than an estimated 100 moose exists in the eastern Upper Peninsula.

Nearby moose populations—notably in northeastern Minnesota—have experienced a dramatic decline in numbers over the past decade. Biologists from the Fond du Lac Band, the 1854 Treaty Authority, and state of Minnesota are engaged in a long term study to better understand the impacts that parasites, disease, predation, and warmer annual temperatures have on moose health.

Data on Gichigami fish gathered

Focus on diet and water temperature/depth studies

By Bill Mattes, GLIFWC Great Lakes Biologist

Black River Harbor, Mich.— Newly hired Climate Change Fisheries Technician Ron Parisien, Jr. is spending time riding commercial fishing tugs to gather diet, growth and age data from adikameg (Lake Whitefish) on Gichigami (Lake Superior) as well as other fishes.

Information on diet, growth and age is vital to understanding fish communities and will be used in models on bioenergetics (energy flow through living things), food webs and the ecosystem of the near-shore waters of Lake Superior.

An investigation into the differences between Lake Superior and lower Great Lakes food webs will be completed with the diet data. Additional research partnerships will be sought to continue and enhance current modeling efforts.

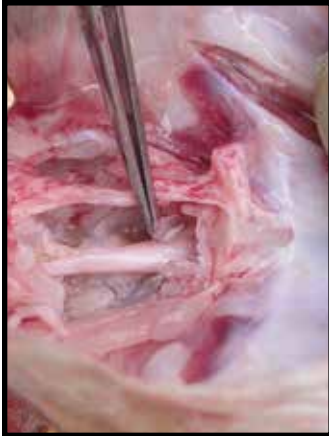
In addition to gathering diet data, the Great Lakes Section is directing a project to test the assumption that water temperature changes have altered the temperature and/or depth distribution of lake trout. This will be done by collecting temperature and depth data from archival tags placed on lake trout between 2015 and 2017 and comparing it to data collected during 2001 to 2003

under a USFWS Great Lakes Fish and Wildlife Restoration Act grant.

Previously collected temperature data are used in bioenergetics modeling of Lake Superior predatory fish, including lake trout and sea lamprey and in stock assessment models.

Changes to the temperature regime inhabited by lake trout will lead to changes in bioenergetics and fishery assessment models. Also, changes in the depths inhabited by lake trout may influence catches in standardized assessments and sport and commercial fisheries. Recapture of tagged fish will include agency assessment fishing, commercial fishing and sport fishing. Location of harvest, date, and depth information will be gathered for each recapture.

When possible, biological characteristics will be collected which include: length, weight and an aging structure. As with the 2001 to 2003 study, fishermen will be asked to report fish captured with archival tags to the Great Lakes Section and will receive a \$100 reward. Temperature and depth information will then be downloaded and stored on a database for later analysis. To report tagged fish go to: glifwc.org/tag.html. For more information on the 2001-2003 study go to: data.glifwc.org/archive.bio/Project%20Report%202004-01.pdf



In the lab, GLIFWC staff analyze stomach samples taken from lake trout during assessment work in Lake Superior. The sampling is part of a study to determine lake trouts' diet. In the lab are Great Lakes Section staff, from the left, Ron Parisien Jr., fishery technician; Bill Mattes, section leader, and Cassandra Arts, Northland College intern.

To the left: Otoliths (ear bones) of fish are used to determine the age. The bones sit inside fluid filled sacs inside of the fish's skull. Fisheries technicians remove the otoliths by cutting the skull bone and then place them in coin envelopes for later analysis.

Correction

Mazina'igan apologizes for incorrectly attributing the article, "Workshop explores lampricide resistance," that appeared in the Spring 2015 edition, page 4 to Bill Mattes, Great Lakes Section leader. The article was a press release from the Great Lakes Fishery Commission.

EPA cuts Binational Forum funding

Forum seeks to regroup

By Sue Erickson, Staff Writer

The Lake Superior Binational Forum, one of the five Great Lakes citizen forums, was composed of dedicated Lake Superior stakeholders who focused on outreach, education, and soliciting public comments from diverse stakeholders on the management of Gichigami. Formed in 1991 the Lake Superior Binational Forum has more-or-less been the only basin-wide outreach component of a binational effort to protect and restore the Great Lakes.

Twelve citizen representatives from the United States and twelve from Canada composed the core body, and at times included tribal/first nations members.

However, funding through the Great Lakes Restoration Initiative (GLRI) and the Environmental Protection Agency (EPA) was eliminated in early 2015. The EPA informed the five Forums last fall that funding would no longer be provided, and that tribal and state governmental agencies would be responsible for their own outreach and public comment opportunities in the future.

According to Lissa Radke, former coordinator of the Lake Superior Binational Forum and sole staff member, EPA administrators said the reason for the cut was to direct all GLRI resources towards clean-up and restoration efforts.

Radke notes that annual funding for all five Great Lakes forums amounted to around \$400,000, so the elimination of this funding had a minor impact on total dollars available in the \$300 million dollar budget designated for Great Lakes protection and restoration this year.

She considers one of the Lake Superior Forum's major successes to be engaging a very diverse group of stakeholders in lake management issues with major initiatives to incorporate tribes and hear their concerns.

The last Forum meeting, in fact, was held at the Red Cliff reservation in November 2014, attracting 165 participants for a half day of speakers highlighting tribal success stories, as well as public input conversations and an evening arts and cultural program celebrating storytelling, songs, and dancing. Open public meetings such as this one were popular with the public since the Forum hosted regional speakers who brought fact-based information on a variety of important topics and offered opportunities for the public to give input on how they wanted Lake Superior to be managed.

Recommendations developed through input heard at Forum meetings were brought to the Lake Superior Binational Program's Workgroup, Task Force and the Great Lakes National Program Office within the the Environmental Protection Agency.

The Forum instituted and maintained many successful outreach programs including Lake Superior Environmental Stewardship Awards, a friends of the lake program called Lake Superior Stewards, Lake Superior Day, a weekly radio program, an electronic newsletter, and website, making information about Lake Superior management issues available to a broad public audience all around the lake. Radke believes that Lake Superior Day will go forward because other groups will continue to actively support that effort on their own.

The Forum members are looking for avenues to continue their outreach and education program with the possibility of linking with another entity with a 501c3 status in order to regroup.

While it is disheartening to see a strong program fold, we say chi miigwech for 24 years of hard work protecting Gichigami, the Great Lake, and its inhabitants and hope other avenues will open to continue this important work.

Check out the Lake Superior Binational Forum website at: <http://www.superiorforum.org>



Brian Bainbridge, Red Cliff vice-chairman, spoke at the final Binational Forum meeting in Red Cliff in November 2014. (COR)

Free workshop on edible wild plants

"Preserving the Power of Plants," a full-day, free workshop will focus on identifying, harvesting, cultivating and preparing native edibles. Starting at 9:00 am on June 9 at the Northern Great Lakes Visitors Center (NGLVC), Ashland, Wisconsin, the workshop will include both indoor and outdoor sessions including presentations on ethnobotany, cooking demonstrations and plant identification walks, plus a natural food lunch.

The event is sponsored by the UW-Superior, NGLVC and GLIFWC. For more information, contact: 715-398-8477.





Waabizheshi research news

By Jonathan Gilbert, PhD, GLIFWC Wildlife Section Leader

Much is happening on the research front with waabizheshi (marten) this year. Below is an overview of GLIFWC's research projects, several of which are cooperative studies.

Marten GPS tracking

GLIFWC is undertaking an experimental trial using new GPS tracking technology. GPS tracking is achieved by placing a collar, with a GPS receiver, on an animal and then tracking the animal using this collar. This technology has been in use for several years, but the collars have been too large for martens to wear. New technology has developed which permits the collars to be much smaller and wearable by martens. But as with all new technology, it must be field-tested. Nick McCann, GLIFWC wildlife biologist, is leading the effort to trap, collar and monitor up to four martens this year to field test these new devices. If successful the data obtained from these collars will enable us to plot marten movement during five-minute intervals, a very fine-scale look at movement patterns.

Cooperative projects with UW-Madison

GLIFWC is collaborating with the USFS and Dr. Jonathan Pauli, and students from his lab, at the University of Wisconsin-Madison, Department of Forest and Wildlife Ecology to investigate marten habitat selection and demography in the Chequamegon/Nicolet National Forest (CNNF). The research relies on several



A recaptured waabizheshi awaits release after the research team completed gathering data on this American pine marten. (photo by Ron Parisien, Jr.)

techniques including hair snares to collect DNA, track surveys to determine habitat use and habitat measurements. Phil Manlick, MS student in Dr. Pauli's lab, is completing his analyses from data collected on the Great Divide District of the Chequamegon side of the forest. He is investigating whether the marten restocking program conducted from 2008-2010 was successful and whether the reintroduced animals are contributing to the marten population there. He has completed his field work and is now in the process of analyzing his data.

Jennifer Grauer, another MS student in Dr. Pauli's lab, is just beginning her work on the Nicolet side of the forest. She will be using similar techniques as Phil but will be focusing on the connection between the Nicolet Forest and the Ottawa Forest to the north. Both of these projects will vastly improve our understanding of marten ecology in Wisconsin and should prove invaluable in shaping future management efforts.

Cooperative project with Purdue University

Dr. Patrick Zollner of Purdue University collaborates with GLIFWC to develop an individually-based, spatially explicit population model which can be used to simulate marten dispersal in Wisconsin. Casey Day, PhD candidate at Purdue, is refining this dispersal model and conducting evaluations of its ability to track known movements. In addition, Casey is trying to incorporate genetic movement into this model, thereby enabling researchers to not only track animal movement, but the exchange of genes, vital for the continued sustainability for most species.

Once completed the model will be used to evaluate the role of Iron County forests as a corridor for marten (and marten DNA) movement from the Great Divide District on the CNNF to the Ottawa National Forest in the UP of Michigan. This potential corridor could provide an important pathway so that the martens on the CNNF do not become isolated and thus more vulnerable to extirpation.



Researchers scan a sedated waabizheshi for a PIT tag, which is a tiny identification chip installed in case a collar is lost. Martens released in the Chequamegon-Nicolet National Forest from Minnesota also carry a PIT tag. Captured animals are lightly sedated for about 15-20 minutes while information is gathered. (photo by Ron Parisien, Jr.)

1837 & 1842 ceded territory waawaashkeshi (deer) harvest by registration station 2014

There were 1,253 deer registered by tribal hunters from the 1837 and 1842 ceded territories in Michigan, Minnesota and Wisconsin (excluding deer registered at Keweenaw Bay Indian Community). This table shows the number of deer registered at each tribal registration station, regardless of the hunter's tribe of enrollment. Some tribes maintained more than one registration station (e.g., Mille Lacs and St. Croix), and totals are presented for each of these stations.

Registration Station	Antlerless	Antlered	Grand Total
Bad River	40	37	77
Fond du Lac	30	16	46
Lac Courte Oreilles	111	99	210
Lac du Flambeau	280	98	378
Lac Vieux Desert	28	12	40
Mille Lacs Station 1	24	21	45
Mille Lacs Station 2	14	15	29
Mole Lake	99	48	147
Red Cliff	38	29	67
St. Croix Station 1	68	65	133
St. Croix Station 2	39	32	71
Warden Registration	7	3	10
Grand Total	778	475	1,253

Wild turkey youth hunt Put on the calendar for 2016

A late-breaking Commission Order established a youth wild turkey hunt in the Wisconsin ceded territory on April 11-12. The hunt is for tribal youth aged 10 to 15 who must be accompanied by a parent, guardian or an adult designated by the parent or guardian. Youth must also get a permit from their tribal registration station. It came up fast this spring, but put it on the calendar as an opportunity for spring 2016!

1837 & 1842 ceded territory makwa (bear) harvest by registration station 2014

There were 39 bears registered from the 1837 and 1842 ceded territories in Michigan, Minnesota and Wisconsin, excluding Keweenaw Bay Indian Community.

Registration Station	Female	Male	Grand Total
Bad River	3	3	6
Fond du Lac	3	4	7
Lac du Flambeau	2	3	5
Mole Lake	2	2	4
Red Cliff	9	5	14
St. Croix Station 1	0	3	3
Grand Total	19	20	39



Gidoogichidaakweminaanig “Our women warriors”

By Dylan Jennings, Staff Writer

Mille Lacs Reservation, Minn.—Mille Lacs has a rich history of fishing by net. When the season comes around, families and providers drop everything to make it out on the lake. Many people manage to maintain full time jobs, children, and households while still setting nets late into the night and checking them early in the morning.

For many groups, netting is a continuation of family legacy. Others simply love to exercise their treaty rights and provide for their families and communities. For a special group of women from Mille Lacs, all of the reasons above continue to motivate them onto the lake each year. Katie Draper, Shelly Pardun, and Audrey Pardun are three Mille Lacs tribal members who aren't afraid to get their hands dirty.

The crew has been netting together for over five years. Braving choppy waters and below freezing temperatures, the team has a passion for fishing and exercising their treaty rights. Shelly, the most experienced team member recalls netting with her late brother Ken Pardun, former GLIFWC warden. “It all started with my brother Ken; he wanted to take me out netting. Pretty soon I came to love it and became excited when the snow started melting and the ice went away. Once my brother passed away, it was really hard; it was like I didn't even want to go anymore. My father said ‘yes you are,’ and he encouraged me to get back out there.” From that moment, Shelly has been looked up to as a leader. With over ten years of experience under her belt, community members seek her advice.

In today's modern society, stereotypes and gender assigned roles falsely guide community members and youth into believing men are solely responsible for the



Katie Draper (left), Shelly Pardun (right), and Audrey Pardun (not pictured) exercise their treaty rights by setting nets at Mille Lacs almost every season. (photo by Dylan Jennings)

harvest of the resources. However, Shelly, Katie, and Audrey are a testament to the power that our ikwegag (women) carry. Serving as role models and providers for their communities, they work hard to ensure their tribal members, and women especially, are empowered to exercise their rights which were hard-won rights.

The trio recalls one of the first years netting at North Garrison landing on Mille Lacs. “There were a lot of other tribes fishing the lake on this night, and when we pulled up a guy came over and asked us, ‘Who's taking you girls out?’ Many of the guys were poking fun at us, and they undermined us. The next day we came back to lift our nets, and they were filled with beautiful walleye, and the guy that was poking fun left with a bucket of suckers.” The group doesn't boast or brag, they just tell the story and laugh hard.

Anyone that harvests fish during this time of the year recognizes the work that goes into every step. A lot of work goes into prepping the boat and mending nets, not to mention setting and lifting nets sometimes in inclement weather and cleaning and packaging fish. There are regulations and guidelines that every tribal member must follow as well. All fish taken are measured and weighed to ensure the lake is at a healthy carrying capacity.

Compassion and taking care of each other is such a huge theme in Anishinaabe culture. Every year the women host a few community fish fries and give back to their people. Katie remarks, “We are always willing to help teach people to net and to exercise their treaty rights because it's such a big part of our future.” Remembering the teachers and

help preserve these practices alive and thriving for the seven generations to come.

