Mazina'igan
A Chronicle of the Lake Superior Ojibwe
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Breathing new life into Indian education

By Charlie Otto Rasmussen, Editor

Reserve, Wis.—Despite all the bitter seeds anti-Indian protestors worked to sew at northern boat landings in the late 1980s, the era did produce some healthy outgrowth. Among the fruits, state legislation known as Act 31 (1989/1991), requiring all public school districts to teach students about treaty rights, tribal culture and sovereignty. Representatives from Wisconsin Indian Education Association (WIEA) gathered at Lac Courte Oreilles (LCO) August 18 to celebrate the statute and discuss strategies to improve its implementation.

"This celebration is a good thing," said Jason Schlender, master of ceremonies and LCO tribal governing board member. "But we recognize that we have more work to do."

That theme cut to the heart of Act 31 today, a quarter century after the bipartisan effort designed to bring a better understanding of Wisconsin's 12 tribes into mainstream education. While some school districts and individual teachers are effectively incorporating native education into classrooms, many Wisconsin educators are failing. So why a celebration? Wisconsin Department of Public Instruction Consultant David O'Connor explained that Act 31 proponents wanted to change the tone of the discussion surrounding Indian education.

"Around three years ago we decided to talk about what Act 31 was getting done, not just focus on the negative, of what's not happening," O'Connor said. WIEA first sponsored the event in Madison, then Bad River, and now most recently at LCO.

While the volume of quality materials about tribes has certainly grown over the last 25 years, making educators aware of what's available, and how to present it, is an ongoing challenge.

O'Connor and others conduct workshops around the state, sharing educational resources with K-12 teachers and school administrators. Another strategy to connect educators with Act 31 program materials centers on reaching teachers before they are certified by the state.

(see Act 31, page 8)

From Act 31 legislation

The state superintendent shall develop a curriculum for grades 4 to 12 on the Chippewa Indians' treaty-based, off-reservation rights to hunt, fish and gather.
115.28(17)(d), Wis Stats

The Lac Courte Oreilles Veteran Color Guard and drum group Badger Singers (right) got the Act 31 Celebration off to a good start August 18. In the background, Dennis White delivers an invocation. White is a longtime educator and 2016 WIEA Educator of the Year. (COR photo)

Tree of life in trouble

Harvest of twigs, branches and logs adds to paper birch's woes

By Steve Garske, GLIFWC Plant Specialist

The Ojibwe people have used wiigwaasaatig (the paper or white birch tree, also known as wiigwaasi-mitig) for thousands of years. From wiigwaasaatig comes makakoon (baskets) to store things in, jiimaanan (canoes) to efficiently travel the lake country, and roofs for wiigiwaaman (wiigwaams).

Wiigwaas (birch bark) is traditionally used as paper for drawing images. Containers made of wiigwaas can be used to boil water and even maple sap over a fire—as long as liquid remains in the container, it won't burn. The starchy inner bark of wiigwaasaatig can provide a nutritious emergency food. In spring, wiigwaasaatig provides sap that can be consumed as a medicine or boiled down to syrup.

One Anishinaabe dibaajimowin (story) (as told by Anishinaabe elder Keewaydinoquay in the book, "Our Knowledge is Not Primitive" by Wendy Makoons Geniusz) relates how, along with Grandmother cedar (Nookomis giizhik), Grandfather wiigwaasaatig is a tree of life, because together these two trees can provide a person with everything they need to survive.

In order to legally harvest birch poles tribal members must obtain a small-scale lodgepole permit from their tribal conservation department. Lodgepoles are any tree that are less than 5" diameter at breast height. Any tree larger than this is considered timber and requires a different permit. This permit is valid for up to 75 trees per year. Tribal members who wish to harvest more than 75 trees must work with their tribal conservation department and GLIFWC to determine suitable areas for this harvest to occur.

Illegal wiigwaasaatig harvest on the Chequamegon-Nicolet National Forest, April 2016. (Steve Garske photo)

For years tribal elders have expressed concern at the decline of wiigwaasaatigoog (birch trees) across the Ceded Territory. Then last year, a report by GLIFWC staff and the US Forest Service (USFS) entitled, Paper Birch (Wiigwaas) of the Lake States, 1980-2010, examined USFS Forest Inventory and Analysis (FIA) data and found the same thing.

The reasons for this decline are many. Many elders remember the time when the trees that got their start after widespread clearcutting in the late 1800s and early 1900s were common and reaching their prime. Wiigwaasaatig is not very shade-tolerant, and the seedlings have difficulty surviving under a dense canopy of aninaatig (sugar maple) and other shade-tolerant trees. It regenerates well after

(see Tree of life, page 21)

Treaty fishing amendments provide greater flexibility

Smaller spears expand harvest opportunities

By Phoebe Kebec, GLIFWC Policy Analyst

In the last issue, we provided some information on changes to the small game chapter of the Off-Reservation Conservation Codes for the Wisconsin portion of the Ceded Territories of 1837 and 1842. These changes occurred as part of the Voigt Stipulation Amendments. The State of Wisconsin agreed to these changes as they paralleled changes in state law and wouldn't affect the conservation of small game species.

At the time *Mazina'igan's* Dagwaagin issue went to press, the stipulation had not been approved by all the tribes or submitted to the court; since then, all six tribes approved the stipulation, followed by Judge Crabb approving the stipulation on October 21.

In this edition, we'll provide a rundown of changes to the fishing chapter for the Wisconsin portion of the Ceded Territories.

Multiple gear amendment

The original version of the Off-Reservation Conservation Codes included a prohibition on carrying multiple types of gear in your boats when spearing, netting or setting lines. The multiple gear prohibition has served as an annoyance to tribal members, especially when protesters have gathered at the landings and have stolen or damaged harvesting equipment.

Now, tribal members will be able to bring spears and angling equipment (including set lines, bank poles, etc.) along with them in their boats while they are setting gillnets and fyke nets. For lifting nets, the prohibition on carrying multiple types of gear remains in place to ensure that catches aren't mixed.

The Wisconsin Legislature recently amended state law to remove the requirement that state-licensed deer hunters wear back tags during the traditional nine-day gun season. The tribes originally required tribal hunters to wear back tags during the state gun hunting season in order to blend in with non-tribal hunters. With the change in state law, back tags will no longer be required for tribal hunters. Tribal hunters will also be able to use blaze pink as an alternative to blaze orange during deer hunting season.

Spear size

For some time, tribal members have wanted to use smaller spears to make it easier to spear smaller fish. The original version of the codes required that spearers use spears that have at least 4½-inch tines. The tribes and the state agreed to reduce the allowable size to three inches long.

The tribes and the state continue to be actively engaged in discussions on other changes to the Off-Reservation Conservation Codes. We are currently in the first year of a two-year process. Please let your Voigt Intertribal Task Force Representative know if you have ideas on other regulatory changes.

You can always find the latest off-reservation regulations at *www.glifwc.org/Regulations/regulations.html*.

A Mole Lake creel clerk measures the tines on a walleye spear at a Vilas County boat landing. New regulations allow treaty fishers to use spears with shorter tines to better harvest smaller fish. (CO Rasmussen photo)

Tribes, US Fish & Wildlife Service review migratory bird hunting regs

By Phoebe Kebec, GLIFWC Policy Analyst

Danbury, Wis.—For the past thirty years, GLIFWC member tribes have developed annual migratory bird hunting regulations in partnership with the US Fish and Wildlife Service. This partnership arose shortly after the 1983 *Lac Courte Oreilles v. Wisconsin* decision in which the Seventh Circuit affirmed the existence of the tribes' off-reservation treaty harvesting rights.

The tribes turned to the Service to authorize a tribal waterfowl season because migratory birds are managed at the federal, rather than state level. The Service became one of the first federal agencies to recognize the tribes' right to self-government in the area of treaty harvesting. In 1985, it issued regulations allowing the tribes with treaty rights to hunt migratory birds to participate in a rule-making process with the Service to create tribal seasons. GLIFWC tribes have participated in the Service's rule-making process each year since 1985. Since the initial season, several other tribes and coalitions of tribes have begun to participate annually.

Nikag (Canada geese). (COR photo)

Last October representatives of nine tribes met at the St. Croix Convention Center with members of the Service's Migratory Bird Program to discuss the process by which the Service approves the tribes' annual regulations. For the past few years, the tribes have been concerned that the Service has failed to use the appropriate criteria to approve or disapprove of tribal seasons.

GLIFWC has submitted proposals for migratory bird hunting on behalf of the tribes who reserved rights in the 1842 and 1837 Ceded Territories, which include methods designed for more efficient hunting (use of e-calls, night hunting, baiting, etc.); these parts of the proposals have not been approved by the Service. The purpose of the discussion at the October meeting was to provide staff of the Service's Migratory Bird Program with a deeper understanding of treaty rights and the specific requests made by the tribes.

(see Migratory bird regs, page 3)

On the cover

Spearing through the ice (akwa'waa) is a venerated Anishinaabe tradition and has also developed a following with state-licensed fishers in Minnesota and Michigan. The Biboon cover image from northeast Wisconsin contains many elements of a successful spearing setup: balsam boughs, decoy and jig, spear, blankets to lay on, an alder-framed hut covered in tarps and, of course, a hole cut through the ice to open water. Fish from the esox family and walleye are common species targeted by tribal spearers. See the Kid's Page (17) for more on akwa'waa. (CO Rasmussen photo)

Ceded Territory news briefs

Mille Lacs Lake fall ogaa survey

2016 year-class moderate, 2015 year-class weak

GLIFWC, Fond du Lac, and Mille Lacs Band fisheries crews recently completed an electrofishing survey around the entire shoreline on Mille Lacs Lake in Minnesota. This survey to evaluate age 0 and age 1 walleye, or ogaa, production on the big lake has been completed by GLIFWC and the tribes annually since 1999. Crews were able to survey all 78 miles of shoreline on the sprawling 132,500 acre lake over the course of one week last September.

The initial analysis of the data collected in this fall's survey suggests that the 2016 year-class is around average. However, in recent years at Mille Lacs Lake, year-classes that start out average or above-average have often become weak by the time the fish reach spawning size due to poor survival in the juvenile life stage. The 2015 year-class appears to be weak, which is consistent with how they looked in fall of 2015.

In the coming months, GLIFWC and MNDNR biologists will review these results and those from other fall assessments before using them to update walleye population models. **–Mark Luehring**

AKRC reunites with GLIFWC

Reaffirm Anishinaabe Akii Protocol

Canadian delegates from the Treaty #3 communities near Lake of Woods, Ontario travelled to Wisconsin Ceded Territory in mid-September. The visitors were a part of the longstanding organization known as the Kabapikotawangag Resources Council or AKRC. The delegation sought consultation with GLIFWC and its member tribes regarding resource management, federal policy and preservation of language and culture.

Over 18 years ago, AKRC and GLIFWC signed the Anishinaabe Akii Protocol, which solidified tribal relations and reaffirmed the commitment to the protection of the natural environment and the resources that Anishinaabe subsist upon.

Some members of the delegation also toured the Waadookodaading Ojibwe immersion school while on their trip. Others toured the Bad River community and learned about manoomin management and the Bad River Natural Resources Department. **–Dylan Jennings**

Early season hunting mirrors 2015

Treaty hunters are off to another modest start to the dagwaagin (fall) hunting season. Through the first eight weeks ending October 31, Ojibwe hunters registered 494 white-tailed deer and 43 black bears. At the same time last year, tribal members had brought in 502 deer and 40 bears, known as makwag in the Ojibwe language.

Registration stations are situated within reservation communities from east-central Minnesota across northern Wisconsin to Lac Vieux Desert, Michigan. The bulk of the treaty whitetail harvest typically occurs in November around the same time states conduct gun seasons. **—CO Rasmussen**

Fur market still low for most species

While tribal members who trap for cultural and ceremonial purposes may take little notice, trappers who sell their furs at auction are facing another disappointing year in 2017, with fur prices remaining low for most species. At the spring North American Fur Auctions, raccoon furs sold for $2-$6 and beaver furs sold for $6-$8. What is causing such low prices?