Long season brings big ogaa numbers

(Continued from page 1)

harvest allocation, taking home 2,030.8 pounds. During the brief yellow perch run to the Mille Lacs shallows, Bad River and Lac Courte Oreilles joined the Mille Lacs Band to gill net a combined 961 asaawe (yellow perch).

Despite 73 walleye waters available to treaty tribes beyond Mille Lacs in the Minnesota 1837 territory, bands selected only 13 to fish taking 330 ogaa for a 702 pound total. One of the most productive outings came from Crow Wing County's South Long Lake where members from Bad River, Fond du Lac, St. Croix and Mille Lacs Band combined for 189.8 pounds of walleye.

Record harvest in Wisconsin

Treaty fishers took advantage of an extraordinary month-long season, establishing a walleye harvest record in the Wisconsin ceded territory. GLIFWC creel clerks tallied 38,512 walleye, a figure well above the previous high mark set in 2010—another early spring that unfolded slowly, increasing harvest opportunities.

On April 3 the St. Croix and Lac Courte Oreilles Bands launched the 31st consecutive off-reservation spearing season on southern-tier ceded territory lakes. Near the fishing season's close in early May, only the muskie hunters still plied the evening waters. From a harvest quota of 1,944, Ojibwe spearmen registered 170 muskellunge.

Upper Michigan

In Upper Michigan a flurry of winter weather struck midway through the ogaa harvest season, preventing spearmen from getting out on the water over a string of evenings. For many Michigan Ojibwe, however, the elements did not avert a successful overall spring season.

“The snow slowed fishing down,” said Matt Kniskern GLIFWC Officer. “You can't see the fish when there are these huge snowflakes in the water.”

Lac Vieux Desert spearmen enjoyed a much better season on their primary harvest water, Lake Gogebic. Ogaa spearmen easily outdistanced last year's harvest of 1,809 on the western Michigan lake with 3,167 in 2015. “Gogebic provided a lot of opportunity for the band this year,” Kniskern said. “It was a bit unusual that walleyes seemed to spend a lot more time hanging out in the shallows.”

Preliminary total harvest for the LVD Band came in at 4,183.

Keweenaw Bay Indian Community fishers found spearing success in the Portage Lake system—a looping waterway that bisects the Keweenaw Peninsula. Throughout the season that ran from April 20 to May 3, creel teams counted every fish at Portage Lake and recorded biological data at boat landings. With fishery modeling assistance from GLIFWC, KBIC officials set a walleye safe harvest level at 2,062 fish. At Mazina'igan press time, tribal biologists continue to process final harvest numbers.

**All figures are preliminary and reflect totals as of May 6, 2015*



Perch make good eating too! Bad River members enjoyed netting for perch in Mille Lacs Lake this spring. Pictured picking perch from nets are Mike Herberg, Sharri Letson, Preston Pospychalla, and Matt Deloney. (photo by Ben Michaels.)



Keweenaw Bay Indian Community creel crew members Otis Malmgren (left), Joe Francois (seated), and Sam Spruce monitor the spearfishing harvest on Michigan's Portage Lake. (photo by Gene Mensch)



Research natural areas reserved for scientific study

Forest Service research natural areas and co-designated tribal research natural areas

By Alex Wrobel, GLIFWC Forest Ecologist

Within the National Forest System there is a network of protected areas known as “Research Natural Areas” (RNAs). These are ecological communities that contain unique and high-quality features that may be rare or no longer commonplace across the landscape. RNA selections are not limited to any one type of ecological community. It is, however, the goal of the RNA program to eventually have protected areas that are representative of all ecosystem types within the nation.

By permanently protecting RNAs, ecosystems can be preserved and managed only by natural processes. These sites can then help us: 1) better understand the ecology of uncontrolled ecosystems and 2) serve as a comparison to similar ecosystems that have undergone various different management activities. As defined by the USDA Forest Service:

“The Forest Service Research Natural Areas (RNAs) network protects some of the finest examples of natural ecosystems for the purposes of scientific study and education and for the maintenance of biological diversity.”

RNA Designations:

Established: An RNA has been officially designated.

Candidate: Areas to be reviewed and recommended by the Regional RNA Committee.

Proposed: New areas in a forest’s plan and/or recommended for designation by the National Forest.

Nominated: Areas currently under consideration.

Designating an RNA

Every National Forest has as “Forest Plan” that describes the goals of the forest as well as the management activities that are planned in order to fulfill them. These Forest Plans are reviewed and revised every 10-15 years in order to ensure the forest is being managed accordingly. It is during this revision process that newly established RNAs as well as new candidate RNAs (cRNAs) are identified. These candidates are then reviewed for potential establishment.

Nationally there are more than 450 designated RNAs on 175 National Forest Service lands. Of these 175 National Forest Service lands, four National Forests are located within the ceded territories under the 1836, 1837 and 1842 Treaties: Chequamegon-Nicolet, Ottawa, Hiawatha and the Huron-Manistee. The Forest Service recognizes the exercise of treaty rights such as hunting, fishing and gathering within the ceded territories through a Memorandum of Understanding (MOU) with the 11 GLIFWC signatory tribes.

Tribal RNAs

In the MOU, the tribes acknowledge their mutual interest in encouraging research coordination on National Forest land within the ceded territories. Together with the Forest Service, they recognize the importance of inventorying and monitoring the status high-quality ecosystems, evaluating the impacts of harvest on the resources subject to the Tribes’ treaty rights, and evaluating the effect of other land management activities on those resources. Again, RNAs are invaluable as comparison study sites for this type of monitoring.

In 2014, the Chequamegon-Nicolet National Forest collaborated with GLIFWC to develop a process for forwarding newly designated RNAs in order for the tribes to consider designating them as “Tribal RNAs.” This process is as follows:

- When new RNAs are officially designated by the USFS, the USFS will provide a description, justification and map of the RNAs to GLIFWC
- The Tribes will review these RNAs at the Voigt Intertribal Task Force meeting and consider adding them as Tribal Research Natural Areas
- If adopted they will be added to the list of Tribal Research Natural Areas in the following document: Tribal Wildernesses, Tribal Research Natural Areas and Tribal Vehicle Permit Areas on National Forests

The co-designation of “Tribal RNA” is unique to GLIFWC member tribes as there are no other “Tribal RNAs” currently designated within the nation. This title not only provides an added layer of enforceable protection to an RNA, but it also demonstrates the tribes’ commitment to maintaining these valuable ecosystems.

The number of established, candidate and tribal RNAs on each forest:

National Forest	Established RNAs	Candidate RNAs	Tribal RNAs
CNNF	17	13	12
Ottawa	2	-	1
Hiawatha	3	9	3
Huron-Manistee	3	10	3

Gathering in a RNA:

In general, the Forest Service does not prohibit gathering in RNAs nor have they requested tribes stop doing so. However, the language that was agreed upon by the tribes in the original MOU stated:

“Gathering of wild plants is prohibited within designated research natural areas except for religious or ceremonial use with permission from the Tribe.”

It was during the 2014 annual MOU meeting with the Forest Service and GLIFWC that it was discussed that the tribal gathering restrictions in the Tribal RNAs were more restrictive compared to gathering restrictions in RNAs for the general public and a change to the language was proposed:

“Gathering of those species for which a general gathering permit is issued by the Tribes is allowed. Examples include: fruits, nuts, leeks, ferns, berries and seeds. This excludes products that are covered by a non-timber forest product permit, such as: firewood, bark, boughs and lodge poles.”

In recognizing that traditional tribal gathering practices have been considered to be part of the natural process of an ecosystem, this change in the language opened tribally designated RNAs to general gathering while maintaining the goals of the RNA program.

For more information on the federal Research Natural Areas program and for RNA locations visit: www.nrs.fs.fed.us/rna/about and for more tribal treaty harvestings regulations visit: www.glifwc.org/Regulations/regulations.html.

For additional information on 2015 National Forest closures and campground rules and regulations, see page 22.



Marvin Defoe, Red Cliff, carefully removes bark from a wiigwaasi-mitig (birch tree). Traditional gathering practices are valued by the Ojibwe tribes today, and they recognize the importance of research areas to the overall preservation of important plant species. (photo by Melissa Rasmussen)

Essential Ojibwemowin

wiigwaasi-mitig—birch tree
maniwiigwaase—gather birch bark
wiigwaas—birch bark



Revitalizing Anishinaabe Spirit: Remediation near Spirit Island

By Dylan Jennings, Staff Writer

Nagaajiwanaang (presently known as Fond du Lac), the Anishinaabe word for “The place where the water stops/gets flat,” is in the process of working towards the remediation of a sacred stopping site for Anishinaabe people. Spirit Island is a sacred island located in the St. Louis River between Wisconsin and Minnesota. It is the sixth stopping place in the Anishinaabe migration story.

In 2011 the Fond du Lac Band of Ojibwe purchased the ten-acre island and associated shoreline from a private resident for \$150,000. Since the purchase of the island, it has been made a candidate for the National Register of Historic Places. Anishinaabe migration stories speak of this area as a stopping point where Midewin ceremonies were held, and Anishinaabe people lived on the island before heading to the seventh stopping point on Madeline Island.



U.S. Steel discharge into the St. Louis River in 1967. (photo reprinted from Minnesota Pollution Control Agency)

The old U.S Steel Duluth Works Saint Louis Superfund Site encompasses a 640-acre area, located southwest of downtown Duluth and is directly within view of Spirit Island. The company operated from 1915-1979 and produced coke, steel, iron products, and also did wire rolling and milling. Less stringent regulations and abandonment have generated tangible environmental issues for not just the Fond du Lac Band of Lake Superior Chippewa, but also the surrounding townships.

Currently, there are environmental concerns in the area specifically in the St. Louis River and nearby shoreline. There are millions of cubic yards of PAH (polycyclic aromatic hydrocarbons) contaminated sediments in the river that need to be removed. Both mercury and PCB (polychlorinated biphenyl) levels are predicted to be present and high in the area as well. Mercury becomes ingested by various fish species and can then contaminate people that may consume the fish. Mercury affects the human nervous system and has detrimental impacts on human development.

In a recent meeting, tribal representatives showed deep concern for a preferred alternative that was suggested as part of remediation efforts. The company proposes to build a confined disposal facility right along the river and dredge minimally to save money. Tribal representatives agreed that this might not be the most protective or acceptable manner for handling the situation, especially given the proximity to Spirit Island. As Fond du Lac Band Natural Resources Manager Tom Howes explains, “Remediation of the U.S Steel site should be done in a way that is respectful of the historical, cultural and ecological significance of the estuary as a whole.”



The small crescent shaped island to the upper right of the Superfund site is Spirit Island.

Many wild plants are tasty & nutritious You may want to add a few to your summer diet

By Owen Maroney, GLIFWC Community Dietitian

Not too long ago you cleaned and put away your sugarbush supplies, assembled your spearing and netting gear, and hopefully enjoyed a bountiful harvest. Now with the spearing season done, you are probably looking forward to the juicy, sweet delights that the berry picking moon has to offer later this summer. However, this season, I urge you to look around and take note of the other delicious and traditional foods that a grocery store cannot offer.

Let's take a look at two plants you may have overlooked in the past that are fun to harvest and delicious to eat! First up, the wetland plant “cattail” (*Typha latifolia* and *Typha angustifolia*) provides many edible parts. In the summer the shoots can be peeled then cooked like asparagus; young cobs can be eaten like baby corn, and the pollen can be used as a flour that tastes something like almond flour. Ten cattail shoots (190 grams) provide about 50 calories and packs in 10% of your daily needs for iron, calcium, and folate, and more than 30% of your dietary fiber needs (based on a 2,000 calorie diet)!

Next, in mid to late summer be on the lookout for juneberries (*Amelanchier alnifolia*)! The fruit looks and tastes like blueberries but have a hint of almond flavor that make them irresistible. They provide almost twice as much iron and potassium as blueberries and more protein than other berries.

All summer long and into fall you can harvest all sorts of wild plants and bring them home for a delicious and traditional dinner. If you are interested, here is a short list to kickstart your personal edible wild plant research: dandelions, sweet fern, wintergreen, sunchoke, acorns, smooth or staghorn sumac, wapato, wild mushrooms, and much more.

Harvesting wild foods can be an enjoyable way for the whole family to incorporate tradition into your summer activities but there are some important things to remember:

- Respect and honor the traditional foods you are harvesting by first putting down asemaa (tobacco) and offering thanks before you harvest.
- Anishinaabe are known as great stewards of the land. Keep that tradition alive by taking only what you need. Remember there are other hungry relatives that rely on those resources too!
- Plant identification can be tricky. Take someone with you that knows the plants and only eat foods you can 100% correctly identify. If you say, “I think this is...,” then don't eat it.



Cattails provide many edible parts including the shoots and cobs and flour created from pollen. (reprinted from nwplants.com)



Juneberries look and taste like blueberries but have a hint of almond flavor. (reprinted from smallfarms.cornell.edu)

- When trying a food for the first time, eat only a little and see how you feel over the next 24 hours. You never know if you are allergic.
- Just remember, as the harvester, it is your responsibility to know where you can harvest, what you can harvest, and to correctly identify the plant. Check out GLIFWC's website for the updated Gathering Regulation Summary http://glifwc.org/Regulations/GatheringandRice_91614.pdf

Happy harvesting!

Editor's Note: GLIFWC's *Mino Wiisinidaa!* (Let's Eat Good!) Traditional Foods for Healthy Living cookbook features recipes for traditional Anishinaabe foods such as summer squash soup with fresh herbs, maple baked lentils and sumac berry ade. The cookbook is a culmination of a three-year project consisting of interviews with tribal community members and elders. For more information on the cookbook visit www.glifwc.org.

Mining activity in the ceded territories

By John Coleman, GLIFWC Environmental Section Leader & Esteban Chiriboga, GLIFWC Environmental Specialist

Mining continues to be a concern throughout the ceded territories. This article describes the status of current mining activity and the work that GLIFWC staff is conducting to review these projects.

Wisconsin

Penokee Iron Mine: Gogebic Taconite (GTac) halted the collection of baseline water quality and quantity data in the Penokee hills in September of 2014. In January of this year, GTac stated that all additional work at the site had been put on hold. Finally, in March of this year, the company officially withdrew its pre-application notice from the State of Wisconsin. The end of the GTac project means that the area of the former project is open for public access once again.

In the fall of 2014 staff became aware that some of the exploration holes drilled by GTac in early 2014 were leaking water to the surface and asked the WDNR to require GTac to either fix the casing on the exploration holes or else plug the holes with cement. Now that the project has ended, GLIFWC will continue to work with the WDNR to make sure all areas disturbed by GTac's activities at the site are properly reclaimed.

Exploration in Chequamegon/Nicolet National Forest: Aquila Resources conducted exploration in the Forest in Taylor County in the winter of 2011-12 but has conducted no exploration since then. Aquila still has an active permit for exploration near Chequamegon Waters and Mondeaux Flowages. Other than GTac's exploration in 2013 and 2014, no other metal mineral exploration activity has occurred in Wisconsin.