The main markets of Russia and China are both facing political and economical issues. Russia's economy is stressed by falling oil prices and the falling value of the Russian dollar. China is reported to have leftover inventory from last year, resulting in less demand this year. With both of these countries working to resolve issues that may take time, trappers may have to brace themselves for another season of prices that drop below the cost of production. **—Paula Maday**

Migratory bird regs

(continued from page 2)

The meeting started with songs at the GLIFWC drum and a pipe ceremony. Much of the discussion was focused on the nature of the tribes' treaty rights and how state and federal agencies must meet certain standards if they wish to limit the exercise of those rights. Tribal representatives also shared about the hunting methods they were interested in using. Several times during the meeting, Service representatives commented that they appreciated the opportunity to understand more about the tribes' perspective. The meeting concluded with a commitment to continue the conversation and a traveling song, offered for the Service staff members who would be traveling home to the Twin Cities and the Washington D.C. areas.

GLIFWC will be submitting a proposal on behalf of its member tribes on or about December 1, 2016. Generally, the Service publishes proposed regulations for tribal migratory bird hunting seasons in the spring, with a goal of publishing a final rule by early summer.

Mille Lacs Band responds to state ogaa overage

In a move that both surprised and dismayed Ojibwe bands early last August, Minnesota Governor Mark Dayton ordered that catch-and-release walleye angling continue on Lake Mille Lacs even as the state exceeded its 28,600-pound quota.

"The State of Minnesota has broken its agreement on the ogaa (walleye) harvest for the second year in a row and has asked us for our understanding," said Melanie Benjamin, chief executive of the Mille Lacs Band of Ojibwe. "As responsible stewards of the resource and out of concern for ogaa the Bands have remained under our allocation." Under a tightly regulated monitoring system, Ojibwe bands have never exceeded their share of the walleye harvest on Mille Lacs Lake.

By mid-September last fall, the Department of Natural Resources estimated that state anglers had blown through their quota by nearly 20,000-pounds. The walleye season was formally closed on September 6, the day after Labor Day.

The state's actions are especially troubling to 1837 Treaty tribes since the Mille Lacs walleye population experienced a marked downturn over the past several years. While some observers blamed the use of gill nets to harvest part of the tribe's allocation, biologists from the state, tribes, and a blue ribbon panel of North American walleye experts, all agree that netting is an unlikely cause for the decline. **—CO Rasmussen**

Bay Mills ladies lead off omashkooz hunt

With a clean shot on a Michigan elk August 30, Kendra Carrick kicked off the 2016 treaty season in the Michigan 1836 Ceded Territory. Fourteen-year-old Carrick of Bay Mills Indian Community filled one of four elk (omashkooz) tags issued by tribal wildlife authorities through a drawing.

Carrick hunted with her father Justin on state land in southern Cheboygan County. After four days of extensive scouting, the pair zeroed in on one of the many state-managed plots that contain standing corn and other crops. There, Carrick found her elk around 10 minutes after legal shooting hours opened.

Another female from Bay Mills harvested an elk in the early season, this one a 3X4 bull. Bay Mills hunters have two remaining cow elk tags good for upcoming seasons in mid-to-late December. This year marks the 10th consecutive tribal elk hunt since 1836 Treaty bands negotiated the 2007 Consent Decree.

—CO Rasmussen

Outside the Bureau of Indian Affairs Great Lakes Agency in Ashland, Wisconsin, people gathered to pay respects to Beartown Firefighters, Alan J. Swartz and James F. Shelifoe, who were killed in a highway crash just north of the Twin Cities. A mile-long procession of regional fire engines and emergency vehicles escorted the two back home to Keweenaw Bay Indian Community, where Beartown Firefighters is based. Emergency services officers from the Mille Lacs Band of Ojibwe worked with other Minnesota-based colleagues in making arrangements for the appropriate return of the bodies.

The Beartown crew was traveling to Utah to help fight the Box Canyon Fire when the crash occurred August 27. Keweenaw Bay Indian Community and surrounding towns held a candlelight vigil for the firefighters September 2 at the Sand Point Lighthouse. **—CO Rasmussen**

No-snow tracking skills helps develop woods-wise wardens

By Charlie Otto Rasmussen, Editor

Camp Douglas, Wis.—Lost hunters, missing persons, and fugitives all leave signs of their passing in the Ceded Territory outdoors. If you know what to look for, the clues are there: from the obvious, like stirred-up leaf litter, to other subtle changes on the landscape.

During a field test GLIFWC officers gather information using notepads and tracking sticks. Pictured above, from the left, are Steven Amsler, Mike Burns and Holly Berkstresser.

INSET: Tracking also involves creating detailed sketches of prints like this one in Roger McGeshick's notepad.

(CO Rasmussen photos)

"All of you who hunt—and this is something I realized during my own training—have already been developing tracking skills," said Jonas Moermond, tracking specialist and GLIFWC warden. "Just figuring out how animals move across the land is a good starting point."

White-tailed deer, wild turkeys, and virtually all wild game leave tracks that contain indications about size, speed, and direction, Moermond said. And it works the same with humans. In wintertime, tracking can be a relatively straight-forward affair with a layer of snow on the ground. But during the mild seasons, advanced skills are often required for a successful pursuit.

"It takes a lot practice and a lot of patience to build good tracking skills," Moermond said. "Humans are the only ones that try to conceal their tracks."

During a steamy week of outdoor training split between southwest Wisconsin military facilities Fort McCoy and Volk Field Air National Guard Base last August, instructors challenged GLIFWC officers with land navigation exercises and "man" tracking scenarios through sand plains, forestland and rocky ridge top terrain. The art of tracking has its own vocabulary and spoor (rhymes with "four") emerged as the buzzword throughout the lessons. And for good reason. Spoor is any evidence of change caused by humans or animals. Finding and correctly interpreting spoor is central to become an effective tracker.

Moermond introduced the 'tracking stick' as a primary, albeit low-tech, tool in gathering information about missing subjects. Developed by professional scouts, the simple wooden dowel ringed with rubber washers helps officers decipher imprints left in the earth. The 18" to 36" sticks help focus the tracker's attention on the trail and establishes gait, or stride length; should a footprint (or other spoor) become indiscernible due to changes in ground cover, sticks help inform the tracker of direction of travel and probable location of the next prints, Moermond said.

Along a field of sandy outwashes, tracking mentors including GLIFWC's Dan North, Riley Brooks, Brad Kacizak, and Matt Kniskern produced a series of tracks for trainees to decipher. Wardens made note of tracks with characteristic "toe-dig" prints, which indicates running, and deployed their tracking sticks to pinpoint travel routes. Armed with pad-and-pencil, officers also sketched out footwear tread patterns, which can be especially useful when multiple prints are present.

During an evening session, officers worked with night-vision and thermal imaging, learning how to indentify spoor through the lens of advanced technology.

"When you're tracking you have to keep in mind that things can look different depending on light source," Moermond said. "The angle of the sun, type of flashlights, including using a red lens—it all makes a difference."

Making climate adaptation planning more accessible in the Northwoods

By Kim Stone
GLIFWC Climate Change Project Coordinator

Understanding and preparing for climate change can be overwhelming for any organization. For tribes, the task can be particularly challenging. Few tribal natural resources departments have designated climate change staff or extra time to focus on a new area of management. Climate change models typically offer not one, but several climate scenarios that must be considered in adaptation efforts. Meanwhile, the firehose of climate change information can create as many questions as answers. Many climate change strategies offer abstract rather than practical approaches, and Anishinaabe values and perspectives are not often considered in these existing planning frameworks.

And then, of course, is the issue of how to fund this additional area of work.

One organization trying to make climate adaptation more accessible for northern forest ecosystems is the Northern Institute of Applied Climate Science, or NIACS ["nye-acks"]. Based in Houghton in Michigan's Upper Peninsula, NIACS is a regional collaborative effort between the Forest Service and several partners including universities and public and private groups.

Through its Climate Change Response Framework, for example, NIACS works with forest managers and landowners to find practical, on-the-ground ways to incorporate climate change considerations into their own forest management projects. In addition to in-person trainings, NIACS also developed an online course in Forest Adaptation Planning and Practices.

For those who need to do training on their own schedule, NIACS created an online, interactive Adaptation Workbook. This online tool provides a structured process for natural resources staff to design a customized adaptation plan suited to their own lands, their own goals, and their own objectives.

In all of their work, NIACS relies on the land or resource managers' knowledge of the land, focusing on their values and judgment to help set their goals and priorities for adaptation.

According to Stephen Handler, NIACS Climate Change Specialist, one advantage of NIACS' adaptation workshops is that they "move people through a linear thought process" to assess what they want to do, how climate change might affect their goals, and how they can prepare for changing conditions. As Handler notes, this type of thought process "is a perfect fit for a grant or funding proposal," and NIACS staff are willing to assist tribes in packaging their project to submit for funding.

NIACS climate change specialist Stephen Handler discussing climate change scenarios with Naomi Tillison of Bad River and Eric Oliphant of the Bureau of Indian Affairs. (Cat Techtmann photo)

Most tribes within GLIFWC have some familiarity with NIACS and its climate adaptation trainings and products. NIACS has directly assisted several GLIFWC tribes in their climate change projects, and staff from many other tribes have participated in NIACS trainings. In July, many attended the training held at Red Cliff in which NIACS presented "Responding to Climate Change in Northwoods Forests." GLIFWC's own Climate Change Program staff have utilized several NIACS products, including vulnerability assessments of several tree species.

For further information, go to *www.nrs.fs.fed.us/niacs/climate/* or contact Stephen Handler at *sdhandler@fs.fed.us*.

Mooz hunt a success for Nahgahchiwanong community

By Dylan Jennings, Staff Writer

For many people, hunting is a sport, a hobby, or a pastime. For others it's a form of dietary supplement. For many Ojibwe people across Indian Country, it's a way of life. Earlier this year, the Fond du Lac (Nahgahchiwanong) Band announced their intentions for a moose harvest. The Band's biologists determined that there would be no biological impacts due to the small percentage of animals to be harvested.

"Our data show that the moose population has been stable for the last three years. Band members successfully harvested 25 bull moose this season," said Fond du Lac Band Natural Resources Director Reggie Defoe.

Historically, tribal communities have always harvested species such as moose. After many of the treaties were signed in the 1800s there was an extended period of time when the state of Minnesota imposed their laws and regulations on tribal members looking to feed their families. Band members were prohibited from harvesting the very resources they had subsisted upon for hundreds of years. This occurred until the early 1990s when the treaties were reaffirmed and many tribes began to develop strong natural resource departments.

Fond du Lac Band Representative Ferdinand Martineau recalls the difficult times that tribal members had endured throughout history, compared to today: "Was the decision to hunt this year controversial? Maybe. But it would have been more controversial in our own community if we didn't hunt and practice our subsistence lifestyle."

Herb Fineday with his bull moose harveted in the 1854 Ceded Territory. (submitted photo)

Speaking of subsistence

Fond du Lac tribal member Herb Fineday encompasses the subsistence ideology in his everyday life. Fineday serves as a detective for the Band, and is an avid harvester and provider for his people. He was also one of the successful hunters in this year's moose hunt.

"We live from season to season and it's always been a part of my lifestyle. We only harvest animals that we need,." Fineday said. He's been participating in moose hunts since 2002, with some successful hunts and some not. This year Fineday had planned to spend a majority of the season hunting with friends and relatives, however, work and training kept him from fulfilling these plans. Eventually, he found a few days to get into the woods. But this year he travelled alone. Fineday was a little discouraged as fellow hunters told him the rut was over and his chances of harvesting a moose were slim.

After two days of camping and tracking moose signs, Fineday finally heard the familiar sound he was hoping to hear. The grunting of a bull moose in the distance gave him the much needed hope to press forward. After some long stretches of tracking the bull on foot, Fineday made contact and dropped the magnificent animal.

He recalls that moment vividly: "I introduced myself to the moose in Ojibwe and all he did was listen to me. I talked about my family and who I was. I talked about where I come from and what I was doing. After he (moose) let out his last breath I thanked gichi manidoo (great spirit)."