Michigan

Eagle Mine: Lundin Mining is now producing ore from the Eagle Mine on the Yellow Dog Plains. The mine will primarily produce nickel and copper. Efforts to permit a 21-mile haul road for ore from the Eagle Mine site to the Humboldt Mill processing facility through the forests next to the McCormick Wilderness were abandoned in 2013. An alternative road was built over the route of existing county roads. During road construction there was a large release of construction site water into the Salmon Trout River that was investigated by GLIFWC and Keweenaw Bay Indian Community (KBIC) staff. The contractor received a citation from the state and the Environmental Protection Agency (EPA) exerted closer oversight until the road was completed in the fall of 2014. Hauling of ore and processing of ore at the Humboldt Mill began in late 2014.

Humboldt Mill: During 2012, 2013 and 2014, the EPA conducted a site assessment at the Humboldt Mill site to identify contamination from previous mining. This assessment is a first step in determining whether the site should be listed as a Superfund site. In 2014, the EPA found that there was sufficient contamination to justify additional evaluation. The State of Michigan offered to take over evaluation of the site and the transfer of oversight from the EPA to the state will occur this winter. Lundin Mining began processing ore in 2014 and started discharging water from the milling into the Escanaba River. Review of the state water discharge permit by KBIC, GLIFWC and the EPA is ongoing.

Orvana/Copperwood: In 2014 Highland Copper Company purchased the Copperwood project from Orvana Minerals. This mineral deposit is located near the Presque Isle River and Lake Superior in the western U.P. Under the ownership of Orvana, permits that would allow the development and mining of the deposit were granted by the State of Michigan. Since purchase of the project, Highland Copper Company has left the project dormant in order to focus its attention on the White Pine Mine.

White Pine Mine: This mine was purchased by Highland Copper Company in 2014 with plans to mine the deposit immediately northeast of the historic White Pine Mine. That mine was closed in 1997 when a proposal to extract copper by acid solution mining was withdrawn. Highland Copper has been focusing its resources on evaluating the ore body and developing a mine plan. In 2014, the Michigan Department of Environmental Quality (DEQ) discussed calling a series of meetings to plan monitoring at the proposed mine site and conduct scoping for the environmental impact analysis process.

Exploration on the Ottawa National Forest: Trans Superior Resources applied to the Forest for permits to explore for minerals within the National Forest at several locations and conducted exploration during the winter of 2013-2014. GLIFWC staff will continue to track mineral exploration activity in the National Forest.

Minnesota

Polymet: The second draft Environmental Impact Statement for the Polymet/Northmet project was released in the fall of 2013. The applicant has proposed more complete capture of water leaking from the existing tailings basins and other changes to reduce release of contaminants from the site. Polymet would use the existing basins for disposal of new tailings. The water escaping from the basins would be treated 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 for at least hundreds of years. Comments on the Supplemental Draft Environmental Impact Statement (SDEIS) were received in early 2014 and the lead agencies and the company have been working on responses and changes to the project to address the issues raised. A draft Final Environmental Impact Statement (dFEIS) is scheduled for release in the spring of 2015 and a FEIS is scheduled for release in mid-2015. GLIFWC staff and staff from Fond du Lac, Grand Portage and the 1854 Treaty Authority are reviewing the proposed responses and project changes. Inadequate baseline data and incorrect characterization of the site hydrology continue to be significant problems with the project.



Untreated water leaving the Minntac tailings basin. The water flows towards the Sandy Lakes (visible in the background). The Sandy Lakes used to support tribal wild rice harvest, but the rice has now mostly disappeared because of the effects of the mine. (photo by Esteban Chiriboga)

Other sulfide ore deposits in Minnesota: Near the Polymet/Northmet copper-nickel ore project are several other sulfide metal ore deposits that have been extensively characterized through exploratory drilling. These deposits are adjacent to the Mesabi Iron Range and extend northeast towards the Boundary Waters Canoe Area. Antofagasta PLC of Chile acquired several of those deposits in 2014. In 2014, Kennecott Minerals joined with a new partner, Talon Metals, to renew exploration activity at the Tamarack sulfide ore site approximately 20 miles west of the Fond du Lac reservation and 25 miles northeast of the Mille Lacs reservation.

Minntac: U.S. Steel's Minntac project is a large iron mine near Virginia, Minnesota. The total footprint of the mine is approximately 32 square miles and the tailings basins cover approximately 16 square miles. Minntac operated for many years with expired water discharge permits. The primary environmental issue is release of thousands of gallons per minute of mine wastewater into surrounding wetlands, streams and rivers. The state was scheduled to issue a draft permit for public review in mid-February but this has been delayed indefinitely because MPCA wants to finalize a new standard for the protection of wild rice.

A key issue in the permitting of Minntac's wastewater discharges is the protection of wild rice. Historically the nearby Twin Lakes (Sandy and Little Sandy) produced many acres of wild rice. After more than forty years of discharge of mine wastewater to the lakes, wild rice is only a remnant. In 2011, Minntac began a water capture program that prevents some of the mine wastewater from entering the lakes. However, substantial wastewater is still being transmitted from the basins to the Twin Lakes. GLIFWC and 1854 Treaty Authority have been collecting water samples downstream of the Minntac tailings basins and cooperating with the EPA to document changes in water quality.

Minnesota has issued a draft standard to protect wild rice from sulfate. GLIFWC and Tribal staff are currently reviewing that standard. A preliminary review suggests that the proposed standard is not protective of manoomin and would allow significant degradation of a wild rice bed before that degradation would be considered significant by the state. A detailed review of the proposal is ongoing.

Mining Capitalism

A book review by Al Gedicks, for Mazina'igan

Stuart Kirsch is uniquely qualified to examine the relationship between mining corporations and their critics. He spent two decades as an anthropologist doing ethnographic research and participating in an indigenous political movement opposed to the Ok Tedi copper and gold mine in Papua New Guinea. The first half of the book describes his experience in working with an alliance of indigenous peoples, environmental activists and lawyers in an international campaign to stop the Ok Tedi mine from dumping their waste into the local river system.

Up until quite recently, the industry has been able to avoid responsibility for the costs of this destructive activity by shifting the burden of human and environmental costs onto society. That era came to a close in the 1990s when indigenous peoples and their allies in the environmental and human rights community mounted successful campaigns to resist ecologically destructive mining projects like the proposed Crandon metallic sulfide mine in Wisconsin.

This has forced the global mining industry to develop new social control technologies to manage their relationships with the public and allow continued access to mineral resources.

Kirsch provides great insight into the political strategies of transnational action networks seeking greater accountability from mining companies. He describes a 1994 lawsuit in Australian courts against one of Australia's largest mining corporations (BHP) brought on behalf of 30,000 people living downstream from the mine. The case established the important precedent that mining companies are liable for damage claims when their mining pollution deprives people of their subsistence practices such as fishing or farming.

The second half of the book examines how the mining industry uses and manipulates science to convince its critics that the problems of the mining industry are being addressed without the need for additional oversight or regulation.

—Al Gedicks, Emeritus professor of sociology, University of Wisconsin-La Crosse

Tribal gatherers, agency experts size up invasive organism threat

By Charlie Otto Rasmussen
Staff Writer

Red Cliff, Wis.—Lurking in bags of landscaping mulch, firewood loaded on pick-up trucks, commercial shipping containers—even floating on the wind, invasive pests are on the move and coming to a forest near you. For many native forest trees and plants used by Ojibwe people, the future looks grim. At a unique meeting March 19, more than 50 tribal gatherers, land managers and scientists from federal, state and tribal agencies sat down to share ideas on what to do about it.

“Emerald ash borer is going to wipe out black ash. It may take 15 years or longer,” said JoAnn Cruse, US Department of Agriculture State Plant Health Director. “But we want to have these discussions with tribes in advance. We need to know each other’s names.”

While many at the GLIFWC-sponsored Forest Invasive Regulatory Meeting looked upon unfamiliar faces, the gathering shared a deep interest in woodlands—scientists who study them and traditional people whose lifeway is intertwined with native trees and plants. Cruse proposed a cooperative plan to preserve and store healthy black ash logs. Future generations could still learn how to pound and peel a black ash log to separate the annual growth rings, she said, making strips used in traditional basketry.

Black ash craftsman Josh Homminga said that for him, the emerald ash borer (EAB) threat is a call for native people to step-up as forest caretakers. “I’m not here to protect the black ash tree because I want

Sugar maples cannot seed in soil where earthworms have removed the duff layer.



The invasive beetle emerald ash borer is expected to wipe out the ceded territory’s ash population within the next few decades said JoAnn Cruse, US Department of Agriculture State Plant Health Director. (photo by Charlie Otto Rasmussen)

to make baskets. It’s because I’m Anishinaabe. It’s because of our migration story.”

Since its discovery in Detroit in summer 2002, the emerald ash borer (EAB) has killed tens of millions of ash trees across the eastern half of the United States and portions of Canada. In the last few years the metallic green-winged beetle has infested scattered locations in the Ojibwe ceded territory. Land managers now consider EAB—originally from East Asia—the most destructive forest pest ever seen on Turtle Island.

Another Asian invader grabbed the attention of meeting presenter Bernie Williams, a Wisconsin Department of Natural Resources (WDNR) conservation biologist and self-described worm geek. Carried in

yard waste, potted plants and sold as new-and-improved fishing bait, these “jumping worms” or “crazy worms” are making their way into Wisconsin.

“It’s really different looking from common night-crawlers,” she said. “This is the most handsome worm out there. They are very, very smart and very unique.”

Known as *Amyntas*, these worms are voracious eaters, efficiently clearing forests of the duff layer. Williams said that crazy worms transform landscapes by preventing native seeds from germinating on bare forest floors, making it easier for invasive plants to grow. Unlike European worms already established in the Great Lakes region, *Amyntas* also eat seedlings and fine plant roots, wreaking havoc on forests and gardens alike.

“Earthworms encourage invasive species because they change the soil structure,” Williams said, confirming that there are no native earthworms in Wisconsin. *Amyntas* is asexual and becomes mature in only two month’s time, easily out-producing all 25 European varieties found in Wisconsin by 2:1, she said.

Presenters Andrea Diss-Torrance, WDNR and Brian Kuhn, Wisconsin Department of Trade and Consumer Protection, wrapped up the presentation part of the meeting and stressed the importance of cooperation between tribes and state and federal agencies to slow the spread of invasive organisms. A lively afternoon discussion moderated by Paul DeMain provided the opportunity for all participants to offer perspectives on how to deal with EAB and other invasives. Several tribal gatherers spoke eloquently about how all forest beings depend on each other, and that the forest must be treated with respect.

The meeting was made possible through a grant from the Administration for Native Americans, US Department of Health and Human Services. For more information contact GLIFWC Forest Pest Coordinator Steve Garske at 715.682.6619 or steveg@glifwc.org.

Protecting manoomin: Monitoring aquatic invasive plant permits

By Lisa David, GLIFWC Manoomin Biologist

Odanah, Wis.—Much attention has been given to aquatic invasive plants in recent years. These are unwanted plants that are capable of creating havoc in wetlands and lakes by out-competing the more desirable native plants.

Two common aquatic invasive plants that can be found in ceded territory waters are Eurasian water milfoil and curly leaf pondweed.

Once established in a waterbody invasive plants can edge out native plants by germinating earlier and growing more aggressively than the native plant community. Problems may then arise when the expanding invasive beds interfere with navigation and recreation or threaten the water’s ecological values.

When invasive plant growth is perceived as too much, then control strategy options are drafted through official lake management planning documents. In addition, permits are frequently submitted to the state by lake associations outlining intentions to treat the invasives—either by mechanical or chemical means.

One way GLIFWC’s Biological Services staff is involved with protecting manoomin is by tracking aquatic invasive plants and monitoring these mechanical and chemical permit applications.

When a lake association or individual shoreline property owner proposes to treat invasives in a lake they must first submit a permit to the Wisconsin Department of Natural Resources. These permits are forwarded to the Commission where potential impacts to manoomin and the local fishery are investigated.

Each year about 110 permits are reviewed for potential impacts to rice and rice habitat in the ceded territory. Of these, an average of 23 permits are for known manoomin waters.



Eurasian water-milfoil. (photo by Alison Fox, University of Florida, Bugwood.org)



Curly-leaved pondweed. (photo by Chris Evans, Illinois Wildlife Action Plan, Bugwood.org)

For these manoomin waters GLIFWC develops comments on the treatment type, location, extent, timing, and proposed chemical concentrations. Comments submitted to the state’s permitting department may suggest treatment plan modifications designed to protect the waterbody’s resources. Consultation between the tribes and the state has even taken place on waters of special concern to the tribes.

At times, low-dose concentrations of federally-approved chemicals are used to control invasive plants in lakes. Plants coming in contact with the treatment chemical have their normal growth cycle disrupted so that they cannot reproduce and spread that year.

In mechanical control treatments, large weed cultivators essentially mow and remove aquatic vegetation from the water. Or removal can also be done through a new technique where trained divers selectively hand-pull and discard invasives.

Much thought and care needs to go into lake planning, dealing with, and potentially treating aquatic invasive plants. Precautions must be in place to ensure that the desirable native plant and fish community remain healthy and intact. While complete eradication of invasives is unrealistic, containing or keeping the invasive populations at low levels will allow native plants to remain a part of the lake’s environment.

For more information on invasive plants in the ceded territory check out GLIFWC’s invasive species website at <http://invasives.glifwc.org/>. Here you will find a wealth of information pertaining to both invasive aquatic and upland plants. You can also help prevent the spread of aquatic invasives in ceded territory waters by not transporting invasives from one waterbody to another on boat props or boat trailers.

McGeshick's message to the Wisconsin Legislature: "Stop saying and start doing"

By Sue Erickson, Staff Writer

Madison, Wis.—"It is time to move beyond saying to doing, aim at increasing ties between state agencies and tribal governments in order to streamline and improve the services our Tribal Nations require," stated Chris McGeshick, Sokaogon Chippewa Community Chairman in his March 5 State of the Tribes Address to the Wisconsin Legislature. He also called for more inclusion in decision-making, more inclusion around the tables, and more opportunities for tribal input.

While the call for more action from the State remained a central theme of McGeshick's message, he outlined six areas he deemed critical to aiding the development of tribal communities today:

1) economic development; 2) greater access to nutrition and health care; 3) improvement of the tribal justice system; 4) expanding and improving educational opportunities; 5) protecting tribal lands; 6) promoting tribal culture and language.

McGeshick encouraged legislators to work with tribes to promote collaborative, community-based economies and sustainable local economies that promote self-sufficiency.

A strong *gaawiin* (no) to iron and frac mining in Wisconsin was a prominent element of the address, prompting applause from the tribal constituents and Democrats alike. *Gaawin*, he said, is necessary to protect and preserve the land and water and all the resources derived from them. Unlike many others, McGeshick explained, tribal folks cannot simply pack up and move away if their environment is degraded. "Tribes cannot simply move away from risks or shift their treaty harvesting areas, because they are fixed in place, in their ancestral territory."

In the area of health and nutrition, he encouraged support of approving natural foods harvested from treaty areas for use in institutional programs. He also recommended the state and tribes work together to promote physical activity programs for youth both before and after school. While applauding the idea of affordable



Chairman McGeshick.

care, McGeshick said that this has not penetrated the reservations where they still rely on inadequate dollars from Indian Health Service.