Since Fineday was deep in the woods and by himself, he spent the next seven hours skinning, quartering and trekking the moose out of the woods. By the time he returned home, many of his friends and relatives had already heard the good news of his successful hunt. "Every moose hunt I've been a part of, we give a lot of it away. It's not only going to be enjoyed by my family, but my extended family and relatives. The majority of the harvesters share like this."

For guys like Fineday, talking about these types of hunts can be emotional. At the end of the day, moose give their lives so that families and communities can be strong and healthy. It's truly a blessing to know that these traditional providers still exist and understand the importance of the Anishinaabe lifeway.

Funding opportunity for climate change planning

By Kim Stone, GLIFWC Climate Change Project Coord.

To help tribal managers mitigate climate risk for vulnerable resources, the Bureau of Indian Affairs (BIA) established the Tribal Climate Resilience Program. The program funds tribal climate adaptation planning, ocean and coastal management planning, youth internships, and climate change activities.

Recently, the BIA introduced "capacity building" as a funding category in the climate program. The new category is intended to help tribes with limited technical or staffing capacity to identify their climate planning needs. The program recognizes that many tribes would like to tackle climate change but do not have the time or resources to draft a full, competitive proposal.

Importantly, tribes can use capacity building funds to hire staff that can help identify what the tribe needs to start the climate change planning process. The tribe thereafter would be in a good position to submit a complete proposal the following year under the BIA's "Climate Adaptation Planning" category.

Capacity building funding is intended to simplify the process for tribes in the early stages of climate change work and only requires a brief description along with a budget and general statement of need. It is generally reserved for tribes who have not previously received funding under this BIA program and who aren't currently ready or able to submit a competitive proposal in the "Climate Adaptation Planning" category. The maximum award amount is $50,000.

Although the BIA offered the capacity building funding in 2015, many managers may have been unaware of it because the category was added later in the funding process. Capacity funding can be a great opportunity for tribes who would like to incorporate climate change into their planning process but have been unable to previously due to lack of staffing or technical capacity.

"Crossing the Line"

GLIFWC premiered the first short video in the Ogichidaa Storyteller series, "Crossing the Line," at Lac Courte Oreilles (LCO) Community College October 26. An audience dominated by young tribal members turned out to see how LCO members Fred and Mike Tribble sparked treaty rights litigation for the inland portions of the Wisconsin Ceded Territory. Watch "Crossing the Line," on GLIFWC's YouTube channel: **www.youtube.com/user/glifwc**.

Lac du Flambeau Band (LdF) representatives were also on hand. The brothers recognized Lac du Flambeau's role in enduring racially-charged boatlanding hostility during spring spearfishing seasons after the courts reaffirmed Ojibwe treaty rights.

Photo: Fred Tribble reacts after receiving gifts in honor of his stance to fight for off-reservation rights. To the right, LCO Chairman Mic Isham, Mike Tribble, and LdF Tribal Councilor Frank Mitchell enjoy the moment. Watch the YouTube video at: https://www.youtube.com/watch?v=KSpEGhWR44Q&feature=youtu.be

Ogichidaa Storytellers is moving forward with post-production on the Gurnoe episode following a major award. Chi miigwech to Wisconsin Humanities Council for $10,000 in support! **—CO Rasmussen**

Ziigwan at hyperspeed: 30-second green-up in the Ceded Territory

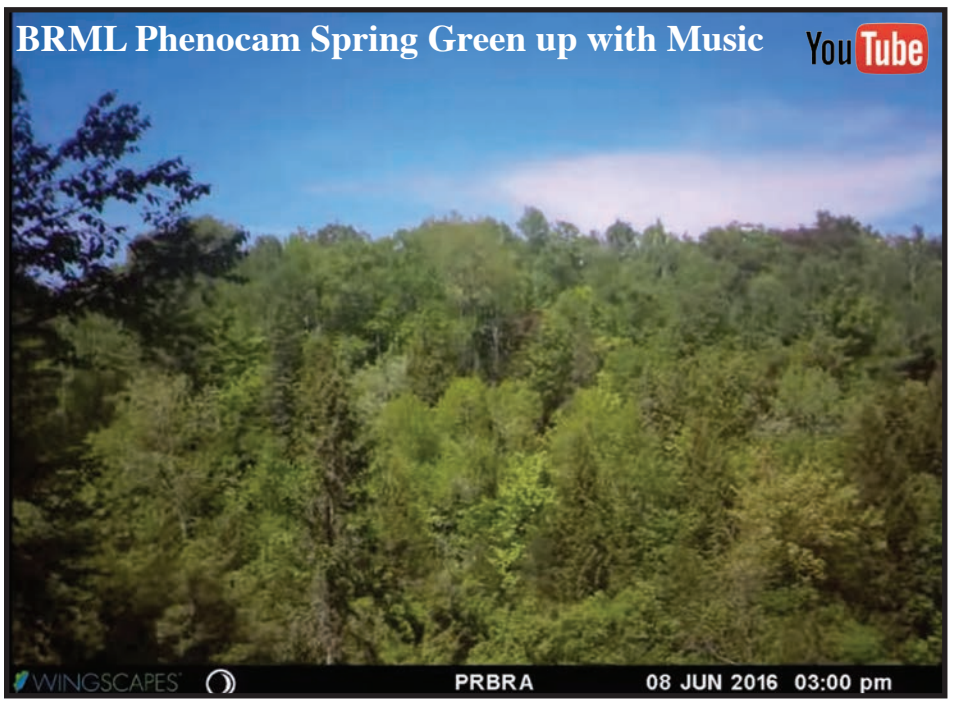
By GLIFWC Climate Change Staff

Phenology is the study of the timing of periodic biological phenomena, such as bird migration or plant flowering, in response to weather conditions. One way GLIFWC climate change staff can closely monitor phenology—without having to visit study sites daily—is by setting up cameras in the forest to continuously record the changing landscape.

Earlier this year, GLIFWC staff set up time-lapse cameras to capture images every 30 minutes during daylight hours at the two phenology study sites in the Penokee Range and the Chequamegon-Nicolet National Forest. Climate ecologist Travis Bartnick then created time-lapse videos by using images taken by the cameras at each location.

The result is ziigwan (spring), captured on film. This 30-second footage of green-up, set to powwow music, provides a continuous snapshot of changes that otherwise occur over several months. Traditional drum group Midnite Express provides the musical background for the visual landscape transformation.

To watch the time-lapse videos of the Phenocam Project at the Chequamegon-Nicolet National Forest, go to *www.glifwc.org* and choose Climate Change (under GLIFWC's Focus Areas). Scroll down to "Climate Change Program Updates" and click on the YouTube link.



The time-lapse camera images will be used for more than just cool movies. The objective of having the PhenoCams is to record when the forest tree canopy greens up in the spring and when the leaves turn color and drop in the fall. Bartnick will be using a PhenoCam Image Processor (PCIP) to analyze PhenoCam images by calculating a time series of Green Chromatic Coordinate (Gcc) values. These values essentially measure the amount of green in an image. The values can be plotted to show the timing of green-up in the spring and brown-down in the fall.

These data can help determine how the timing of spring green-up and fall brown-down might be associated with other phenological observations that GLIFWC staff have recorded during their weekly visits to the study sites.

Deadline extended for nominations for national climate award

Do you know a tribal government, tribal organization, or student leader you'd like recognized for their efforts to adapt to a changing climate? Consider nominating them for a "Climate Adaptation Leadership Award for Natural Resources." The award program sponsor, the National Fish, Wildlife, and Plant Climate Adaptation Strategy, recently extended the deadline for nominations until **December 9, 2016** to allow more organizations to participate.

The award recognizes exemplary leadership in efforts to reduce climate-related threats and enhance the resilience of the nation's living natural resources—and the communities that depend on them. For information, visit *www.wildlifeadaptationstrategy.gov/award.php*. Nominate your tribe or another tribe or tribal entity by using the online form ("Nominate Today") located at the top of the website.

Dense and ever-thirsty phragmites targeted by GLIFWC, tribes

Invasive plant escaping sewage treatment plants

By Miles Falck
GLIFWC Wildlife Section Leader

Chequamegon Bay, Wis.—Non-native phragmites is a perennial invasive grass that invades wet open habitats including wetlands, shorelines and roadsides. It outcompetes native vegetation, forming dense monocultures that can reach heights of 15 feet or more.

Phragmites alters ecosystem functions by reducing biodiversity, increasing the frequency and intensity of fires, and drying out wetland habitat through evapotranspiration and the accumulation of dead biomass.

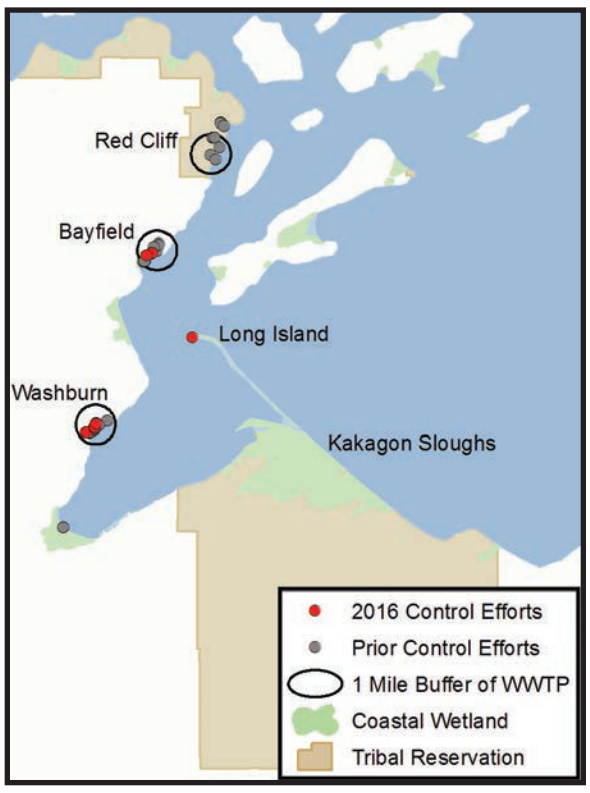
Already a serious problem in the lower Great Lakes, non-native phragmites is uncommon in the Lake Superior basin. GLIFWC and its member tribes are working to keep it that way.

In 2013, GLIFWC staff detected several populations of non-native phragmites in the vicinity of wastewater treatment plants (WWTP) in Washburn, Bayfield, and Red Cliff. These treatment plants all use non-native phragmites to dewater sewage sludge.

Unfortunately, the seeds from these plants are blowing off site and becoming established around Chequamegon Bay. GLIFWC staff conducted initial treatment on these sites in 2013. Follow up efforts have continued annually since 2014 to survey for new sites and treat resprouting plants.

Environmental Protection Agency-Great Lakes Regional Initiative funds were awarded to GLIFWC, Red Cliff, and Bad River in 2016 to address these issues. GLIFWC has received funds to continue survey and control efforts within Chequamegon Bay, to survey additonal south shore coastal wetlands between Duluth and Ashland, and to train Bad River Natural Resources staff to differentiate native and non-native phragmites.

Bad River has received funds to survey for phragmites in and around the Kakagon Sloughs (see map) located downwind of the predominantly northwest winds that occur in winter, when the wind-dispersed seeds of phragmites are dropping.



Location of non-native phragmites control efforts in relation to wastewater treatment plants (WWTP) and coastal wetlands in Chequamegon Bay.

Red Cliff also received funds for an analysis of alternative technologies to dewater sewage sludge at each of the wastewater treatment plants.

In the field

GLIFWC staff continued phragmites survey and control efforts in Chequamegon Bay this past summer. Two new phragmites sites were detected and treated in 2016.

One site was located within one mile west of the wastewater treatment plant in Washburn. The other new site was found on the western tip of Long Island. This is the first site detected along the east side of Chequamegon Bay and confirms the threat posed to Kakagon Sloughs.

Small pioneer populations of non-native phragmites appearing in Kakagon Sloughs will be challenging to detect because of the abundant native phragmites that grows there. GLIFWC provided a mid summer and fall training for Bad River Natural Resources staff to identify the native and non-native phragmites during the different stages of its life cycle.