As for tribal justice systems, McGeshick says they are lacking adequate political, legal and financial support that would allow tribal governments and judicial systems to function equally with state and federal systems. He listed the chronic shortage of resources and technical assistance; increasing frequency of violent crime; conflicts related to economic development initiatives; limitation of tribal court sentencing authority; lack of rehabilitation and incarceration facilities; and confusion over jurisdictional lines between federal, state and tribal authorities.

(See McGeshick delivers State of the Tribes, page 18)



Ogichidaag (veterans) follow behind the *dewe'igan* (drum) as the 2015 State of the Tribes Address begins with a procession of the first flags of the land, the Eagle Staffs. (photos by Dylan Jennings)

UW summit brings Wisconsin tribal leadership back to campus

By Dylan Jennings, Staff Writer

Madison, Wis.—*Zhewenimaad* is a word that Anishinaabe have used for centuries. It refers to the ability to have compassion for them. Compassion, respect, and mutual understanding were common themes at the 2015 University of Wisconsin (UW) Native Nations Summit on Environment and Health, hosted by the UW-Madison's Nelson Institute.

On March 12, tribal leaders and representatives from the various tribal communities in Wisconsin traveled to Madison and participated in a two-day summit. The opening remarks highlighted the century-long relationship that Wisconsin tribal communities have had with UW-Madison. Everything began with the historic meeting of the Society of American Indians on campus in 1914. Nearly one hundred years later, the meeting was revived.

GLIFWC Chair and Lac Courte Oreilles Band Tribal Chairman Mic Isham looked upon the one hundred year old photo of Wisconsin tribal leadership and recognized his relative. "It's truly an honor to sit where they (1914 Wisconsin tribal

leadership) have sat and made these decisions for the betterment of our people." Menominee Tribal Chairman Gary Besaw told the crowd, "There is no word in our language for natural resources, simply because we recognize that everything has a spirit. Having researchers understand this is crucial for our people," he said.

Jacqueline Pata, Executive Director of the National Congress of American Indians, was the keynote speaker and set the stage in a good way. She emphasized that all data acquired from research relating to tribes must be "tribally driven and tribally owned." Larry Roberts, Assistant Deputy Secretary for Indian Affairs of the U.S Department of the Interior, stressed the importance of obtaining this data from a policy standpoint. He made it clear that research and baseline data help tremendously in the formulation of federal budgets.

The final day of the summit involved graduate presentations and smaller breakout sessions. Sixteen UW researchers presented on current research endeavors in partnership with Wisconsin tribes. These presentations segued into topics for breakout sessions, which included: water quality and fisheries, healthy living, culturally appropriate economic development, education and culture, climate change, traditional agriculture and food security, health in the clinic, and mining.

The idea was pretty simple: the tribes should be the ones that benefit from research topics involving tribal communities. The summit aimed at gaining insight into the realms of research that the tribes are seeking. Every breakout session had a facilitator or expert in the particular field to help record input and maintain the flow of the conversations. UW students were also present at the summit to record information and learn about the relationship between the university and the tribes. Wunk Sheek American Indian Student Organization President Sam Pecore was one of the Native American students in attendance. "I got a lot of positive vibes, and it was great to see everyone come together," she said.

New connections were made and relationships formed. As the drum sounded and the retreat song was rendered, both UW leaders and tribal leaders could return to their homes knowing that this aura of compassion, respect and mutual understanding will guide the people into the future. As Lac du Flambeau Tribal Councilman Brooks Big John put it, "Let's not wait another hundred years to sit down and talk with each other. Let's take action and do some good things for our people." The Eagle Staff carried by Ho-Chunk Spiritual Leader Gerald Cleveland was danced out of the room, and everybody was left with blessings on their travels and a promise for a new tomorrow.



Tribal leaders from Wisconsin tribes gather on top of the Bad River watershed map created by University of Wisconsin PhD student Jessie Conaway and the Bad River Youth Outdoors program. (photo by Dylan Jennings)

Mii sa azhigwa ji-iskigamizigeng! Natives eye maple forests for income, sustainability

By Charlie Otto Rasmussen, Staff Writer

Iron County, Wis.—When Paul DeMain spots a milk tanker truck rumbling down the road, he sees the future of the maple sap industry in the Penokee Range and wider Ojibwe ceded territory. “You load those trucks with sap from cooperating sugar bushes, take it all to a centralized facility—maybe an old dairy—and boil it down to syrup and sugar,” said DeMain, an Oneida tribal member with an Ojibwe family tree that branches to Lac Courte Oreilles and Bad River.

DeMain outlined a dreamy sweet vision for bringing “Penokee Gold” maple syrup to market as he worked an iskigamizigan (sugar bush) with Sokaogon member Larry Ackley at the Harvest Education Learning Project (HELP) Camp along the north-slope Penokee foothills in early March.

“The tapping potential in Wisconsin, Michigan, areas of Minnesota, is really outstanding,” DeMain said. “Market demand is growing every year and a product that is of indigenous origin can be very attractive. Maple sap can be the foundation for environmentally friendly, sustainable jobs.”

A regional movement is already afoot with the recent formation of the Intertribal Maple Syrup Producer’s Cooperative (Co-op) based in the upper Great Lakes. Non-tribal syrup and maple sugar products dominate the market, and Co-op members are working to promote the “native” label and the long cultural and nutritional history that goes with it.

Down Highway 77 east of the HELPCamp, DeMain, Ackley and associates have their hands full at a second iskigamizigan located in the county forest north of Upson. With assistance from GLIFWC, Iron County authorities issued an off-reservation treaty harvest permit for the site. The county forester designated sap-harvest trees with a swath of blue paint.

While monitoring yields between the two woodlots, DeMain discovered that the county land trees released around twice the sap volume per tap as at the HELPCamp. The sugar content in unprocessed sap was also higher at the county sugarbush.

DeMain said that as more native people become involved and learn how and where to tap, the maple sap industry may return to the heydays of the latter-1800s when Ojibwes and Menominees sold sugar by the tonnage.

Beyond maples, upper Great Lakes tapping opportunities extend to other native trees including white and yellow birch. “Birch syrup is very high in antioxidants,” DeMain said. “It’s used to treat cancers and other major diseases.” At a time when Americans are trending toward consuming healthier, local foods, DeMain said the time is right to get maple and birch products into the mainstream.

By early April, around a month after the season began, Iron County maple sap began running cloudy and it was time to pull the taps. “The tree only gives what it can,” DeMain said. “It’ll use the rest for budding out, for springtime.”



Honeyere DeMain (left) of Lac Courte Oreilles and Jeff St. Germaine of Lac du Flambeau tapped off-reservation sugar maples in the Iron County Forest in early March.

Inset: DeMain said producers are moving to smaller diameter taps. —photos by Charlie Otto Rasmussen

Maple syrup, GTac departure sweeten HELP fundraiser

By Charlie Otto Rasmussen, Staff Writer

Town of Anderson, Wis.—There were plenty of hugs and handshakes to go with the pancakes and syrup served

up at the HELP Camp April 25. The 2nd Annual Penokee Pancake Feed at the Harvest Education Learning Project (HELP) Camp drew people from around the region to raise funds, share stories and celebrate the recent departure of the mining company Gogebic Taconite.



Volunteers at the 2nd Penokee & Pancake event cheer the winner of a fresh bottle of maple syrup on April 25. Everyone who made a cash donation was entered into a drawing for zhiwaagamizigan (maple syrup) and other items. Donations support operation of the HELP Camp and provide assistance to Bad River’s David Joe Bates, who is recovering from a house fire that took his son, Parker. Pictured from left: Debbie Crowe (Oneida), Rachel Goodpaster (Ho Chunk), and Lori Liddle of Neillsville, Wisconsin.

Inset: Fluffy pancakes await locally-produced maple syrup. (COR)

“It’s a great turnout for a great cause,” said Lori Liddle, an event volunteer from Neillsville, Wisconsin, who traveled 160 miles to the Penokee Mountains foothills.

“And even though there’s this sense of accomplishment, we still have work to do.”

Revenue from cash donations was split between the David Joe Bates Family and a fund to support HELP Camp operations. Bates, a Bad River member and Penokee preservation advocate, lost his son Parker in a devastating house fire April 1 in Odanah.

Whether you kicked in the suggested \$10 or showed up with empty pockets, all comers were treated to a splendid mid-afternoon meal that looked a lot like breakfast. There was bacon donated by the O’Dovero Farm just down the road, organic eggs, manoomin and blueberry pancakes, cornbread Johnnycakes, sausages, coffee, juice, and the main attraction—maple syrup and, in its refined form, maple sugar (ziinzibaakwad). A collection of jars in the serving line offered syrup from a handful of sugarbushes, each with a distinct tint: Fond du Lac’s Spirit Lake, Madeline Island, Sioux River, Moore Please, and Penokee Gold.

For many the Pancake Feed provided a first opportunity to gather and celebrate a recent environmental victory for the watershed. Gogebic Taconite, a subsidiary of Cline Development Group, suspended

efforts to build a massive iron mine in the Penokees in early March. Since its creation in 2013 by the Lac Courte Oreilles (LCO) Tribe and Paul DeMain, the HELP Camp has rallied the state along with neighboring regions against the mining proposal.

Throughout the seasons, HELP has brought attention to a multitude of natural treasures available in the hills, some with sustainable economic potential like tapping the extensive stands of sugar maples.

“We’re here to celebrate a lot of things. We’re here to help contribute to Joe Bates to help him get back on his feet. And we’re here to celebrate the discovery of gold in the Penokees,” said DeMain, who is developing the Penokee Gold syrup brand with other tribal members.

Originally sited in the Iron County Forest along Moore Park Road in April 2013, the camp was translocated only a stone’s throw east to private land after persistent objections from some county officials.

From the beginning the camp has drawn a critical eye to GTac’s mining proposal, highlighting potential negative impacts destructive to both the environment and human health. In the process DeMain, Nick Vander Puy, Larry and Jen Ackley and other camp denizens have succeeded in making the case that the Penokees are worth saving. The mining company has left the area for now, but no one believes they are gone for good.

“It is a good time for sugarbush” Sokaogon youth take to the woods Tap mino aninaatig (good maple)

By Dylan Jennings, Staff Writer

Mole Lake, Wis.—Four wheel drive and a heavy foot on the pedal gets us through dense mud and sizable puddles. “This is our sugarbush,” nods Chris McGeshick, Mole Lake tribal chairman. We gaze upon hundreds of large and healthy maples scattered throughout rolling hills. “This is where I learned to do maple syrup when I was a young boy,” says McGeshick. Just as he speaks of his childhood, we pull into the camp, where a group of youth is waiting for us. Eager to begin, the young ones begin attaching the bags to the metal frames, remembering what they had been taught just days before. The group, armed with a drill, buckets, and taps, climbs a small hill and sets off into the woods. Asemaa (tobacco) is offered and the first tree is drilled. A young boy puts all of his weight into the drill and a community member has to add a little more weight for the drill to pierce the tree. Nearby, the other youth empty the bulging bags of sap without instruction.

Before anyone can put a tap in, the tree begins to spew sap and everyone begins to smile. Some of the young boys instinctively place their tongues underneath the tap and taste maple sap for the first time. With unpredictable weather and threats of climate change it’s always uncertain when and how long the sap will run.

Other community members come out to help the kids dump buckets and tap more trees. A couple of Mole Lake Tribal Council members arrive and help as well. Down the trail a few yards, the community elders have a sugarbush set up. It’s truly a beautiful thought that elders and youth work alongside each other.

Everyone does their sugarbush a bit differently, but at the end of the day, it’s all made into the same sweet products we learned to savor. The communities that foster their young ones with the exercise of treaty rights and the passing of cultural knowledge can rest, knowing these young people will carry forth these very practices and teachings that are a piece of Anishinaabe identity.



Above, Mole Lake Chairman Chris McGeshick shows Jacob Macintosh, Sokaogon youth how to assemble a bag for sap collection. Looking on are Ashenni McGeshick and Nolan Thorbahn. Inset: Leelyn VanZile carefully pours fresh sap into a galvanized container to transport home for boiling.



Leelyn VanZile gives the drill a little boost as Ashenni McGeshick carefully drills into a maple. Troy Soldier supervises the crew and awaits his turn.



Sokaogon maple sap gatherers include: Back row left to right Leelyn VanZile, Arlyn Ackley Jr., Chris McGeshick, Carson Ackley, Mike Krusensterna, Ashenni McGeshick, and Cheyenne Landru. Front row left to right: Vinny Amundson, Nolan Thorbahn, Jacob Macintosh and Troy Soldier.

—photos by Dylan Jennings



Outdoor skills, Ojibwe culture merge at Ishpaagoonikaa

By *Charlie Otto Rasmussen*
Staff Writer

Red Cliff, Wis.—A trio of fish rarely gets this kind of attention. Rainbow trout, coho salmon, and common carp alike ascended 50 feet from the depths of Buffalo Bay and into the eager arms of tribal youth assembled around a hole drilled in the ice. Ranging from elementary students to high schoolers, 30 kids carefully examined each species, many taking a moment to cradle the glossy fish against increasingly slimy winter jackets.

“It’s awesome to see the smiles on the kid’s faces,” beamed Nathan Gordon, a volunteer chaperone from Red Cliff. The fish made their appearance at Ishpaagoonikaa (Deep Snow Camp) in a demonstration gillnet set under the Gichigami ice by Marvin DeFoe.

One of GLIFWC’s signature youth outreach events, Ishpaagoonikaa is held at Ojibwe reservations on a rotational basis. GLIFWC officers collaborate with native communities to share cold-weather outdoor skills, Anishinaabe culture, and celebrate the unique outdoors of biboon (winter). At Red Cliff March 14-15, GLIFWC wardens teamed with tribal law enforcement officers, Red Cliff Family and Human Services, youth center staff, and a handful of community members.

“This level of community involvement has such a positive impact on the kids,” said Ishpaagoonikaa Director and GLIFWC Outreach Officer Heather Naigus. “We stress respecting natural resources and respecting Ojibwe ancestors by continuing to use the treaty rights they reserved for tribes today.”



Remy Cadotte with a nice coho salmon caught in a gillnet in Lake Superior’s Buffalo Bay. (photo by Charlie Otto Rasmussen)



Ishpaagoonika campers pull a line attached to a 100-foot gillnet set offshore from the Red Cliff Reservation as Marvin DeFoe moves in with a net hook. (COR)

On Gichigami hard water

Great Lakes natives figured out how to catch fish through the ice long ago, and it starts with making an offering. “Before you go out on the ice, you’re going to put down some tobacco for the lake,” DeFoe, a Red Cliff elder and experienced fisherman, told campers standing in a circle on the edge of the ice. “That’s what we do as Anishinaabe.”

Between the Wisconsin mainland and heavily wooded Basswood Island, a frosted emerald green ice sheet supported activity stations featuring fishing techniques, kite flying and one uncommon stopover, which DeFoe slyly described as an “old time Red Cliff golf course.” Kids divided into clans with titles like Hunters and Gatherers, fanning out to experiment with angling—even working hand-carved decoys in a spearing wiigiwam. The gillnet pull briefly discombobulated the groupings when cries of “fish” carried across the bay, drawing virtually every camper to witness the catch emerge from a hole cut into the ice. Under a full sun that brought out a colorful iridescence in each fish, tribal youth circulated the catch in chain-gang style, allowing everyone time for wide-eyed inspection. Soon enough the roar of GLIFWC’s nearby airboat piloted by Officer Jim Stone reminded Ishpaagoonikaa participants there was much more to see and do.