In addition, Red Cliff Band's engineering contractor Strand Associates completed an alternatives analysis last summer. Chad Abel, Red Cliff Treaty Natural Resource Division administrator, presented the results of the analysis to local communities using reed bed technology in their WWTP. The alternative analysis recommends converting each treatment plant to use native phragmites instead of the non-native subspecies. Although no final decisions have been made, Chad has indicated that each community is supportive of this recommendation.

Until a new technology is employed to dewater sewage sludge at these WWTPs, annual survey and control efforts will be required to insure that non-native phragmites does not become established within the coastal wetlands of Chequamegon Bay

Spur Lake inspires introspection, collaboration

By Peter David, GLIFWC Wildlife Biologist

Some would say another manoomin season is over. The harvest period has passed. Plants once lush and green are now dead and brown and falling out of sight beneath the dark water of late autumn. But manoomin is a reminder that in the Ojibwe world view, nature is a circle, not a line. The life and vibrancy of the summer beds has not been lost, but is transformed and concentrated. It lies in the promise of the next generation, encoded in the seeds, buried in the lake-bottom muck. The circle—we hope—has no ending, no "over", just a rotation to the next phase of the cycle. But is this always true?

The harvest phase of the cycle that just passed was a challenging one for many. Biologists are still working to document harvest volumes, however modest, across the wild rice landscape. But the crop was below average; many beds were hit with intense growing-season storms in July and the weather during the harvest window was only moderately cooperative. In ways, the manoomin seemed to still be getting its strength back from the generally very good season it had in 2015—and studies on nutrient cycling suggest there is some science to support this perspective.

Harvest survey

Please complete and return your harvest survey from GLIFWC—even if you never went out!

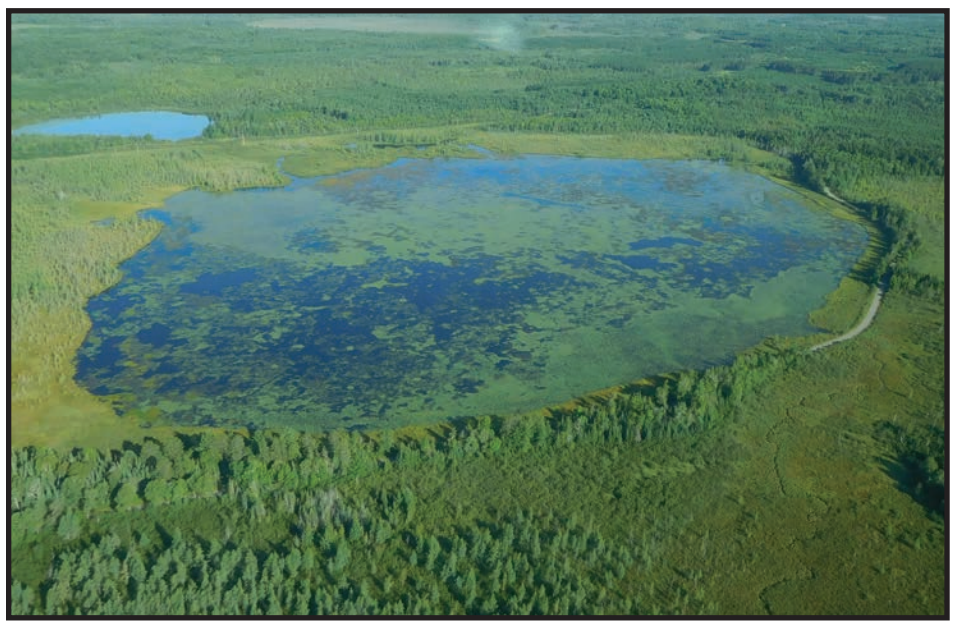
The great annual variability of the manoomin crop has long been recognized in the traditional ecological knowledge (TEK) of the Ojibwe, and that knowledge gives us some assurances that this poor year is not a predictor of another tough season in 2017. But we also know that that TEK was gleaned over centuries when ecological change was relatively slow, and when manoomin and the other parts of the natural community faced few of the threats they face today. Does the circle ever come to an end?

When constancy turns upside down

Spur Lake in east-central Oneida County was once a go-to manoomin lake in Wisconsin, capable of supporting rice over nearly all of its 113 acres. No one

(See Manoomin, page 11)

Spur Lake, Oneida County, 1987.



Spur Lake, Oneida County, 2015.

Traditional foods with Burnsie
It's a family affair

By LaTisha Coffin
Grant Project Coordinator

"A piece of jerky, my girl?" Like he even needs to ask. It's the first thing I hear when I sit down with Myron Burns, Sr, and his son Bill. Everyone calls Myron "Burnsie" on the Bad River Reservation in far northern Wisconsin.

Burnsie and Bill run a small wild rice processing business out of Burnsie's backyard and in a shed with a parching machine, homemade wild rice thresher, and a rice separator that they bought from someone in Nebraska. An all-around outdoorsman, Burnsie helped build and repair wild rice processing equipment for other tribal members in the community.

About five years ago he decided to process wild rice himself. Through trial and error, he and Bill have perfected their processing equipment down to an exact science, including a very precise amount of time for threshing the rice. Today, Burnsie and Bill work with about ten wild rice harvesters, both tribal and non-tribal, all of which come back to the Burns' year after year for their wild rice processing needs.

"Being honest with our customers is what brings them back," says Burnsie as he shows off his homemade threshing machine.

While wild rice is all they think about in late summer, Burnsie is never one to be idle. In between football games, baseball games, and family functions, Burnsie is usually smoking fish in his backyard or processing venison into summer sausage, bacon, and his incredible jerky. Traditional foods like fish, wild rice, berries, maple syrup, hominy, and venison are things that Burnsie has been working with his whole life.

And just like with the wild rice processing, Burnsie's whole family pitches in to help him. His daughter Etta helps him smoke fish and his son Myron, Jr helps with jerky and bacon made from the venison that hunters give him based on a barter system.

For years, Burnsie and his wife Judy would assist grieving families in the Bad River community by cooking and serving the funeral feast food, which has now been passed on to his son Bill. With all the venison and wild rice he gets from processing, Burnsie gives as much back to the community as he can, donating to funerals and to the elderly that do not have anyone to "rice" for them.

His advice for young entrepreneurs and tribal youth hoping to work more with traditional foods is to learn from their elders by watching them. "Ask to come watch how we do things, like jerky. But I don't just make the jerky for them, I let people make it and ask questions. That's how they learn," says Burnsie. Throughout the years, tribal youth have mentored with Burnsie to learn how to work with traditional foods, which is something that Burnsie wants to happen more often so practices and traditions do not get lost.

"If I share how to work with fish or venison with someone, then I leave something behind that's worth leaving behind. There's no reason for me to take everything I know with me when I pass on," he says. Burnsie and Bill look forward to mentoring more tribal youth in wild rice processing and hope to expand their business with smoked fish and jerky, something they've been doing as a family for years.

Myron Burns, Sr shows off his homemade threshing machine. (LaTisha Coffin photo)

And as I leave with pockets full of venison jerky, I can't help feeling like part of the family.

Myron Burns, Sr (Burnsie) and Bill Burns can be reached via *www.manoomin.com*.

Editor's note: Myron and Bill Burns are part of a three-state GLIFWC project called *Manoomin–the Good Berry*, funded by the First Nations Development Institute.

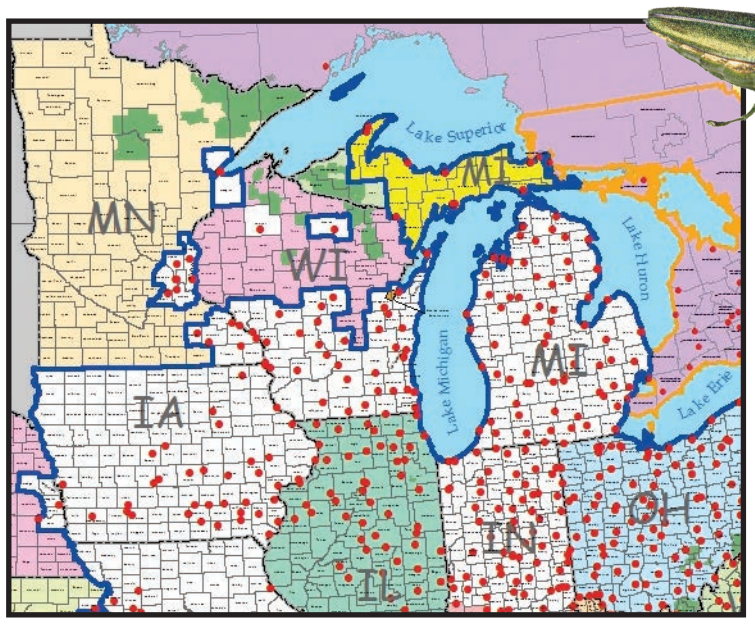
Turtle Island's forests at risk

Invasive insect continues to spread across Ceded Territory

By Steve Garske, GLIFWC Plant Specialist

Fourteen years ago a widening swath of dying and dead ash trees in Detroit, Michigan led to the discovery of a slim iridescent green beetle never before seen in North America.

The insect arrived sometime in the early 1990s, most likely in crates or other wood packing material from China. Since then the emerald ash borer, or EAB, has proven to be the most destructive forest insect ever to invade Turtle Island.



This excerpt from the USDA-APHIS National EAB Quarantine Map shows quarantined counties in the Upper Great Lakes region. Blue borders indicate federally quarantined areas. (Sawyer County, Wisconsin is state-quarantined and will soon be federally quarantined also.) Red dots show the first detection locations for each county. Counties without red dots were quarantined pre-emptively because they were surrounded by quarantined counties and assumed to be infested. See* www.emeraldashborer.info/documents/MultiState_EABpos.pdf *for full map.

North Eastlund Road in Sawyer County, about five miles southeast of the Lac Courte Oreilles Reservation. Last August a single EAB beetle was found stuck to a purple panel trap hung in the white ash tree on the right. (SCG photo.)

This year saw the detection of the EAB in several more Ceded Territory counties. In Michigan, the EAB was detected in and just north of the City of Marquette, near the town of Norway in Dickinson County and northwest of Baraga, leaving just the western tip of the UP (Iron, Ontonagon, and Gogebic Counties) unquarantined. In northwestern Wisconsin, the EAB has spread from Superior to Park Point, Minnesota and now the City of Duluth, resulting in a quarantine of southeastern St. Louis County.

The most recent northern Wisconsin county to be quarantined is Sawyer County. In August a single beetle was found in a USDA purple panel trap just southeast of the town of Radisson, about five miles southeast of the Lac Courte Oreilles Reservation. The area is rural, with sandy soils and relatively little ash (black ash, however, grows around local wetlands). The white ash tree that had the EAB-positive trap still looks healthy, and the source of the infestation is still unknown (see photo). Fourty-two of Wisconsin's 72 counties are now quarantined.

EAB adults are good flyers, and can fly several miles to find an ash tree. Nonetheless EAB populations typically only spread 1-2 miles per year on their own. Without human help the population found in Detroit in 2002 would still be confined to a few counties in southeastern Lower Michigan, northern Ohio, and the Windsor, Ontario area. Unfortunately the beetle is now found in 27 states and two Canadian provinces, from the east coast as far west as Colorado.

The breeding season for the EAB ended in early September. The adults have died. The larvae are tucked away underneath the bark of ash trees, waiting for next spring. With the arrival of warm weather some will turn into adults, spread their wings and head off into the treetops. They don't care whether they emerge where they started out or hundreds of miles away, only that there are ash trees to feed and reproduce on. Don't be the one to give them a lift!

Wisconsin Act 31 continued

(continued from page 1)

"We're looking at a requirement that every teacher education student take two classes [about tribal sovereignty, culture and history]," said Gary Johnson, a University of Wisconsin-Superior professor and early Act 31 supporter. "Those [student teachers] are the ones we want to infuse native culture with."