“Anytime you get GLIFWC wardens and tribal police flying kites with kids, it’s a good thing,” Naigus said. “We want to have these positive interactions at a young age.”

Naigus said the leadership shown by tribal youth who have participated in past GLIFWC camps was impressive. One veteran, 12-year-old Talon DeFoe, did a nice job working with younger kids in the spearing akwa’wewigamig (house for spearing), Naigus said.

Following a sleepover at the Red Cliff youth center, campers took in more outdoor skills, sporting hand-braided survival bracelets constructed with heavy-duty paracord. During a cultural lesson Nathan Gordon shared a dewe’igan song, passing his hand drum around the room allowing everyone to try out a few beats.

“Ishpaagoonikaa is all hands-on activity, very engaging for the kids,” Naigus said. The Red Cliff Tribe wrapped up the memorable weekend with a generous giveaway, distributing outdoor gear to all the kids. Naigus said she’s exploring locations for next year’s winter camp. For more information about GLIFWC camp programs, contact Officer Naigus at 906.458.3778 or hnaigus@glifwc.org.

Enforcement round-up

For GLIFWC wardens, the spring spearing and netting season is intense work as they are required to monitor all open landings throughout the ceded territory night after night for the duration of this highly regulated season.

Prior to ice-out and the subsequent consecutive nights on duty, GLIFWC wardens were involved in a number of activities including two training sessions, one on winter survival techniques which tested their stamina in the extreme cold and another on the use of Taser guns. They also put on two trapping workshops, one at Lac Courte Oreilles and the other at Sokaogon/Mole Lake, which were well attended.

Over winter GLIFWC wardens participated in a joint patrol with Bad River wardens, using GLIFWC’s airboat to monitor commercial fishing on Lake Superior. The airboat was also called into action to retrieve a body from Perch Lake, Bayfield County following an unfortunate drowning. While at Lac du Flambeau’s Winter Expo, airboat demonstrations were a big attraction.

Wardens also assisted when the Apostle Islands National Lakeshore opened the ice caves to the public and for the second year running drew thousands of visitors to the caves. GLIFWC wardens manned GLIFWC’s mobile command unit for over two weeks and had ATVs and snowmobiles ready in case they were needed.

See page 19 for information about GLIFWC’s upcoming natural resource cultural summer camp.
—Sue Erickson

Clip & Save ✂

2015 GLIFWC enforcement youth activities/education

Class	Month	Place	Contact
ATV	June	Bad River	Vern Stone 715.292.8862
ATV/ Snowmobile	June	Red Cliff	Mike Soulier 715.209.0093 Jim Stone 715.292.3234
Boater	June	Red Cliff	Mike Soulier 715.209.0093 Jim Stone 715.292.3234
Boater	July	Bad River	Vern Stone 715.292.8862
Onji-Akiing	July	Camp Nesbit	Heather Naigus 906-458-3778
Hunter Safety	September	St. Croix	Brad Kacizak 715.562.0030
Hunter Safety	October	Bad River	Vern Stone 715.292.8862

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

Opportunities abound for language learners at Anishinaabemowin-Teg

By Levi Tadgerson
Language Specialist Asst.

Sault Ste. Marie, Mich.—The Anishinaabemowin-Teg language conference recently held a very successful 21st annual event. The conference is host to a vast array of knowledge and skillsets that simply cannot be found in other venues.

The conference brought in language speakers and learners of multiple Anishinaabemowin dialects from across many Anishinaabe communities and participants ranged from newborn to elders. Anishinaabemowin was spoken and discussed within the workshops, as well as during social interactions in a manner that is unprecedented anywhere else.

This annual event gives language revitalization enthusiasts an unparalleled opportunity to network with other language devotees, to interact with Ojibwe language and culture and to learn more about nindinwewininaan (our sound).

This year Anishinaabemowin-Teg was shortened to a two-day event; however, the amount of knowledge being shared within a shorter timeframe was nothing short of astounding. The workshops offered, concentrated on passing

traditional knowledge and Anishinaabe language to those who do not yet carry such a strong tribal identity. Presenters included teachers, speakers, students, and language enthusiasts, and workshop topics varied.

For example Rosella Kinoshameg and Barb Nolan discussed traditional methods for new parents to nurture their children in a way that allows the child to grow into a mentally healthy Anishinaabe adult. In another presentation Georgian College students discussed how they are combining their school's pilot Anishinaabe Language program with new technologies such as video capabilities and social media outlets to help preserve and revitalize language within their targeted community.

Each workshop had something different to share, but the common theme between them all was language revitalization and living with our language. In addition to the actual workshops, vendors offered an array of language and cultural educational materials and Anishinaabe artwork.

Above all else, at Anishinaabemowin-Teg, connections were made between those who carry the language of our ancestors and those who must learn to carry it for our language to continue. Importantly, relationships were created

and nurtured between people who are working diligently to revitalize our traditional language and interrelated cultural knowledge.

Nimiigwechiwendaamin (we are thankful for) continuously allowing us the opportunity to develop these relationships and to acquire the knowledge offered at this event. As always, we will be looking forward to next year's Anishinaabemowin-Teg festivities.

Anishinaabemowin-Teg is a non-profit charitable corporation dedicated to the promotion and preservation of Anishinaabemowin of the Anishinaabe of the Great Lakes region. Typically, the conference takes place during or around the iskgimizige-giizis (sugarbush moon) every year. This year the event took place on March 26-29 at the Kewadin Casino in Sault Ste. Marie, Michigan.



Participants were kept involved by presenter William Morin, Ontario, Canada, who conducted one of the many language workshops during the two-day Anishinaabemowin-Teg language conference in March at Sault Ste. Marie. (photo by Levi Tadgerson)

New language materials in the making Nenda-gikendamang biboonagak update

By Levi Tadgerson, Language Specialist Assistant

By request of GLIFWC member tribes GLIFWC's language staff has been working diligently on the development of the first two Anishinaabemowin kid's activity booklets which are to be released in the summer of 2015. The Nenda-gikendamang biboonagak (we seek to learn throughout the year) project is funded through a three-year ANA (Administration for Native Americans) language grant.

The first two booklets to be published out of the eight-book series concentrate on wintertime activities, such as akwa'waawin (spearing through the ice), agoodoowin (snaring), and aagimewin (snowshoeing). The booklets are to include short stories, interactive activities for students to do in class as well as at home, and language exercises intended to help new language learners advance in language acquisition. The student edition will be published entirely in the Mille Lacs dialect of Ojibwemowin with the parent teacher's edition being published bilingually with English.

Also in development is a website that corresponds directly with the stories, vocabulary, and activities contained within the booklets. The website will allow language students to have access to the materials used within the booklets outside of school in a fun and interactive manner.

Over the next two and a half years GLIFWC will be releasing all eight booklets, as well as making a soft opening for the language website while it remains under construction. The materials for this series will be constantly under development and tested to ensure usefulness for teachers and students. In hopes of revitalizing our language among the young up-and-coming Anishinaabeg, much care will be taken to ensure quality within this series. Every single ikidowin (word), or giigidowin (sentence), will be checked by a fluent speaker to ensure correctness of the language contained within the materials.

We look forward to the upcoming release of the first set of booklets, and the soft release of the work-in-progress corresponding website. We hope to see the materials widely used within the Anishinaabeg community and look forward to assisting with some of your language needs in the near future.

Fairbanks gives FdL's language program a boost Brings knowledge and experience to the program

By Wesley Ballinger, GLIFWC Language Specialist

Fond du Lac Reservation, Minn.—Nagaajiwanaang Waa-kanawendangig Anishinaabemowin is the Fond du Lac Tribe's new Ojibwe language department, formed as a result of a community-based strategic planning session with Chairwoman Karen Diver. Community members compiled a list of priorities they want the tribe to enact. Language and cultural preservation were at the top of this list. After a resolution passed, a language advisory board was formed in order to draft new bylaws for the operation of the new language department. In January 2015, Ozhaawashkwaazhigookwe (Janis Fairbanks) was hired as the new Language Coordinator.

Ozhaawashkwaazhigookwe, a Fond du Lac tribal member, has been working in the language revitalization field for 20 years. In 1995, she worked for the North American Indian Association based in Detroit. While there, she teamed with Dr. Margret Noori to run a language table. It was this dedicated work that led to the creation of *Ojibwe.net*, and subsequently led to her hiring as a board member of Anishinaabemowin-Teg.

The Anishinaabemowin-Teg conference is a well-known yearly event where language advocates can meet with each other and discuss teaching trends and techniques that increase language acquisition. As event coordinator, Ozhaawashkwaazhigookwe met a vast array of Ojibwemowin speakers, who are much needed resources as fewer first speakers remain to carry on the language.

Fairbanks brings her experience to the Fond du Lac community where she is enthusiastic about bringing more community access to the language. Plans include increasing the number of language tables for more participation and creating more audio and video conversational materials to help with retention and everyday usage of Ojibwemowin. If you want to witness all the fine work being done in the Fond du Lac community, please take the time to attend the annual "Kiwenz Ojibwe Language Camp" this summer: June 17-21 at the Kiwenz Campground, 3212 Magney Drive, Cloquet, Minnesota 55720.

Concentrated Animal Feeding Operations (CAFOs)

Red Cliff & Bad River tribes say no!

Bayfield County, Wis.—A proposal by Iowa-based Reike's View Farming to locate a CAFO, housing over 20,000 pigs, in Bayfield County caught the attention of many citizens in the region over potential issues of environmental degradation.

Both the Bad River and Red Cliff Tribes have passed resolutions in opposition to the proposal. Red Cliff's resolution sums it up as follows:

"WHEREAS: the negative implications and risks brought to communities and landscapes by allowance of CAFOs surpasses the damages we are willing to incur to water quality, human health, economic vitality of the tourist sector, diversified small-scale local agriculture, soil quality, and treaty protected fishing and hunting grounds;

NOW THEREFORE BE IT RESOLVED: that the Red Cliff Band of Lake Superior Chippewa stands in opposition to the allowance of concentrated animal feeding operations on the Red Cliff Reservation, in Bayfield County, and in all the territory in which the Lake Superior Chippewa retain Treaty Rights, as reserved under Treaties of 1837, 1842, and 1854."

Bayfield County Board placed a one-year moratorium on CAFOs during a February Board meeting, but there is debate as to whether it would apply to Reike's proposal because it came after the proposal was submitted. Meanwhile, the company has also approached the Iron County Board with interest in several sites within the county.

Below are excerpts (reprinted with permission) from the Executive Summary of a 2008 report on CAFOs issued by the Union of Concerned Scientists. A link to the full report can be found at: http://www.ucsusa.org/sites/default/files/legacy/assets/documents/food_and_agriculture/cafos-uncovered.pdf

While the report scrutinizes numerous issues with CAFOs, it importantly includes suggestions for other viable, more humane, and environmentally friendly options for raising food. *(Sue Erickson)*

CAFOs uncovered

The untold costs of confined animal feeding operations

The livestock industry (including poultry) is vital to our national economy, supplying meat, milk, eggs, and other animal products and providing meaningful employment in rural communities. Until recently, food animal production was integrated with crop production in a balanced way that was generally beneficial to farmers and society as a whole. But livestock production has undergone a transformation in which a small number of very large CAFOs predominate. These CAFOs have imposed significant—but largely unaccounted for—costs on taxpayers and communities throughout the United States.

CAFOs are characterized by large numbers of animals crowded into a confined space—an unnatural and unhealthy condition that concentrates too much manure in too small an area. Many of the costly problems caused by CAFOs can be attributed to the storage and disposal of this manure and the overuse of antibiotics in livestock to stave off disease.

CAFOs—Too big for our own good

Most of the problems caused by CAFOs result from their excessive size and crowded conditions. CAFOs contain at least 1,000 large animals such as beef cows, or tens of thousands of smaller animals such as chickens, and many are much larger—with tens of thousands of beef cows or hogs, and hundreds of thousands of chickens.

The problems that arise from excessive size and density (e.g., air and water pollution from manure, overuse of antibiotics) are exacerbated by the parallel trend of geographic concentration, whereby CAFOs for particular types of livestock have become concentrated in certain parts of the country. For example, large numbers of swine CAFOs are now located in Iowa and North Carolina, dairy CAFOs in California, and broiler chicken CAFOs in Arkansas and Georgia.

We need to be concerned about these excessively large feeding operations because they have become the predominant means of producing meat and dairy products in this country over the past few decades. Although they comprise only about 5 percent of all U.S. animal operations, CAFOs now produce more than 50 percent of our food animals. They also produce about 65 percent of the manure from U.S. animal operations, or about 300 million tons per year—more than double the amount generated by this country's entire human population. For the purposes of this report, there are approximately 9,900 U.S. CAFOs producing hogs, dairy cows, beef cows, broiler chickens, or laying hens.

Better options exist

CAFOs do not represent the only way of ensuring the availability of food at reasonable prices. Recent studies by the U.S. Department of Agriculture (USDA) show that almost 40 percent of medium-sized animal feeding operations are about as cost-effective as the average large hog CAFO, and many other studies have provided similar results. Medium-sized and smaller operations also avoid or reduce many of the external costs that stem from CAFOs.

If CAFOs are not appreciably more efficient than small and mid-sized operations, why are they supplanting smaller farms? The answers lie largely in farm policies that have favored large operations. CAFOs have relied on cheap inputs (water, energy, and especially feed) to support the high animal densities that offset these operations' high fixed costs (such as buildings). Feed accounts for about 60 percent of the costs of producing hogs and chickens and is also an important cost for dairy and beef cows, and federal policies have encouraged the production of inexpensive grain that benefits CAFOs.



Swine in a CAFO. (www.epa.gov/region7/water/cafolimages/hogssm2.jpg)

Perhaps even more important has been the concentration of market power in the processing industry upon which animal farmers depend. This concentration allows meat processors to exert considerable economic control over livestock producers, often in the form of production contracts and animal ownership. The resulting "captive supply" can limit market access for independent smaller producers, since the large majority of livestock are either owned by processors or acquired under contract—and processors typically do not contract with smaller producers. Federal government watchdogs have stated that the agency responsible for ensuring that markets function properly for smaller producers is not up to the task.

Hoop barns and smart pasture operations

Although there is evidence that confinement operations smaller than CAFOs can be cost-effective and produce ample animal products, studies also suggest that sophisticated alternative means of producing animal products hold even greater promise. For example, hog hoop barns, which are healthier for the animals and much smaller than CAFOs, can produce comparable or even higher profits per unit at close to the same price.

Research in Iowa (the major hog-producing state) has also found that raising hogs on pasture may produce animals at a lower cost than CAFOs. Other studies have shown that "smart" pasture operations such as managed intensive rotational grazing can produce milk at a cost similar to confined dairy operations, but with added environmental benefits.

Properly managed pastures, for example, require less maintenance and energy than the feed crops (such as corn and soybeans) on which CAFOs rely. Healthy pastures are also less susceptible to erosion, can capture more heat-trapping carbon dioxide than feed crops, and absorb more of the nutrients applied to them, thereby contributing less to water pollution. Furthermore, the manure deposited by animals onto pasture produces about six to nine times less volatilized ammonia—an important air pollutant—than surface-applied manure from CAFOs.

The Many Hidden Costs of CAFOs

Water pollution from manure

Disposal of CAFO manure on an insufficient amount of land results in the runoff and leaching of waste into surface and groundwater, which has contaminated drinking water in many rural areas, and the volatilization of ammonia (i.e., the transfer of this substance from manure into the atmosphere). Several manure lagoons have also experienced catastrophic failures, sending tens of millions of gallons of raw manure into streams and estuaries and killing millions of fish. Smaller but more numerous spills cause substantial losses as well.

Remediation of the leaching under dairy and hog CAFOs in Kansas has been projected to cost taxpayers \$56 million—and Kansas is not one of the country's top dairy- or hog-producing states. Based on these data, a rough estimate of the total cost of cleaning up the soil under U.S. hog and dairy CAFOs could approach \$4.1 billion.

The two primary pollutants from manure, nitrogen and phosphorus, can cause eutrophication (the proliferation and subsequent death of aquatic plant life that robs freshwater and marine environments of the oxygen that fish and many other aquatic organisms need to survive). For example, runoff and leaching from animal sources including CAFOs is believed to contribute about 15 percent of the nutrient pollution that reaches the Gulf of Mexico, where a large "dead zone"—devoid of fish and commercially important seafood such as shrimp—has developed. CAFO manure also contributes to similar dead zones in the Chesapeake Bay (another important source of fish and shellfish) and other important estuaries along the East Coast. Chesapeake Bay's blue crab industry, which had a dockside value of about \$52 million in 2002, has declined drastically in recent years along with other important catches, partly due to the decline in water quality caused in part by CAFOs.

(See CAFOs uncovered, page 22)



Top GLIFWC administrators call out a big miigwech to staff



To the left: GLIFWC staff received pins recognizing 5-year employment anniversaries. Pictured from left: Julie Ante (15), Riley Brooks (5), Jonas Moermond (5), Brad Kacizak (5), Ben Michaels (5) and LaTisha Coffin (5). Additional staff not pictured were also recognized for their years of service: Alexandra Wrobel (5), Sara Moses (5), Lisa David (5), Dara Unglaube (10), and Dan North (15).

Lower left: Wrapped in a new Pendleton blanket, Inland Fisheries Technician Ed White accepts congratulations from Executive Administrator James Zorn for completing 25 years of service to GLIFWC. Deputy Administrator Gerry DePerry, pictured right, enjoys the moment.

Great Lakes Fisheries Technician Mike Plucinski shares his thoughts on joining GLIFWC's exclusive 30-years-of-service-club as James Zorn and Gerry DePerry look on.

—Photos by Charlie Otto Rasmussen



GLIFWC staff roster grows

Third person rounds out staff for language project

Melissa Maund-Rasmussen filled out the small cadre of staff needed to complete GLIFWC's new Administration for Native American's language grant.

Working with Wes Ballinger and Levi Tadgerson, Rasmussen, who started with GLIFWC last December, will complete the web component of this project. A three-year project, the goal is to produce four seasonal stories with a complementary interactive website containing further resources like games and activities. Rasmussen is in charge of the latter.

Born in Texas, her parents later moved to Libertyville, Illinois (near Chicago), where she completed high school. She studied elementary education and art at Winona State in Minnesota, but more recently completed a certificate in web design from Wisconsin Indianhead Technical College, Ashland, Wisconsin in 2011.

Over the last sixteen years, she has been self-employed as a photographer, graphic designer and a web designer. She currently also manages the web page for A Natural Branch of Learning, an outdoor education program for youth.

Married to GLIFWC's Charlie Rasmussen, writer/photographer, she has devoted much of her time to raising their three children, Jackson (16), Augustin (14), and Isabella (10). While getting children to events, such as swim meets, takes up much of her time, she also enjoys outdoor activities, photography and just occasionally slipping away for a weekend with old friends. —Sue Erickson



Ante shifts gears from foods to records

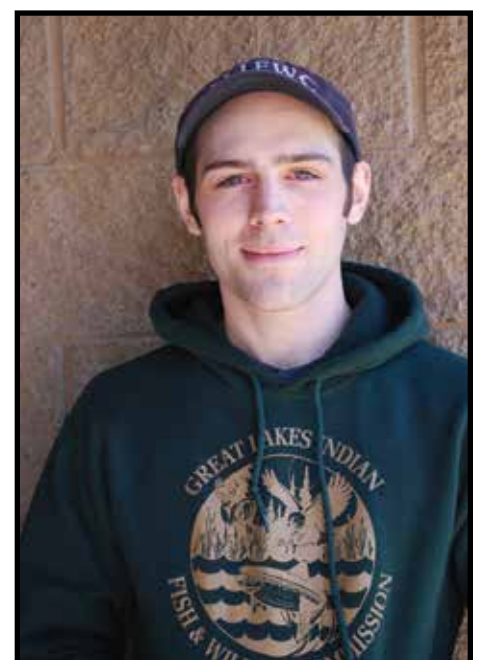
Stephen Ante, Red Cliff, took on a new position with GLIFWC and a challenging one as a records management clerk with a focus on the Enforcement Division.

It was a big change from his previous position as a food tester with the Mino Wiisinidaa! (Lets Eat Good) Traditional Foods for Healthy Living, a three-year ANA grant program that concluded with the publication of a traditional foods cookbook. Prior to that Stephen served in several capacities as a summer intern with GLIFWC as well.

He started the new position in the fall of 2014 and by now is feeling well-oriented within the Enforcement Division where he is entering records into electronic files as well as maintaining hard copy files. Records, such as citations, revocations, and suspensions, are part of the routine entries along with reports. Reports may involve some data breakdown such as how many citations, how many were dismissed and how many were convicted.

A graduate of Wisconsin Indianhead Technical College with an associate degree in business management, Steve's passion is for gardening, harvesting wild foods in the spring and summer, and, no surprise—cooking. He's also serious about his music.

—Sue Erickson



GLIFWC welcomes new staff

Dylan Jennings joins PIO staff

Brings diverse skills and cultural knowledge

Dylan Jennings, Bad River tribal member, is not actually new to GLIFWC, having served as a limited term employee for both the Biological Services Division and the Public Information Office (PIO) in 2014. However, as of January 26, he stepped into the full-time position as PIO's Outreach Assistant.

Jennings brings to the Public Information Office his writing skills, experience with computer layout and public speaking along with strong cultural connections.

He graduated from D.C. Everest High School, Wausau, with Honors in 2010 and pursued a degree at the University of Wisconsin-Madison with an anthropology major and archaeology minor. As a University of Wisconsin Chancellor's scholar, he also earned certificates in environmental studies and American Indian studies. He is currently enrolled in the Conservation Biology Masters program at UW-Stout. Jennings also brings a history of working with youth groups and diverse work experience throughout his educational career.

Jennings will be contributing to the Mazina'igan with articles and photos, assisting with layout, staffing public information booths and will also be available for treaty rights presentations.

He currently resides on the Bad River reservation. Committed to preserving Anishinaabe lifeways, he is an avid treaty harvester and craftsman. He is also a skilled drum-maker and a member of the award-winning Midnite Express Drum group.

We welcome Dylan aboard as a member of the Public Information Office!

—Sue Erickson



Great Lakes technician to assist with GLRI studies

Great Lakes Restoration Initiative's climate change funding provided for a fisheries technician with GLIFWC's Great Lakes Section. Ron Parisien, Jr., Bad River, was selected to fill the three-year post as a Great Lakes fisheries technician. Not a new face at GLIFWC, Ron has worked previously as a seasonal employee both as a wildlife and inland fisheries aid since 2002.

His new appointment requires sea legs as he will be aboard commercial fishing tugs as well as GLIFWC's assessment boat, assisting with monitoring the fishery and collecting samples of various Gichigami fish.

In particular Ron's work will focus on collecting otoliths (ear bones) for aging samples and stomach samples from lake trout, whitefish and herring as part of GLIFWC's dietary studies. Ron will examine stomach content in GLIFWC's lab to determine the composition of the fishes' diet.

In addition, Ron will be working with GLIFWC's temperature/depth study of lake trout, placing archival tags on lake trout as well as retrieving tags.

Researchers hope to record dietary changes as well as fish movement in relation to water temperature as part of observations relating to the impact of climate change.

Other duties will include assisting with lamprey trapping this spring, part of GLIFWC's ongoing lamprey control program and fall population assessments in Lake Superior.

Outside of work, Ron can be found outside, hunting, fishing, and exercising his treaty rights. He and his significant other, Darcey Bender, are busy with their six-month old son, Dominick, as well as Darcey's two children Xavier, age 8, and Lizzy, age 6.

—Sue Erickson



McGeshick delivers State of the Tribes address

(Continued from page 11)

Preservation of languages was another key issue. McGeshick recommended that tribes be able to open and charter schools directly with the State, allowing each tribe to educate their own members and frame the education to suit the needs of their communities.

McGeshick also challenged the State to expand on Act 31, which requires instruction on Native issues as part of curriculum at three educational levels. He encouraged development of curriculum about Native history, culture and contemporary tribal governments as well as provision of early language programs across the state.

New climate staff gets to work in ceded territory

By Charlie Otto Rasmussen, Staff Writer

Aki—planet Earth—hit an unsettling milestone in 2014, the hottest single year on record. NASA's Goddard Space Flight Center made the announcement in January after reviewing data from weather stations around the world.

With an eye to evaluating how the ongoing warming trend may affect ceded territory resources, GLIFWC has enlisted a pair of climate specialists, and plans to fill two more related positions this summer. Following a year of research the team is scheduled to produce a climate vulnerability report for key plants, fish, and animals.

Climate Ecologist

Grand Rapids, Minnesota native Travis Bartnick is drawing from experience working in the western United States and the Apostle Islands to head a phenology analysis of native plants. Phenology is the study of the timing of life cycles that occur every year, like when flowers bloom. Temperature and precipitation—both elements of climate change—play a central role in phenology.

The work focuses on culturally important food and utilitarian species including sugar maple (aninaatig) and paper birch (wiigwaasi). Bartnick said some species that are growing at the southern extent of their range—like wiigwaasi—are especially vulnerable to increases in average annual temperatures.

Bartnick graduated from University of Wisconsin-Stevens Point with a biology and wildlife ecology double major. At UW-Madison (UW), he earned a MS in wildlife ecology. During a recent collaboration with UW, APHIS (Animal & Plant Health Inspection Service) and National Park Service, he rubbed shoulders with GLIFWC wildlife staff during efforts to control and survey white-tailed deer numbers on several of the Apostle Islands. Using a network of trail cameras, Bartnick developed a new method to estimate the deer population of Sand and York Islands.

He currently lives in Ashland.

Climate Scientist

What impacts does warming water temperatures and other measures of climate change have on walleye populations? Hannah Panci is culling an array of data sources to find out. The University of Minnesota-Duluth MS biology graduate is currently creating models designed to help GLIFWC and its member tribes fine tune ogaa (walleye) management in the 21st Century.

After growing up in Eagle River, Wisconsin Panci trekked east to Vermont's Middlebury College earning a BS in environmental studies. Along with graduate studies in Duluth, she conducted bird community studies with the Natural Resources Research Institute.

Panci has traveled extensively across the northern tier of the United States as a cross-country skier and in Montana, as a ski instructor. She recently settled in the big snow country of Ironwood, Michigan.



GLIFWC welcomes Climate Ecologist Travis Bartnick (left) and Climate Scientist Hannah Panci. (photo by Charlie Otto Rasmussen)



Ontario chiefs seek to expand TEK role

By Jen Burnett, GLIFWC Outreach Specialist

GLIFWC attended the Chiefs of Ontario's Following in the Footsteps of Our Ancestors: Elders and Youth Water Gathering in March. The Summit was put on by the Chiefs of Ontario which is a political forum for 133 First Nations to protect and exercise their treaty rights to advocate for strong, healthy native communities. Over 70 representatives from the First Nations, Environment Canada, and GLIFWC attended the event to discuss how traditional ecological knowledge (TEK) plays a key role in protecting and restoring the Great Lakes as a vital water resource.

Under the renewed Great Lakes Water Quality Agreement between the US and Canada, there is an effort to engage First Nations to meaningfully contribute to Great Lakes Initiatives and other ecosystem priorities in decision making processes between the First Nations and federal and provincial governments. The Summit was a way to connect elders, who are holders of traditional knowledge, with the First Nations' natural resource departments, and to encourage youth to enter into the field of natural resource management.

GLIFWC was invited to the summit to share the successes and challenges with incorporating elders' input and traditional Anishinaabe ecological knowledge in tribal natural resource management. The GLIFWC Advisory And Guide Input Group of Elders (GAAGIGE) was highlighted as a useful tool in ensuring the proper and necessary role TEK has in tribes' efforts to self-regulate treaty resources, as stated by members Leonard and Mary Moose (Mille Lacs). A number of other projects, such as increased participation in the Lake Superior Lakewide Management Plan and manoomin restoration in the ceded territories, were discussed to show First Nations how Anishinaabe culture can seamlessly mesh with biological principles in a variety of ways. GLIFWC was honored to serve as model for successful co-management between tribal people and federal/provincial governments and hopes that our relatives in Zhaanganaashiiwakii (Canada) will continue to undertake a more active role in Great Lakes protection and restoration issues.



Two representatives from the Chiefs of Ontario Youth Delegation shared their experience working with elders from their First Nation communities to design an ecological summer project. Many elders were happy to see Ontario youth take an interest in natural resource management and undertake the Anishinaabe duty to be good stewards of aki. (photo by Jen Burnett)

Tribes celebrate GTac's preapplication withdrawal

(Continued from page 1)

The dewe'igan (drum) has always had a presence at the boat landings and it was refreshing to see an atmosphere without protesters and without negativity. Three hand drum singers shared Honoring songs for Lake Galilee and our waters, their voices carrying through the still night. Finally, asemaa was offered to the water prior to harvest, remembering also the spirit of the fish and their gifts to us.

It was a good night.



Jason Schlender, Lac Courte Oreilles tribal member, speared the ceremonial oгаа (walleye) for the LCO Community at Lake Galilee. (photo by Dylan Jennings)

Onji-Akiing (From the Earth)

Natural Resource Cultural Summer Camp

July 20-24, 2015

Lake Nesbit Environmental Center
Sidnaw, Michigan

GLIFWC is excited to announce our 2015 Cultural Summer Camp Program: Onji-Akiing for grades 5-7!

A collaborative effort between GLIFWC and the US Fish & Wildlife Service, Onji-Akiing (From the Earth) is a cultural outdoor adventure-based camp that focuses on natural resource career exploration and treaty rights. This camp is held at beautiful Camp Nesbit, nestled in the heart of the Ottawa National Forest in Sidnaw, Michigan, also home to the calling loons of Lake Nesbit.