Native kids in public schools

In a poignant and heartfelt address to Act 31 celebrants, Karen Breit shared family experiences with her native children who attend the Hayward Schools. While commending the school's proactive effort to implement Act 31 Review, Breit explained that racism still creeps into student life.

LCO Community College Dean of Students Karen Breit addresses representatives from Wisconsin's 12 tribes while event master of ceremonies and tribal governing board member Jason Schlender looks on. (COR photo)

"The kids will still get teased about their skin color," she said. During a local history practicum, students were asked to dress-up like northwoods pioneers, leaving Breit's son at a loss. He wasn't comfortable. "There are positive things happening in our schools but these things remind me that more needs to be done for our kids."

To help address her concerns and those of other American Indian parents, Breit joined the school's Act 31 Review Committee. Comprised of educators and others in the LCO Community, the all-volunteer working group provides input and recommendations to the school district on incorporating native culture and perspectives into curriculum, as well as extracurricular activites.

"We hope to create a model that can be used by other communities," she said. "It takes all of us working together to create the best possible educational experience for our children."

Collecting Stories Documentation Project underway in LdF

By Paula Maday, Staff Writer

Lac du Flambeau, Wis.—This past August, the Lac du Flambeau (LdF) Tribal Historic Preservation Office (THPO) launched the *Collecting Stories Documentation Project*, an oral history project aimed at capturing the life stories of community members.

The project is training 20-30 people as interviewers and aims to collect 200 interviews over the course of one year. "We want to see the reservation through the eyes of the people who live here," says Cynthia Stiles, tribal archeologist.

The project is supported by a grant from the Cultural Resource Fund, which according to its website, "supports tribal and state cultural and historic preservation projects for eligible grantees." The Cultural Resource Fund was created by the Federal Communications Commission and seven Class I freight railroads involved in the construction of Positive Train Control (PTC) poles.

Because the railroads did not undergo legally required environmental and historic preservation review before raising poles prior to 2013, the railroads agreed to provide ten million dollars in grants to tribal and state historic preservation offices for use in cultural and historic preservation projects. LdF received a Phase I grant through the Cultural Resource Fund for conservation of boarding school clothing. The *Collecting Stories Documentation Project* was awarded through a Phase II grant.

The grant is a shared responsibility between the LdF THPO and the George W. Brown, Jr. Ojibwe Museum and Cultural Center. The THPO is responsible for training community members as interviewers, who then go out and collect stories from other community members. The museum is responsible for archiving the recorded interviews so that descendants can hear their family members and other community members talking about their lives, years down the road.

Bad River tribal member Christy Jackson pays close attention as Cynthia Stiles, LdF Tribal Archeologist, demonstrates how to use recording equipment during the Oral History Interview Workshop held on October 13, 2016. (Paula Maday photo)

To train interviewers, the THPO has organized a series of four-hour training sessions. Each interviewer only needs to complete one training session to be certified. The training session provides the interviewer with an introduction to project planning, interview preparation, and interviewing techniques. It also covers instruction in the use of recording equipment, which interviewers are able to borrow to complete their interviews. The THPO will continue to work with interviewers after the initial session to conduct historical research, craft questions, and practice interviewing skills.

So far, 10 people have been trained and two interviews have been collected. Stiles said that the training is not limited to LdF tribal members.

"I have sent information about our project to all THPOs in the state, and we have already trained people from the Lac du Flambeau, Bad River, and Sokaogon communities," said Stiles. "But we are hoping to get more local tribal members who are interested and want to participate."

Because of limited equipment, interviewers from other tribes are not able to borrow the recording packs utilized by LdF to record interviews, and archive of the interview would need to be arranged with the interviewer's home THPO.

One of the topics that Stiles pays particular attention to during the training session is how to make the interviewee feel comfortable: "They are giving a part of themselves to the future, so we want to be very respectful to them," she says. "It is important to allow the interviewees to talk and to recognize the gift of what they have given you," she said.

If you are interested in learning more or in signing up to be trained as an interviewer through the *Collecting Stories Documentation Project*, please contact Project Coordinator Lauren Abel at (715) 588-4447 or *label@ldftribe.com*.

Stamp sands threat comes into focus along the Keweenaw

By Bill Mattes, GLIFWC Great Lakes Section Leader

Gay, Mich.—Representatives from the Keweenaw Bay Indian Community, GLIFWC, Environmental Protection Agency, Army Corps of Engineers, and Michigan Technological University met October 19th to view a massive deposit of stamp sands first hand. This multi-agency collaboration developed over the past fifteen years to address a common concern: the movement of toxic stamp sands into Gichigami, along the shoreline and onto nearby Buffalo Reef.

Stamp sands or tailings, are a byproduct of giant steam-driven stamps, which crushed mined rock so that copper could be extracted. Nearly 27 million metric tons of stamp sands were deposited by mining companies along the Lake Superior shoreline and in the water at Gay during the course of the mining era in the early 1900s.

Buffalo Reef is one of three major spawning reefs for chinamegos (lake trout) and adikameg (lake whitefish) in management unit MI4 on the east side of the Keweenaw Peninsula. An extensive restoration effort occurred here between 1967 and 1994 when 1.5 million lake trout were stocked. Currently, lake trout spawning abundance on Buffalo Reef averages 15,000 fish annually. Lake whitefish also spawn on the reef.

GLIFWC staff annually monitor juvenile lake whitefish by using beach seins to sample the shoreline adjacent to Buffalo Reef. While virtually no fish are found over stamp sands, juvenile lake whitefish and other fish were often found along the natural sand shoreline. Over the past four years however, juvenile lake whitefish have been absent from all areas near Buffalo Reef, a disconcerting finding.

Movement of stamp sands onto Buffalo Reef were first brought to the attention of GLIFWC staff by a commercial fisherman who fishes in the area where tribal members maintain a commercial lake whitefish and lake trout fishery. Harvest of these fish is important—culturally and economically—for tribal members who, with the support of GLIFWC planners, promote and market Lake Superior fish and the health benefits of traditional foods.

Loss of fish production at Buffalo Reef is likely if nothing is done. Stamp sands will continue to cover and fill in spaces between rocks on the reef needed for successful spawning. This would mean a loss of genetic diversity as lake trout are reef-specific spawning fish, returning to the same reef to spawn year after year, and this would adversely affect the local economy as both lake trout and lake whitefish hatched from the reef contribute to the lake's fishery.

The collaborative group met on the Michigan Technological University campus in Houghton following the field trip to discuss possible avenues for cleanup and containment of the stamp sands. Esteban Chiriboga, GLIFWC environmental specialist presented to the group on the environmental impacts of stamp sands.

A massive dune of fine-grain stamp stands lies in between Gay, Michigan and Lake Superior on the east side of the Keweenaw Peninsula. The product of historic copper mining operations, stamp sands continue to migrate along near shore areas of Gichigami and threaten a major spawning reef used by lake trout and whitefish. (Amanda Plucinski photo)

"The level of engagement on this issue from the agencies is encouraging," Chiriboga said. "They have a good understanding of the importance of Buffalo Reef to the tribes and have committed to continue working toward a permanent solution to the stamp sand contamination in the area."

Partnerships form foundation of walleye work in Upper Michigan

By Charlie Otto Rasmussen, Editor

As walleye populations continue to struggle in some 1842 Michigan Ceded Territory lakes, Lac Vieux Desert (LVD) Band fisheries managers are expanding selective stocking efforts. With an ever-growing cadre of partners, LVD supports fisheries programs from the Wisconsin border waters to Gichigami.

"Our work to help recover walleye populations has really strengthened our relationships with local organizations and the DNRs in Wisconsin and Michigan," said Roger LaBine who leads tribal fisheries work with Mitchell McGeshick. DNRs, or Departments of Natural Resources, represent state fisheries programs.

While the tribe most often focuses walleye releases on its home water, Lac Vieux Desert Lake, fishery managers turned loose 1,050 extended growth ogaa (walleye) into Cisco Lake last September. LVD Tribal Chairman Jim Williams Jr. and Greg Wenzel from Cisco Chain Riparian Owners Association took part in the September 16 release that featured robust walleye up to 10-inches long. The extended growth fingerlings originated from Cisco brood stock captured in fyke nets during the spring spawning run.

The tribe's ability to stock larger ogaa expanded just a few years ago with the construction of two fabric-lined rearing ponds near the south shore of Lac Vieux Desert Lake. Here, tribal fisheries staff work with another group, Lac Vieux Desert Lake Association, to culture and stock ogaa into the 4,017-acre lake bisected by the Michigan-Wisconsin border. From a portable hatchery dubbed "walleye wagon" local volunteers tend to fertilized eggs collected jointly by the lake association and LVD tribe. In 2015, they hatched and released 300,000 fry, and in this past year stocked nearly 1.8 million of the tiny walleyes.

Above, LVD Fishery Manager Mitchell McGeshick weighs ogaa fingerlings netted from tribal rearing ponds.

Right: Extended growth ogaa or walleye fingerling.
(submitted photos)

On the north shore of Lac Vieux Desert Lake, the band continued upgrading their long-running hatchery at Old Village. In a move to use more green energy, band contractors installed a solar array to power water and electrical systems. And through a cooperative agreement, the Old Village hatchery received two, 24-foot runway tanks from Keweenaw Bay Indian Community; in exchange LVD fisheries managers raised and fed walleye hatchery stock to fingerling size, transferring them to the Keweenaw Peninsula's Portage Lake, an important fishery for the community.

The LVD Band assigned one runway tank to lake association partners to hold fry until the hatchlings shed their yoke sacs. Once free of the sacs, cooperators marked those 1.8 million walleye with OTC, LaBine said. State biologists requested the procedure, which involves marking the fish in oxytetracycline "bath," to help identify hatchery fish in future surveys. Fish absorb OTC into their bones, allowing biologists to identify hatchery fish when viewed under ultraviolet light.

Fisheries assessments conducted over the coming years will reveal how well the cooperative stocking efforts aid in walleye recovery on a lake cherished by many.

To stock or not to stock walleye, that is the question

By Mark Luehring and Aaron Shultz
GLIFWC Inland Fisheries Biologists

Stocking has been a large part of walleye management in the Ojibwe Ceded Territory since the late 1800s. Wisconsin, Michigan, and Minnesota all have extensive walleye propagation programs that produce fry, spring fingerling, or fall extended growth fingerlings.

In addition, tribal and private hatcheries have stocked significant numbers of fish in lakes throughout the Ceded Territory. Historically, most of the walleye produced in hatcheries were fry or spring fingerlings. In recent years, many hatcheries have tailored their facilities to produce extended growth fingerling walleye (about 6 inches in length) with the hope that these fish will experience higher survival rates than earlier life stages.

Since walleye are such a popular fish among state and tribal fishers, they have been widely stocked for a variety of reasons. Many of the early walleye stocking programs were intended to introduce walleye to waterbodies where they were not initially present (e.g., Escanaba Lake). In some lakes where natural reproduction does not occur, stocking has been used to maintain fishable walleye populations (e.g., Tomahawk Lake). Stocking can also be a valuable tool to help walleye stocks recover in lakes where natural reproduction has failed (e.g., Lac Vieux Desert Lake).

While stocking has contributed to walleye populations in the Ceded Territory in a variety of ways over time, the most abundant walleye populations are supported through natural reproduction.

Although stocking has often contributed to improving walleye populations, it does present some biological risks and financial costs. For example, when hatchery fish are stocked into lakes with natural reproduction, they may compete with naturally produced fish for habitat and resources, suppressing natural year-classes. In addition, if hatchery fish have different genetics than the fish in a given lake, cross breeding of natural fish and hatchery fish can reduce the fitness of the offspring, which can hinder maintenance or recovery of natural walleye stocks. Stocked fish also show poor survival when conditions in the lake are not suitable for them.

From a financial perspective, the price tag of producing walleye in a hatchery can be quite high, with extended growth fingerlings costing in the range of two dollars per fish. Overall, these financial costs and biological risks need to be taken into account before moving forward with a walleye stocking program.

Stocking has often been viewed by stakeholders as a 'fix-all' tool for walleye management. User groups around lakes often want to stock walleye to further increase healthy populations, improve fishing, restore naturally reproducing populations, or create a walleye fishery. Unfortunately, these goals are often unachievable by stocking alone.

Ogaa are an important species to state licensed anglers as well as Ojibwe tribal members. (COR photo)

The fish present in a lake are a product of the habitat in that lake, and only a small percentage of lakes have good walleye habitat. Even in cases where hatchery fish are being used to restore a naturally reproducing walleye population, biologists need to work to identify and eliminate the reasons for failure of natural reproduction for the project to be successful.

In many instances, focusing on building ecological resilience (i.e., an ecosystem that can withstand disturbance) is a more cost effective long-term solution than stocking walleye into a water body.

For example, resource managers could focus efforts on constructing/restoring shorelines to provide a buffer between land use practices (e.g., fertilizing a lawn, agriculture) and a lake. This would reduce stressors in this ecosystem (e.g., nutrient loading) and make it more resilient to future disturbances (e.g., warmer temperatures associated with climate change).

Collectively, stocking can be a useful management tool in some lakes, but building ecological resilience into lakes with naturally reproducing walleye populations will do more to ensure that this resource is available for future generations to harvest and enjoy.

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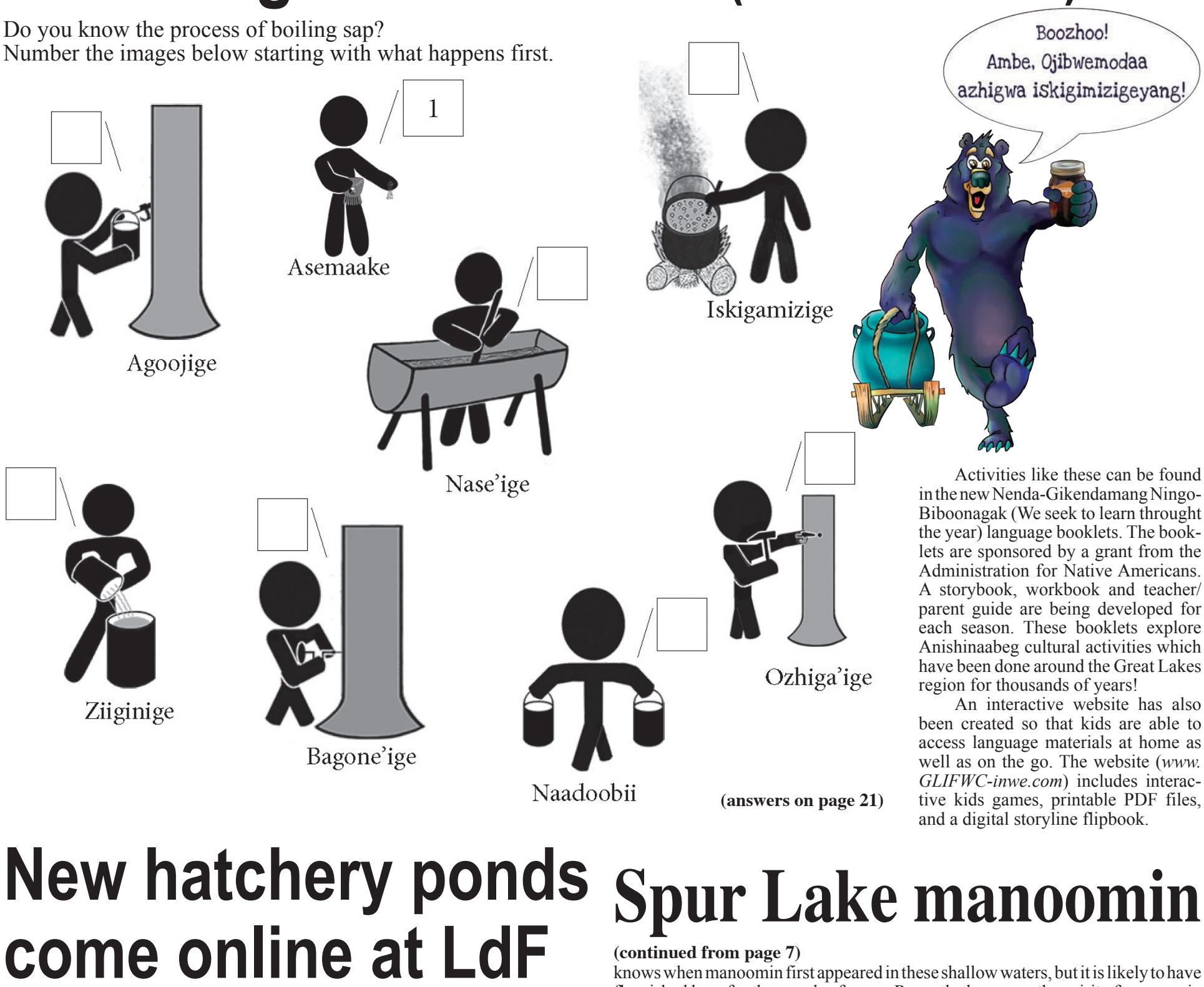
(What is the process of boiling sap?)
Awegonesh nitam? (What is first?)

Do you know the process of boiling sap?
Number the images below starting with what happens first.



(answers on page 21)

Activities like these can be found in the new Nenda-Gikendamang Ningo-Biboonagak (We seek to learn throught the year) language booklets. The booklets are sponsored by a grant from the Administration for Native Americans. A storybook, workbook and teacher/parent guide are being developed for each season. These booklets explore Anishinaabeg cultural activities which have been done around the Great Lakes region for thousands of years!

An interactive website has also been created so that kids are able to access language materials at home as well as on the go. The website (*www.GLIFWC-inwe.com*) includes interactive kids games, printable PDF files, and a digital storyline flipbook.

New hatchery ponds come online at LdF

Even with construction still finishing up on new rearing ponds in spring 2016, Lac du Flambeau's (LdF) William J Poupart Sr. Fish Hatchery produced 27,490 extended growth walleyes averaging around seven-inches each. While most fish were stocked into off-reservation lakes, LdF fisheries staff released some into border waters as well. Walleye-stocked lakes in northeast Wisconsin include: Dead Pike, Little Trout, Booth, Arrowhead, Sweeny, Carrol, Bird, Upper Gresham, Bolger and Flambeau Lakes. (Larry Wawronowicz photo)

Spur Lake manoomin

(continued from page 7)

knows when manoomin first appeared in these shallow waters, but it is likely to have flourished here for thousands of years. Recently, however, the spirit of manoomin has struggled at Spur. Poor crops have not happened just once or twice: it has been a decade since the lake supported even a modest crop, while other vegetation has greatly expanded in abundance. And it is hard to know exactly why.

Spur seems an unlikely place to have problems. There are only 2.8 square miles of watershed above the lake outlet, and most of that has minimal human development. A lightly-traveled town road hugs much of the east and south sides of the lake, but lakeshore is otherwise undeveloped, and is currently protected as a state natural area.

One thing does appear to be clear: lake levels have increased by 1-2 feet from what was found even decades ago—more than enough to trigger a decline in manoomin. But the causes and solution to the issue are less straight forward. Likely, an interplay of factors are at work: some beaver impacts, some reduction in outlet flow, some restriction in stream channel from vegetative encroachment. Identifying the extent of each, determining how to address them, and then finding the funding to correct them will all need to be done before recovery is possible.

That effort has started. State, township and tribal representatives recently met to share knowledge and information on the history of Spur, and to begin charting a way forward. In an important early step, GLIFWC law enforcement staff recently collaborated with biologists by conducting a low-level drone flight down the outlet stream to document possible flow bottlenecks.

It is interesting to consider how worldview might color a person's perspective on this effort. If one sees life as a linear path, then the loss of a historic rice bed may seem like a natural end point, neither positive or negative perhaps, but just something that happens. For those who see life as a circular rhythm, the same loss might be more likely to be viewed as a disturbance in the natural cycle. But regardless of worldview, is it rewarding to know that all partners in this fledgling restoration effort are in agreement that reducing water levels on Spur Lake and recapturing the historic abundance of rice is a goal worth pursuing.

At home on Gichigami: work, study, culture and life

Safety first: boating into the new year

By Anya Janssen, GLIFWC LTE

Here in the Great Lakes region of the world, where fishing and boating are integral parts of life, vessel safety and natural resource protection remain vital to the needs of our communities. Both the Keweenaw Bay and the Red Cliff communities hosted Drill Conductor Training for commercial fishing vessels this past summer. Michigan State University (MSU) Sea Grant partnered with Alaska Marine Safety Education Association (AMSEA) to offer training courses on vessel safety to northern Great Lakes communities.

MSU Sea Grant is part of a National Sea Grant Network made up of 33 university-based programs operating under the National Oceanic and Atmospheric Administration (NOAA). In congruence with the mission of academia, the MSU Sea Grant collaborates with collegiate institutions dedicated to research, education, and outreach. The Sea Grant Network is united by a common goal to protect and sustain the Great Lakes. Drill Conductor Training courses, conducted by Ronald Kinnunen, senior educator with MSU Sea Grant, and Jerry Dzugan, executive director of AMSEA, help to achieve that goal by regulating the safety of boaters and fishermen of this region.

Training for Keweenaw Bay took place on June 21 and was held at the Ojibwa Casino Resort in Baraga, Michigan. Training in Red Cliff was held on June 23 at Legendary Waters Resort and Casino. Callie Kopp and Jalyn LaBine, summer interns with GLIFWC's Great Lakes Section, participated in the vessel safety class held at Keweenaw Bay.

"At that point I had not been on the boat on Lake Superior yet and I was a little nervous," Kopp said. "After receiving the training, I felt more comfortable and confident about being on the water because I knew how to handle emergency situations."

One emergency situation highlighted by both Kopp and LaBine were the fire drills. "We had to run around the boat, putting out 'fires,' and throwing water out of the boat because we were 'sinking.' Then when there was no hope for the boat, abandon ship with our survival suits on" LaBine said.

"We also learned how to put out fires using a fire extinguisher. Most people don't know how to properly use them and the chemicals inside are gone before the fire is out. This skill is not just beneficial for being on the boat, it is also a good life skill that I will have for the rest of my life," Kopp said.

The Drill Conductor Training offered real life scenarios that oriented trainees to respond effectively to emergency situations. According to LaBine, "Simple things like not wearing a safety vest in an emergency situation, it could really cost a life."

Commercial fishermen who routinely operate a fire extinguisher are reportedly three times as proficient in putting out fires, compared to those who have never operated a fire extinguisher. Jalyn LaBine, GLIFWC Great Lakes Section intern, (left) and Chris Peterson, Red Cliff tribal fishermen, apply firefighting techniques taught in the course. GLIFWC would like to thank Keweenaw Bay Fire Department members Tom Chosa and Al Gathier for their assistance in this training exercise.

Vessel safety training assures that commercial vessel captains are in compliance with the U.S. Coast Guard Regulation to practice monthly emergency drills, increasing the abilities of captains to effectively handle emergency situations on their vessels. The monthly drills cover the following contingencies: strategies for abandoning a vessel, fire-fighting techniques depending on the type of fire and its location on a vessel, overboard water rescue with life and rescue boats, responding to flooding of a vessel, donning immersion suits and flotation devices (in a matter of seconds), donning a fire-fighter's uniform and breathing apparatus, making voice radio distress calls and using visual distress signals, testing and reporting inoperative alarm and location systems, and lastly, activating general alarm.

When dealing with unpredictable and potentially dangerous waters such as Lake Superior, it is critical to have the necessary training to keep oneself and others safe. For more information on when and where future training will be held, visit: ***amsea.org***.

Research tracking laker habits in a warming Gichigami

By Bill Mattes, GLIFWC Great Lakes Section Leader

Chinamekos (lake trout) have long provided food for the Anishinaabe people. As settlers pushed into the Great Lakes region, lakers—along with adikameg (lake whitefish) and kewis (lake herring or cisco)—provided for a means of trade and income. Currently, many tribal members rely on these same species in commercial fisheries, which supply restaurants and wholesale food distributors.