Leadership and service learning activities are important aspects of this program. Activities also focus on group cooperation and communication, problem-solving, self-confidence, leadership, physical exercise, spiritual growth, social skills, as well as respect and responsibility to self and community. Hands-on experiential activities include a group obstacle course, high ropes course, sweat lodge, fishing, archery, swimming, canoeing/manoomin gathering, animal and plant wisdom, cultural exploration, and cooperative games.

Centered on the Medicine Wheel, this camp explores Native American traditional ways and traditional ecological knowledge, but also learning in the areas of forestry, biology, fisheries and botany. Youth will work with staff from GLIFWC and the USFS. This camp is free of cost. Deadline for accepting applications is June 15, 2015 and it fills up fast so early applications are encouraged.

Deadline for accepting applications is June 15, 2015

Onji-Akiing Registration Form

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

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

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

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

For questions or concerns, please contact:

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



Mail application, essay and letter of recommendation to: GLIFWC, Attn: Camp Registrations, PO Box 9, Odanah, WI 54861 or Heather Naigus at 253 Silver Creek Rd., Marquette, MI 49855. You can also email application to hnaigus@glifwc.org or fax application to 715-682-4221.



Waaswewin (Spearing fish by torchlight)



By Dylan Jennings, Staff Writer

Boozhoo gakina awiiya (hello everyone)! It is ziiigwan (spring), which means it is a good time for us to harvest giigoonyag (fish)! There are a couple ways that we can harvest giigoonyag. My favorite way to harvest fish is by spearfishing.

Before anything is done, we get together and have a feast for the gigoonyag. This is our way to give thanks to the giigoonyag that we will harvest. We make a little dish and an elder prays for the food in our Anishinaabe language. "Wisiinidaa! Let's eat," the old man says. We scarf down a wonderful feast and eat the last of our ogaawag (walleye) from last season.

We also prepare our jiimaan (boat) and make sure every piece of our equipment is up to regulation. A long time ago, our ancestors speared by waaswaagan (torchlight), but today we use head lanterns. The wardens usually check our equipment and boat registration to make sure everything is up to date and that we are obeying the rules. They want to make sure that we are safe when we are harvesting.

Once a lake warms up and is free from ice, it is time to spear. We make our way down to the lake and meet with a creel team. They will wait for us to finish spearing and then count and measure every fish we take and say whether it is male or female. We say a prayer and offer our asemaa (tobacco) to the water and the giigoonyag.

Once on the lake I look up and the stars are so bright they light up the clear lake. I shine my headlamp into the water and begin to

search the rocky bottom for eyes. We can tell the ogaawag apart from other fish because their eyes glow when the light shines on them. Sometimes we see ginoozhe (northern pike), namebin (sucker), asaawe (perch), or name (sturgeon). Other times we may see beshaa ashigan (largemouth bass) or mashkinoozhe (muskellunge). I see a pair of oгаа (walleye) eyes coming my way and I lunge the anit (spear) at them. I miss. The water creates "refraction," which means everything is a little offset. I adjust my spearhead in the water and try again. This time I am successful and pull a beautiful oгаа into the boat. It's a really good feeling to know that I am providing for my family and community. We give a lot of our fish to our elders and some of the disabled members of the community.

Unscramble the Ojibwe or English words for each giigoonyag!

perch

w a a a s e



walleye

a g o a



ginoozhe

h e n r o t n r k i p e



name

g n u o e s r t



beshaa ashigan (ag)

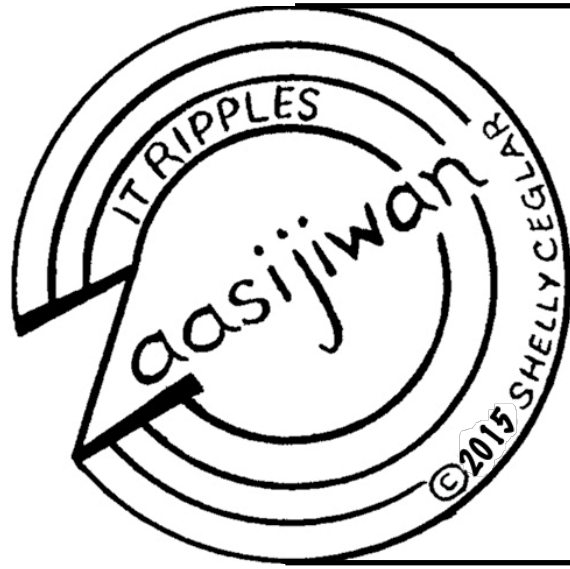
g e r a l o u m t h s a b s



Spearing fish by torchlight. (photo by Charlie Otto Rasmussen)

Draw a line to each of the matching Ojibwe words!

- | | |
|-------------|---------------|
| Muskellunge | Namebin |
| Sucker | Anit |
| Tobacco | Waaswaagan |
| Boat | Maashkinoozhe |
| Torch | Asemaa |
| Fish Spear | Jiimaan |



Aaniin ezhwebak niibing? What is happening as it is summer?

Bimaadiziwin. Akiing, gigichi-gitigemin. Waabigwaniin Gichi-waabigwaniin idash waabigwaniinsan. Gitigaanens gaye. Pagessanag, zhoominag, zhiiwibag. Wendad. Wenipaninaagwad. Gagwedwen! Gitigewiniinag idash gitigewikweg wiidookodaadiwag. Agindaason! Niminwenimaag opiniig, gichi-oginiing, mashkodesiminag. Niminwendaanan oginii-waabigwanan, miinan, wezaawab-gonik. Niminwendam mawinzoyaan. Megwaayaak naawaakwaa maniwiigwaasewag idash bisha'igobiewag. Daga ikidon miinawaa, miigwech!"

("Life. On the earth, we do great gardening. Flowers, big flowers and small flowers. Vegetables also. Plum trees, grapes, rhubarb. It is easy. It looks easy. Ask about it. Farmer men and farmer women they help each other. Read about it. I like them potatoes, tomatoes, beans. I like them roses, blueberries, black-eyed susans. I love it when I am picking berries. In the woods in the middle of the woods they collect birchbark and they peel basswood bark. Please say it again, thank you.)

Bezhiig—1

OJIBWEMOWIN (Ojibwe Language)

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

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

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

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

VTA Animate, Verbs, Transitive. Neg, A&B

- Naazh!-naan—Fetch him/her!
- Ninaanaa.—I fetch h/h.
- Ginaanaa.—You fetch h/h.
- Ginaanaawaa.—You all fetch h/h.
- Onaanaan.—S/he fetches h/h.
- Onaanaawaan.—They fetch h/h.
- Ninaanaan.—We fetch h/h.
- Ginaanaan.—We all fetch h/h.
- Gaawiin ninaanaasii.—I don't fetch h/h.
- Gaawiin ginaanaasii.—You don't fetch h/h.
- Gaawiin onaanaasiin.—She doesn't get h.
- Gaawiin ninaanaasiinaan.—We don't get h.
- Gaawiin onaanaasiwaan.—They don't get h.

Niizh—2

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

- A. Inashke! Ishpayi'ii giishkikamigaa iwidi miigizi bimise.
- B. Giwaabandaan ina amiko-giba'igan imaa zaaga'iganing?
- C. Niwii-izhaa mashkodeng. Mashkode-bizhiki onjibaa imaa.

D. Naadawishin a'aw akik!
Gidizhaamin mookijiwanibiig. Ambe iwidi!

E. Ninzaagitoon! Gidaa-jiime na?
Mewinza ningii-ozhitoon jiimaan.

F. Waabang gagiigooyikewag gakiijwang. Gidizhaa na?

G. Azhigwa ozhiitaan! Aaniin ezhichigeyan? Wewiib! Odaminodaa agwajiing!

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

Niswi—3

IKIDOWIN ODAMINOWIN (word play)

Down:

1. blueberries
2. and
3. Read it! Count!
4. It is easy.
5. in the middle of the woods
9. Come on! Let's go!

Across:

6. life
7. How/in what way?
8. please
10. there



Gizhaate.
It is hot.

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

Niiwin—4

VTA Negation—I don't...Use Gaawiin and an eding sound -sii-

No, I don't like h/her(they), living thing.
Gaawiin niminwenimaasii(g)
mizizaak(wag)—deerfly(s),
zagime(g)—mosquito(s),
zagaskwaajime(g)—leech(es),
bingoshiins(ag)—sandfly(s).
I don't see h/h(they) bee(s).
Gaawiin niwaabamaasii(g) aamoo(g),
enigoons(ag)—ant(s),
ookwe(g)—maggot(s),
miimiinsi(wag)—mayflies.
I don't kill h/h(they) frog(s).
Gaawiin ninisaasii(g) omagakii(g).
asabikeshii(wag)—spider(s).

- wag
- sii
- ni- -aa
- gi- -aawaag
- o- -aan

1. Waabang _____ wiinaan _____ gaazhagens.
2. Agwajiing gaawiin iwaabamaa _____ nimaamaa.
3. Abinoojiyag! Daga _____ naan _____ gidakikoog.
4. Zaagi'iganing baashkwaawe'owaad, gaawiin niminwenimaasiig miimiinsi _____.
5. A'aw animosh _____ waabam _____ waaboozon iwidi. Inashke! Waabooz naasanaa!

Translations:

Niizh—2 A. Look! Above the bluff over there eagle he is flying. B. Do you see it? the beaver dam there on the lake? C. I want to go to the prairie. Buffalo originate there. D. Fetch it for me that pail! We are going to the spring (water). Come over there! E. I love it! Can you canoe? Long ago I built a canoe. F. Tomorrow they are going fishing at the waterfall. Are you going? G. Now, get ready! What are you doing? Hurry! Let's all play outside!

Niswi—3 Down: 1. Miinan 2. Idash 3. Agindaason 4. Wendad 5. Naawaakwaa 9. Ambe Across: 6. Bimaadiziwin 7. Aaniin 8. Daga 10. Imaa

Niiwin-4 1. Tomorrow/dawn I want-to fetch/go get her/him the cat. (ni- -aa) 2. Outside no, I do not see him/her my mom. (-sii) 3. Children! Please you all go get them your pails/pots. (gi- -aawaag) 4. At the lake when they are hatching, no I do not like mayflies (plural ending -wag). 5. That dog he sees him/her that rabbit over there. Look! Rabbit look out! (o- -aan)

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 lynn@glifwc.org.



2015 campground changes

By Alex Wrobel, GLIFWC Forest Ecologist

The Chequamegon-Nicolet National Forest is facing challenges with continuing the current level of services provided at developed recreational sites. Due to increased operational costs and constrained funding, the Forest has made some changes to stay within their 2015 budget. While the majority of campgrounds, trails, boat launches and other recreational sites will remain unaffected, a small proportion of them (roughly 11 percent) will have reduced service levels and some will be closed. The Forest has continued to maintain service levels despite financial troubles during the last several years, but this practice is no longer sustainable. Sites were selected based on various factors including history of tribal use.

From Forest Supervisor Paul Strong:

"I respectfully request that tribal members refrain from using the closed campgrounds (or campground loops) this summer while we conduct consultation and evaluate the budget situation in regard to future permanent action."

"I am sensitive to tribal treaty rights on the National Forest and the negative effect that closures may have on some tribal members. I believe that the other recreation sites on the Forest, many of which are close to sites with reduced service levels, may provide suitable alternatives for tribal members. There may be ways for minor adjustments to be made to accommodate tribal needs or desires which cannot be satisfied by use of other sites. The Tribal-Forest Service MOU states that Tribes can request permits from the Forest Service for use of campgrounds closed to public use."

These changes are for 2015 only and will be reevaluated for future years based on funding levels, consultation with tribes and input from other stakeholders and users. For a complete listing of recreation sites that will be affected please visit: www.fs.usda.gov/cnnf and select "Changes to Summer Recreation Opportunities." GLIFWC will also be maintaining a list of campground changes that can be found at: data.glifwc.org/camping/.

The Forest welcomes your feedback and has established an online interactive map where comments can be entered and also has comment cards available online at <http://www.fs.usda.gov/recmain/cnnf/recreation>. You can also find a list of available recreation sites on that page.

Attention Campers

GLIFWC member tribes exercising their treaty rights may camp for free on most campgrounds in the Chequamegon-Nicolet, Ottawa, Hiawatha, and Huron-Manistee National Forests. Permits are issued through the Native American Game & Fish Applications (NAGFA).

There is currently no camping agreement for Michigan state properties, Wisconsin state properties, Minnesota state properties or county properties, so your tribal camping permit issued through the NAGFA system is valid ONLY for the above four National Forest campgrounds.

It is your responsibility to know the ownership of the campground where you plan to stay. If you have questions with this please contact Alexandra Wrobel at GLIFWC at 715-682-6619.

Prior to camping:

You must obtain a tribal camping permit through your tribal registration station or GLIFWC. You will be issued a paper permit (similar to previous years). This permit will include a tribal camping permit number that you will use to fill out the envelope at the campground.

If you will be using other areas of the National Forest that require a parking permit, you can also obtain this from your registration clerk or GLIFWC.

The parking permits are hung from the rear view mirror and have the GLIFWC logo on them. These do not expire and can be used beyond this season. The number that is on your parking permit is a number unique to you in the NAGFA system. You can find this number at the top of your paper permit next to "NAGFA ID #." This is different than the number you will use for the camping envelope.

Arriving at the campground:

Follow the camping registration procedures at the campground. Generally, this involves providing information requested on a registration form or envelope. You do not need to place anything inside the envelope.

During your stay:

You are required to follow all posted campground rules and regulations, and note that some rules may differ between campgrounds.

CAFOs uncovered: The untold costs

(Continued from page 16)

Air pollution from manure

Airborne ammonia is a respiratory irritant and can combine with other air pollutants to form fine particulate matter that can cause respiratory disease. And because ammonia is also re-deposited onto the ground, mostly within the region from which it originates, ammonia nitrogen deposited on soils that have evolved under low-nitrogen conditions may reduce biodiversity and find its way into water sources. Ammonium ion deposition also contributes to the acidification of some forest soils.

Animal agriculture is the major contributor of ammonia to the atmosphere, and the substantial majority of this ammonia likely comes from confinement operations, since manure deposited by livestock on pasture contributes proportionately much less ammonia to the atmosphere than manure from CAFOs. Up to 70 percent of the nitrogen in CAFO manure can be lost to the atmosphere depending on manure storage and field application measures. Over the past several decades, the amount of airborne ammonia deposition in many areas of the United States with large numbers of CAFOs has been rising dramatically, and may often exceed the capacity of forests and other environments to utilize it without harm.

The USDA has estimated the total U.S. cost of controlling air and water pollution through manure distribution onto farmland—in quantities that comply with the Clean Water Act—at \$1.16 billion per year under high manure acceptance rates. However, the standard applied in this calculation would only reduce airborne ammonia pollution from CAFOs by about 40 percent. And if lower, more realistic manure acceptance rates were used, the manure would have to be transported unacceptable distances. Therefore, proper manure disposal from CAFOs at current farmer acceptance rates would in all likelihood exceed these values considerably.