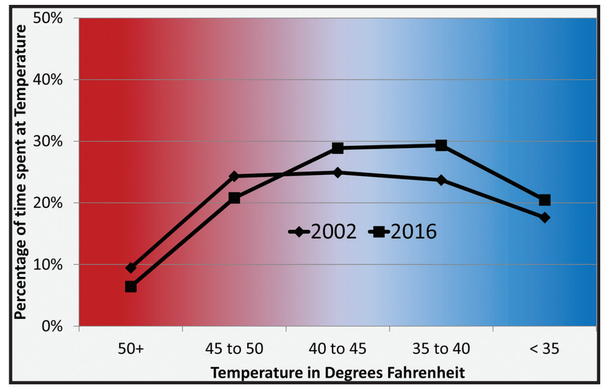
Chinamekos thrive in the clear cold water of Gichigami, preferring temperatures around 50 degrees Fahrenheit, a temperature not too common during most of the season in Gichigami, where the average temperature is 40 degrees F. But that may be changing.

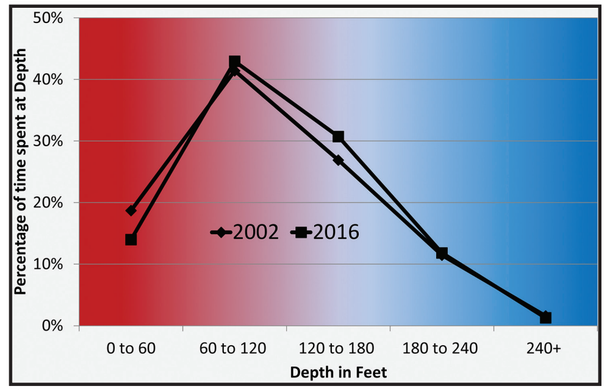
The temperature of Lake Superior's waters is highly linked to winter ice cover. An ice free lake is midnight blue in color whereas an iced over lake, with a little snow on top, is white. As anyone who owns a car with a dark interior knows, dark colors get hot! The same happens to Lake Superior in an ice-free winter; heat is absorbed by darker waters giving the upper water layers a head start for further heating over the warm summer months. This ultimately leads to a later ice cover the following year due to the lake taking longer to cool back down. Lately, ice-free winters have been occurring more often, and the lake has been warming up.

Fish are the same temperature as the water they live in. They cannot sweat or shiver or put on a coat. To track changes a warming lake may have on lake trout, GLIFWC's Great Lakes Section staff attached depth and thermal archival tags on fish to see what temperatures they were staying in and at which depth they were staying. In 2002, 124 tags were deployed and fourteen were retrieved. In 2015 as part of GLIFWC's Climate Change Program, 99 tags were deployed and so far thirteen have been retrieved.

Data are still being analyzed, but when complete they should show if fish inhabit warmer water or deeper water than they did fifteen years ago. Either could be the case; lake trout may stay in the warmer water if it's available. This may lead

(see Chinamekos, page 19)





Percentages of time spent at a given temperature (upper) and depth range (lower) by chinamekos based on tagging conducted in 2002 and 2016.

Native voices sound off at binational Great Lakes meeting

Lake Superior LAMP for 2015-2020 finalized

By Jen Ballinger
GLIFWC Outreach Specialist

Toronto, Ont.—Following a recent round of updates to the Great Lakes Water Quality Agreement (GLWQA), the federal governments of the United States and Canada sponsored a public forum October 4-7. The forum included representatives from American tribal governments, First Nations, Métis Nation, and the general public. Event speakers addressed the current state of the Great Lakes, threats the lakes are facing, and updates to the activities of Annex subcommittees under the GLWQA, said Jennifer Vanator, a GLIFWC policy analyst who attended on behalf of the Commission's member tribes.

The priority projects identified in the Gichigami LAMP include:

- Reducing impacts of current aquatic invasive species (AIS) and prevention of new AIS species introduction
- Responding to climate change
- Increasing connectivity and natural hydrology between Lake Superior and its tributaries
- Continuing the work of the Zero Discharge Demonstration Program
- Preventing contamination from emerging chemicals of concern
- Addressing threats to important habitats or native plant and animal communities
- Restoring and protecting high quality habitats
- Managing for self-sustaining, diverse and healthy species populations

"Indigenous people and organizations played a major role in the discussions," Vanator said. "They are concerned about water quality, ecosystem health, and want to see TEK better incorporated into GLWQA programs."

Forged in 2012 the GLWQA is a formal commitment between Canada and the United States to protect and restore Great Lakes waters. GLWQA includes 10 annexes, or specific categories, that focus on issues including groundwater, climate change, discharge from vessels, and aquatic invasive species.

Gichigami LAMP shines first

Under Annex 2 of the GLWQA entitled "Lakewide Management," the US and Canada assess the status of each Great Lake by addressing environmental stressors that adversely affect the waters of the Great Lakes, and are best addressed on a lakewide scale through an ecosystem approach. The mechanism in which the countries do this is through writing and implementing a Lakewide Action Management Plan (LAMP) for each of the Great Lakes.

The US and Canada recently finalized the most recent Lake Superior LAMP in summer 2016.

It requires each of the Great Lakes to be managed by a five-year Lakewide Action and Management Plan (LAMP); Lake Superior's LAMP was produced first. The Lake Superior LAMP has officially been released and can be found at ***https://binational.net***.

The LAMPs help direct and organize management actions in each of the Great Lakes. The Lake Superior LAMP was drafted by the workgroup of the Lake Superior Binational Program (a program to restore and protect the Lake Superior Basin), now called the Lake Superior Partnership Work Group, and provides an action plan for restoring and protecting the ecosystem through 2019. The Lake Superior LAMP documents the current environmental conditions of the lake, threats to the lake's ecosystem, lakewide objectives, priorities for future scientific investigations, and features a list of actions and projects to address threats and to achieve lakewide objectives.

The recent LAMP finds Lake Superior in overall good condition with a relatively healthy fishery. Contamination from legacy contaminants, such as PCBs, is on the decline. Lake Superior fish consumption advisories are less restrictive than in past years, but are still necessary to prevent overexposure to mercury and PCBs. Lake Superior is facing threats from aquatic invasive species, such as sea lamprey and non-native phragmites, among others. Lake Superior is also facing threats from climate change in ways unique to its ecosystem. Responding to these threats dictates the priority actions and projects that Partnership agencies will work on in the next five years.

The LAMP lists 29 projects that the Lake Superior Partnership has identified as priorities for action, as well as agencies that have committed to try to implement each. GLIFWC, its member tribes, 1854 Treaty Authority, and Chippewa Ottawa Resource Authority have committed to work towards implementing 26 of the 29 stated priority actions. A new Lake Superior LAMP will be drafted to direct management activities from 2020–2024.

–first section by COR

Taking stock of the Great Lakes Restoration Initiative

The Great Lakes Restoration Initiative (GLRI), the largest Great Lakes restoration program in US history, was the topic of discussion at Northland College's Water Summit in Ashland, Wisconsin September 30. A panel of Great Lakes experts, featuring GLIFWC Chairman Mic Isham, discussed the many successes of the GLRI program. Isham provided a tribal perspective and advocated that tribes should have more control and oversight on GLRI projects awarded to them. The Water Summit participants authored a report to the US presidential transition teams with suggestions for continuing an effective GLRI program. Photo from left: Katherine Buckner, Council of Great Lakes Industries president; Chairman Isham; Todd Ambs, Healing Our Waters Coalition campaign director; and Randy Lehr, co-director of the Burke Center. (Jen Ballinger photo)

Whitefish study tracks Gichigami food web

By Bill Mattes, GLIFWC Great Lakes Section Leader

Adikameg (lake whitefish) provides the backbone of the commercial fishery in Gichigami. As such, GLIFWC's Great Lakes Section started a new program to gather more information about whitefish biology including length, weight, age, and diet. Diet is easy to collect and analyze. Just catch a fish, look inside its stomach, count and weigh differing items, and compare them over time.

Great Lakes Section's Climate Change Fisheries Technician Ronnie Parisien Jr. has spent the past year riding commercial fishing tugs, and thanks to the cooperation of the tribal fishers, he has been able to do just that with over four hundred lake whitefish collected.

Baseline information on the seasonal diets of the commercially important lake whitefish collected over the past year, and information to be collected in the future, will be used to track any changes that may occur due to invasive species and/or climate change over time.

In Michigami (Lake Michigan), lake whitefish growth declined following the invasive zebra and quagga mussel invasion. The growth in the mussel population was followed by a decline in phytoplankton (small plants in the water), and a drastic drop in diporeia numbers, which made up over half the whitefish diet.

This not only led to declines in the size of commercially harvested lake whitefish but wreaked havoc on the entire food-web and led to reductions in fish stocking for recreational trout and salmon fisheries.

(see Adikameg, page 19)

'Changing Leaves,' changing youth

GLIFWC fall camp brings traditional leadership activities to new season

By Paula Maday, Staff Writer

Lac du Flambeau, Wis.—Sixty-four youth from Wisconsin, Minnesota, and Michigan gathered under the yellow canopy of dagwaagin for the first Waatebagaa (Changing Leaves) Cultural Fall Camp on October 15-16. Waatebagaa is the third in a suite of seasonal youth camps offered by GLIFWC, joining Camp Onji-Akiing—held for one week each summer near Sidnaw, Michigan, and Ishpaagoonikaa—held over a winter weekend at rotating tribal locations.

The fall camp builds on the successful format of these two established camps, connecting tribal youth with traditional Ojibwe activities; with elders, cultural advisors, and mentors; and with each other, to grow youth leadership and cultural knowledge.

Upon arrival, youth set up camp *literally*, pitching their tents and unrolling their sleeping bags inside the Lac du Flambeau school gym. Afterward, they split into three clans—Hunters, Fishers, and Gatherers—and traveled to Waswagoning Village—a recreated Ojibwe Indian village in Lac du Flambeau. There, the clans rotated through a variety of traditional and outdoor activities, including: fleshing and brain tanning, gillnet making, fish cleaning and smoking, waterfowl cleaning, trapping and beaver skinning, deer cleaning, air rifle use, archery/cross bow use, and tree shelter making/outdoor survival skills.

Waatebagaa campers don blaze orange for a group photo amidst the beautiful birch in Waswagoning Village. (Paula Maday photo)

Kiins Stark, 11, said he came to camp "to learn about the ways and about my culture. My favorite part about this camp was making new friends." Aysia Klingman, from Lac Vieux Desert, said her favorite part of camp was "learning about wild geese and getting to eat new things like dried venison. I thought that was pretty good!" she said.

Joslyn Beaulieu, 16, from Red Cliff, served as a junior counselor for Waatebagaa. She says she's been attending GLIFWC camps since she was eight or nine years old. "It helps kids grow up. It teaches them leadership and skills that they need every day in life. I think it's really important and I'm really glad I've gone. It's helped me develop so much as a person."

Kolton Houlton, 20, from Marquette, echoed Beaulieu's feelings. "This camp has made me who I am today in terms of respect level and the knowledge that I have gained. I learn new things every year. I'm still learning as a junior counselor." Junior counselors are older youth who have had experience at previous GLIFWC camps and can guide their clans in behavior and serve as mentors.

"What I like to do here for the campers is to spread respect, not only to their elders, or to their peers, but to the land that they're here on. Nature itself. That's the big thing for me," Houlton said. "What I like to spread to all the kids is the amount of respect that they need and that they can obtain through this camp and camps affiliated with GLIFWC."

In addition to guidance from junior counselors, campers receive guidance in specific activities from elders, community members, and GLIFWC conservation wardens. Bob Williams from Lac du Flambeau says he came to fall camp to help the kids understand how to hunt and to skin a deer: "What we're teaching out here, you can't get this in a classroom. This is their classroom out here, amongst the spirits here, the ones that are standing around us here. And I thank the Creator and the ones that are helping them along. The kids enjoyed coming here and learning how we used to live."

Mike Wiggins, Jr., Bad River, also helped with the deer processing session. "Deer teach us and remind us to be gentle. The lesson that comes with waawaashkeski is usually centered in sharing. If you turn into hunters and fishermen, one of the beautiful things you will be able to do is share food with your community," he told campers.