Harm to rural communities

CAFOs are sited in rural communities that bear the brunt of the harm caused by CAFOs. This harm includes the frequent presence of foul odors and water contaminated by nitrogen and pathogens, as well as higher rates of respiratory and other diseases compared with rural areas that are not located near CAFOs.

One study determined that each CAFO in Missouri has lowered property values in its surrounding communities by an average total of \$2.68 million. It is not possible to accurately extrapolate this value nationally due to the many differences between localities, but as a very rough indication of the magnitude of these costs, multiplying by 9,900 (the total number of U.S. CAFOs as defined for this report) would yield a loss of about \$26 billion.

Antibiotic-resistant pathogens

Estimates have suggested that considerably greater amounts of antibiotics are used for livestock production than for the treatment of human disease in the United States. The massive use of antibiotics in CAFOs, especially for non-therapeutic purposes such as growth promotion, contributes to the development of antibiotic-resistant pathogens that are more difficult to treat.

Many of the bacteria found on livestock (such as *Salmonella*, *Escherichia coli*, and *Campylobacter*) can cause food-borne diseases in humans. Furthermore, recent evidence strongly suggests that some methicillin-resistant *Staphylococcus aureus* (MRSA) and uropathogenic *E. coli* infections may also be caused by animal sources. These pathogens collectively cause tens of millions of infections and many thousands of hospitalizations and deaths every year.

Conclusions and recommendations

The costs we pay as a society to support CAFOs—in the form of taxpayer subsidies, pollution, harm to rural communities, and poorer public health—is much too high. For example, conservative estimates of grain subsidies and manure distribution alone suggest that CAFOs would have incurred at least \$5 billion in extra production costs per year if these expenses were not shifted onto the public. The figure would undoubtedly be much higher if truly adequate manure distribution was required.

Technological solutions to specific CAFO problems have been proposed, such as feed formulations that would reduce manure nitrogen, lagoon covers that would reduce atmospheric ammonia, and "biogas" capture and production that would reduce methane emissions from manure, but these are only partial solutions and would generally add to the cost of production. None of these technologies solve antibiotic resistance, loss of rural income, or the ethical treatment of animals. By comparison, sophisticated CAFO alternatives can provide plentiful animal products at similar prices, but with much fewer of the problems caused by CAFOs.

The bottom line is that society is currently propping up an undesirable form of animal agriculture with enormous subsidies and a lack of accountability for its externalized costs. Once we appreciate the role these subsidies—along with government policies—play in shaping the way our food animals are raised, we can also see the environmental, health, and economic benefits to be gained from redirecting agriculture toward smart pasture operations and other desirable alternatives.

Public policies that support CAFOs at the expense of such alternatives should be eliminated, and policies that support these alternatives should be implemented. Needed actions include:

- Strict and vigorous enforcement of anti-trust and anti-competitive practice laws under the Packers and Stockyards Act (which cover captive supply, transparency of contracts, and access to open markets)
- Strong enforcement of the Clean Water Act as it pertains to CAFOs, including improved oversight at the state level or the takeover of responsibilities currently delegated to the states for approving and monitoring and enforcement of National Pollution Discharge Elimination System permits; improvements could include more inspectors and inspections, better monitoring of manure-handling practices, and measurement of pollution prevention practices
- Development of new regulations under the Clean Air Act that would reduce emissions of ammonia and other air pollutants from CAFOs, and ensure that CAFO operators cannot avoid such regulations by encouraging ammonia volatilization
- Continued monitoring and reporting of ammonia and hydrogen sulfide emissions as required under the Comprehensive Environmental Response, Compensation, and Liability Act and the Emergency Planning and Community Right-to-Know Act
- Replacement of farm bill commodity crop subsidies with subsidies that strengthen conservation programs and support prices when supplies are high (rather than allowing prices to fall below the cost of production)
- Reduction of the current \$450,000 EQIP project cap to levels appropriate to smaller farms, with a focus on support for sound animal farming practices
- Revision of slaughterhouse regulations to facilitate larger numbers of smaller processors, including the elimination of requirements not appropriate to smaller facilities, combined with public health measures such as providing adequate numbers of federal inspectors or empowering and training state inspectors
- Substantial funding for research to improve alternative animal production methods (especially pasture-based) that are beneficial to the environment, public health, and rural communities

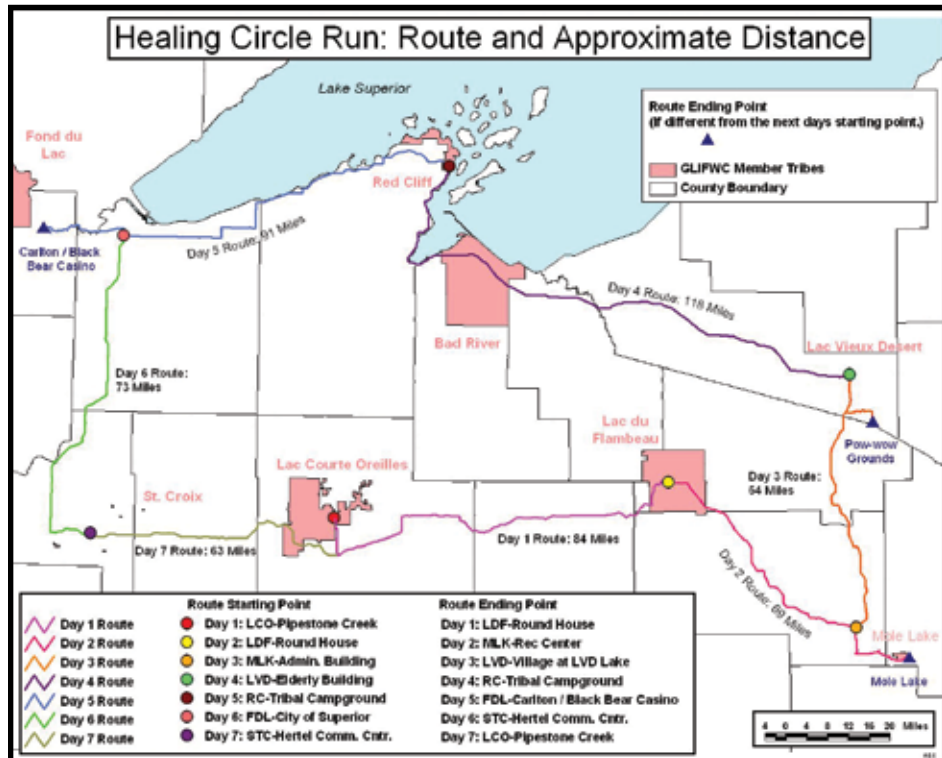


Healing Circle Run/Walk

July 11-17, 2015

The 2015 Healing Circle Run/Walk is intended to be a prayer for healing. During the 2001 Healing Journey Run, participants thought of a teaching on healing—"for a nation to heal, it must begin with the individual. As a person heals, then that person can help heal his/her family. As a family begins to heal, they can help heal their community. As communities heal, they can help the nation heal. As nations heal, they can help Aki (the earth), our plant and animal relatives to heal."

The 2015 Healing Circle Run/Walk will occur from July 11-17, 2015. The run/walk will connect eight Ojibwe reservations in northern Wisconsin, Michigan, and Minnesota (see below map) starting at the Lac Courte Oreilles Reservation and ending at Lac du Flambeau on July 11 (Day 1), then ending at Mole Lake on July 12 (Day 2), at Lac Vieux Desert on July 13 (Day 3), at Bad River/Red Cliff on July 14 (Day 4), at Fond du Lac/Black Bear Casino on July 15 (Day 5), at St. Croix on July 16 (Day 6), and at Lac Courte Oreilles on July 17 (Day 7).



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

Sandy Lake Ceremonies slated for July 29

All are welcome to join GLIFWC for annual ceremonies, paddle and feast in commemoration of the 1850 Sandy Lake Tragedy. It is a time to remember the sacrifices made by the many tribal members who arrived at Sandy Lake, Minnesota to receive annuity payments, but found only inadequate and spoiled rations, delayed payments and, for many, death.

While the annuities were to be paid out in October, only a portion of the promised annuity arrived as late as December, forcing long treks home through ice and snow since the waterways were frozen over. Fortunately, the commitment of the people to return home foiled a scheme to remove tribal communities from Wisconsin and Upper Michigan to the Minnesota territory. About 400 perished either at Sandy Lake or en route home. Word of the tragedy spread and precipitated Chief Buffalo's journey to Washington, DC to protest the removal efforts. President Millard Fillmore agreed to rescind the 1850 Removal Order, and later in the 1854 Treaty, permanent reservations were allocated.

It is a good time to remember those people, their struggles and determination, and to say chi miigwech!

Agenda: A morning ceremony at the East Boat Landing is followed by a paddle in canoes or kayaks across Sandy Lake where ceremonies are held at the Mikwendaagoziwag Monument located at the Sandy Lake Recreation Site on Highway 65 north of McGregor, Minnesota. A noon feast follows. For more information contact GLIFWC at 715-682-6619.

—Sue Erickson



Mikwendaagoziwag monument.

Ecuador, UW delegation in Ojibwe Country



Flora Yopez, community health worker from La Calera, Imbabura, Ecuador describes the story of her community woven into a tapestry. The colorful weaving was gifted to Bad River Chairman Mike Wiggins during a cultural exchange April 12-13. Pictured from left: Wiggins, Yopez, Ines Bonnilla of La Calera, and Lori DiPrete Brown, University of Wisconsin. Professor Frank Hutchins of Bellarmine University and UW Professor Patty Loew were also part of the delegation.
Inset: Bad River's Dan Wiggins guided the group on a Kakagon Sloughs tour.
—Photos by COR

G-WOW Changing Climate, Changing Culture Institute

July 13-16, 2015

Northern Great Lakes Visitor Center-Ashland, WI
Bonus day @ Fond du Lac Tribal College July 17th



- Learn a new model for increasing climate change literacy that integrates culture with science.
- Investigate how climate impacts on the Lake Superior Ojibwe affect your community's culture and economy.
- Get tools to develop climate change projects in your classroom and community.

Where:

7/13-16: Northern Great Lakes Visitor Center, Ashland, WI, surrounding communities and tribal lands
7/17: Fond du Lac Tribal and Community College, Cloquet, MN. Featuring NASA climate change in-the-classroom webinar, climate education tools, place-based climate activities and tours.

Who:

Classroom teachers, community youth educators & leaders.

What:

Climate change professional development training including field investigations on the Bad River-Kakagon Sloughs, Stockton Island, Bad River tribal forest. Expert training from climate, natural resource and traditional ecological knowledge specialists. Tools and resources to develop climate service learning projects in your community.

Cost:

FREE! Enrollment limited to 30 participants. Applications due June 5th.

Questions?

For information and application materials:
<http://fyi.uwex.edu/nglvc/> click on "2015 G-WOW Institute"
Contact Cat Techtmann, UW-Extension, 715.561.2695 catherine.techtmann@ces.uwex.edu





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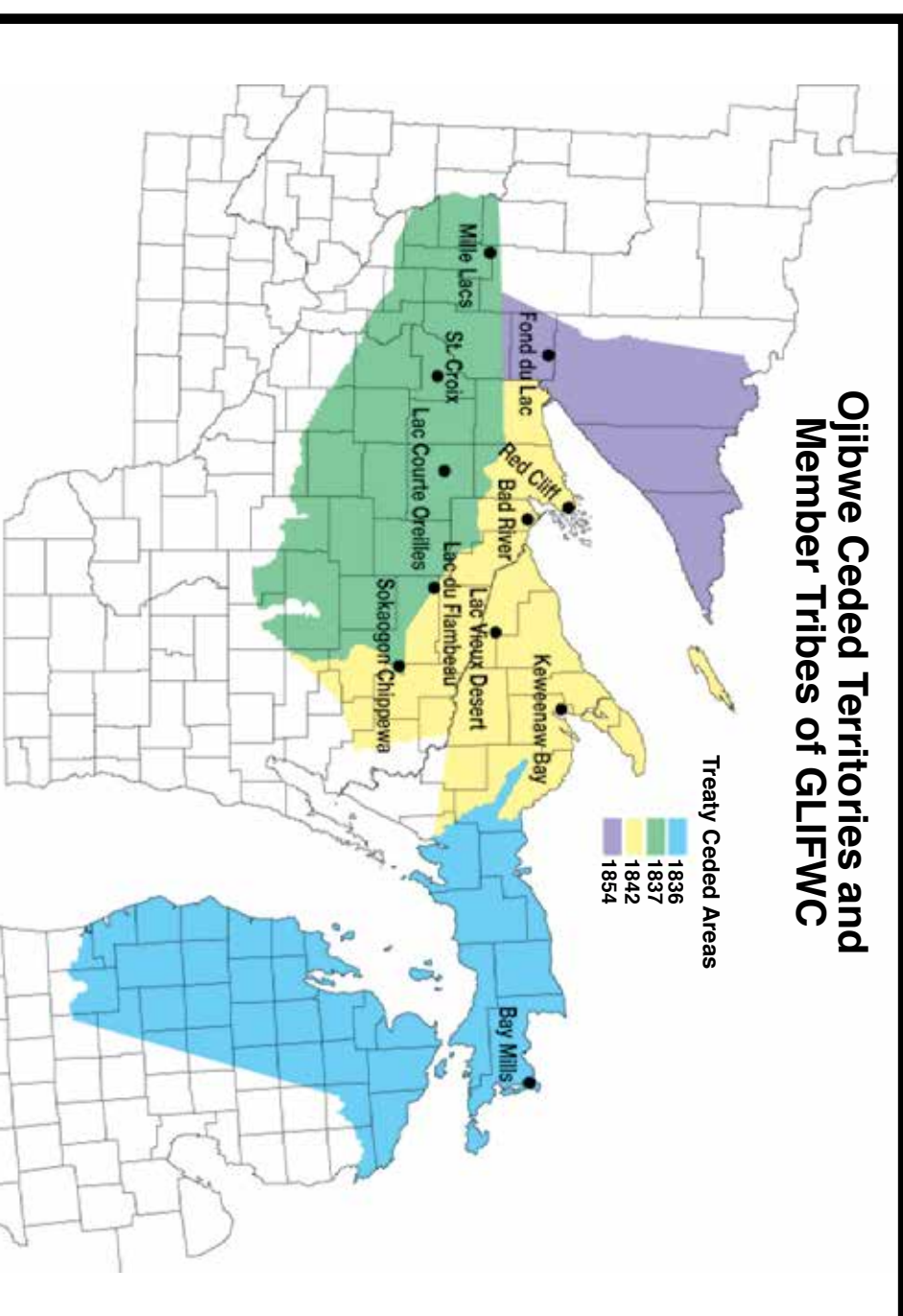
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Although **MAZINA'IGAN** enjoys hearing from its readership, there is no "Letters to the Editor" section in the paper, and opinions to be published in the paper are not solicited. Queries as to potential articles relating to off-reservation treaty rights and/or resource management or Ojibwe cultural information can be directed to the editor at the address given above. For more information see GLIFWC's website: www.glifwc.org and our Facebook page.

Ojibwe Ceded Territories and Member Tribes of GLIFWC



Mazina'igan
A Chronicle of the Lake Superior Ojibwe



Niibin 2015