Sharing food and sharing knowledge, the youth who attended Waatebagaa learned many things that will help them develop into leaders including respect, friendship, and certainty in their identity. As they rolled up their sleeping bags and took down their tents, they exchanged smiles and prodded one another with traditional native humor. They each take with them the memories of a beautiful weekend spent under the changing leaves of the fall season and the lifelong, soul wisdom of knowing what it means to be Ojibwe in daagwaagin.

GLIFWC Warden Mike Soulier oversees standing air rifle technique while Chris McGeshick, Sokaogon tribal chairman, assists a camper with shooting from the ground. (Paula Maday photo)

LCO tribal youth Melvin (Cody) White and Andre'anna Acosta learn how to properly clean fish from Lyle Chapman. (Paula Maday photo)

Wardens in the "first person"
~ in the field ~

Unique youth hunt for survivors following law enforcement tragedy

By Holly Berkstresser
GLIFWC Warden

Three Lakes, Wis.—In early October I had the honor of helping with a youth hunt. But not just any youth hunt. This hunt is for families who have lost a law enforcement parent in the line of duty. This was the second year that an interagency group of officers have collaborated to put on this event.

Attending this year were five youth and four adults hailing from Minnesota, Arizona and Maryland. From our base at Camp Luther, we started off Thursday, October 6 with a firearm safety course, emphasizing safe and responsible firearms handling. That afternoon, we went to the shooting range to target and trap shoot. In the evening some of the mentors brought two of the kids and their mothers along on a duck hunt.

Friday morning, we woke up bright and early to rain showers and chilly 40-degree temperatures. We split into two separate groups. One group went out onto Thunder Lake duck hunting, while the other group went to a farm field to goose hunt. Although the geese didn't come in, the kids and their moms had a great time. The duck hunters, on the other hand, had more success, bagging five blue-winged teals!

Saturday morning we headed out to Herb and Mary Jo Hoover's pheasant farm, and met with members of a local bird dog organization. The couple who owns the dogs have helped both years, and brought eight of their best German shorthair pointers to assist in the hunt. The landowners made a large lunch for everyone and opened their home and land to us.

Happy hunters. As part of the Concerns of Police Survivors program, Kelly (left), Nick, and Logan Bruner traveled to the Ceded Territory for a special pheasant hunt. GLIFWC, Wisconsin Department of Natural Resources, and additional agencies and businesses collaborated to help make a memorable hunt. (Holly Berkstresser photo)

The day was a success, with the hunters getting five birds. That evening, the dog owners cooked up dinner for the group, making what they simply call "Bird," a cream-based stew served over egg noodles. It was a big hit with everyone.

Sunday morning, a couple of the youth still wanted to hunt, so before they had to depart for the airport in Rhinelander, two of the mentors took them on a grouse hunt. Although they were unsuccessful, they had a great experience in the northwoods. Although this camp is still young, the word about it has spread throughout the C.O.P.S. (Concerns of Police Survivors) family.

This camp is organized by Wisconsin Department of Natural Resources Wardens, GLIFWC Enforcement Division, Vilas County Sheriffs, National Park Service, DanKar Kennels, local landowners, and staff at Camp Luther. Planning for the third annual C.O.P.S. hunt is already in the works, and I will most definitely be attending.

C.O.P.S is a non-profit organization that offers programs and services to survivors nationwide. Each year around 150 officers are killed in the line of duty nationwide. The organization relies on grants and donations to fund their work. For more information on C.O.P.S. go to ***www.concernsofpolicesurvivors.org*** or check out their Facebook page.

Workshop offers up trapping insights

By Mike Burns, GLIFWC Warden

Mole Lake, Wis—When the leaves begin to change and the nights become cold, fur-bearing animals of the Ceded Territory begin making preparations for winter. Bobcat, muskrat, beaver, raccoon, and coyote all have ecological and biological demands to withstand the cold winters. A quality fur coat is among the most important components, and this is the time of year when trappers seek out animal pelts.

Trapping continues to be a way of life for Ojibwe people. Traditional knowledge of animal behavior, identifying commonly used areas and observation of animal tracks allows trappers to focus in on a particular animal or species. Trapping the animal is just the beginning before the fur can be used in clothing or other things. The animal must be skinned, fleshed, stretched, and tanned to reach the final step of the process.

Conservation Warden Mike Burns sets a #1.5 foothold trap. The trap is placed in a shallow hole and covered with dirt and leaves to appear as nothing is there at all. (staff photo)

GLIFWC Conservation Wardens Christina Dzwonkowski, Gale Smith, and I took part in a weeklong training October 10–16 on trapping and preparation of native fur-bearers. Sokaogon Mole Lake Tribe hosted the training with expertise from GLIFWC Conservation Warden Supervisors Roger McGeshick and Mike Popovich.

Wardens first prepared traps by boiling them in native staghorn sumac to give the traps a scent free, dull black finish. Officers then set traps in hopes of targeting one or two animal species. 110 Conibears were used in targeting mink and muskrat. To target coyote

(see Trapping workshop, page 21)

Ghost net recovery in MI

By Gale Smith, GLIFWC Warden

Ghost nets are commercial fishing nets that have been damaged due to inclement weather or vandalism and have sunk to the bottom of a lake. It is important to recover these nets because they can cause equipment damage or loss, biological hazard, and wastefulness of an important resource.

State fishermen who use a trolling technique can get their fishing lines caught in ghost nets. Once caught, the line becomes too heavy to pull up, and they end up having to cut the line, losing both the line and other equipment that was attached to it. Replacing this equipment can be very costly. Additionally, ghost nets can sometimes continue to catch fish and rot. Biologically, this is not good for the lake and also a waste of the resource.

GLIFWC Wardens removed 6,000 feet of ghost nets from Gichigami. (Matt Kniskern photo)

On September 19-23 I assisted GLIFWC Wardens Dan North and MattKniskern with the recovery of ghost nets in the Upper Harbor of Marquette, Michigan and by Manitou Island. This was an eye opening experience for me as to the amount of effort that goes into recovering these nets.

The process starts with information received from informants. Local fisherman call in to the state natural resource department and report broken fishing lines or sightings of ghost net fragments. This includes details of net locations marked by GPS coordinates. State game wardens then contact GLIFWC wardens. Once we receive this information, we set the coordinates into our GPS system and the search begins.

Using sonar technology, we are able to locate inconsistencies on the lake's bottom. The nets tend to have a hump shape on the sonar screen. While onboard the net pulling vessel I was mainly in charge of dropping the net dragger as our

(see Ghost net recovery, page 21)

Aaniin ezhiwebak biboong?
What is happening as it is winter?

"Indoojibwem. Ingii-maajiitaa! Gaye gidaa-maajiitaa. Gaye, biboong, gidaa-aadizookem. Gemaa gidaa-gete-dibaajimom. Gimaajii-ikid: "Giiwenh mewinzha." Mii dash daa-ikidoyan: "giiwedinong, waabanong, zhaawanong, ningaabii'anong, ishpiming, akiing gemaa megwaayaak, naawaakwaa, noopiming gemaa agaaming, jiigi-zaaga'igan, agidishkwam gemaa makwa a'aw, waabooz a'aw, maang a'aw, waawaashkeshi a'aw." Gidagonaanan aabajichiganan biboong! Weba'aagwonaan, waabaakwad, odaabaan, aagimag. Miigwech. Mii'iw."

("I am speaking Ojibwe. I started! Also, you all should start. And, when it is winter, you could tell sacred stories. Or you all could tell old stories. You could begin by saying: "It is said long ago you could then say: "to the north, to the east, to the south, to the west, in the sky, on the earth or in the woods, in the middle of the woods, in the bush or across the lake, by the lake, on top of the ice or that bear, that rabbit, that loon, that deer. Add in tools as it's winter! Shovel, ax, sleigh/wagon/car, snowshoes." Thanks. That's all.)

Bezhig—1

OJIBWEMOWIN (Ojibwe Language)

Inashke! Migizi a'aw.

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.

VAI's Verb, Animate, Transitive, S/he verbs

Bimose.—S/he walks.
Nibimose.—**I** walk.
Gibimose.—**You** are walking.
Nibimose**min**.—**We** walk.
Gibimose**min**.—**We all** walk.
Gibimose**m**.—You all walk.
Bimose**wag**.—**They** walk.

Learn conjunct/B-form-means "if, when, or while..." is a dependent clause.
Niimi**yaan**—When/If I dance...
Niimiyan—When/If you dance...
Niimid—When/If s/he dances...
Niimiyaang—When/If we dance...
Niimi**yeg**—When/If you all dance...
Niimi**waad**—When/If they dance...

Niizh—2

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

A. Mewinzha ingii-shooshkwaada'e. Noongom ningikaa.

B. Mewinzha ingii-shooshkwajiwe. Ningaagiidaawigane.

C. Mewinzha ingii-shooshkwaagime. Noongom ningotaaj.

D. Oshkiniigiiyan, zhooshkaada'eg! Zhooshkwajiweg! Zhooshkwaagimeg!

E. Ambe omaa! Agwajiing ambe odaminog! Baapig! Zoogipon!

F. Inashke! Odaabaanigamigong ingii-mikawaag aagimag.

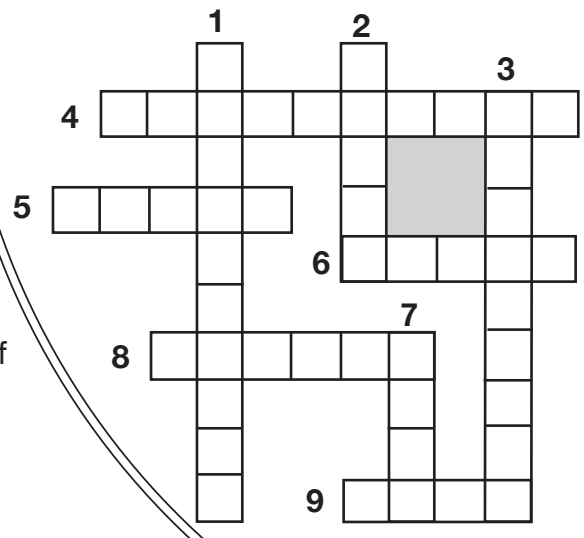
G. Endaso-biboong ninaanaa'itawaag aagimag.

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

Aandeg a'aw.

Niswi—3

IKIDOWIN ODAMINOWIN (word play)



Down:

1. In the middle of the woods.
2. loon
3. I began
7. also, too

Across:

4. from, to, in the south
5. bear
6. or, maybe
8. on the earth
9. old, old-time

Bine wa'aw.

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

Niiwin—4

VAI Q and A:

Izhinikaazo.—S/he is named so.
Aaniin ezhinikaazoyan?—What is your name?
Jessi nindizhinikaaz.—Jessi is my name.
Aaniin ezhinikaazod?—What is his/her name?
Gaazhagens izhinikaazo.—S/he is named cat.
Aaniin ezhinikaazowaad?—What are their names?
Nika idash Zhiishiib izhinikaazowag.—They are named goose and duck.
Aaniin ezhi-ayaayan?—How are you?
Nimino-ayaa.—I am well.
Aaniin ezhi-ayaad?—How is s/he?
Mino-ayaa.—S/he is well.
Aaniin ezhi-ayaawaad?—How are they?

-yan
Gid-
Nim- -min
-d
-wag

1. Zaaga'iganing biboong _____aadizooke_____.

2. Aaniin ezhinikaazo____?
Ginger (n)indizhinikaaz.

3. Ginger _____izhinikaaz. Gaye wiinawaa, agaami-ziibiing. Sue dash Cody izhinikaazowag.

4. Imaa niim'idiwining gii-pimose____. Gii-niimi_____.

5. Aaniin ezhi-ayaa_____? Mino-ayaa. Debizi. Niimi_____, mino-bimaadizi.

Translations:

Niizh—2 **A.** Long ago, I skated. Now, I am old. **B.** Long ago went sliding. I have a sore back. **C.** Long ago I skied. Now, I am fearful. **D**. When you are young, you all skate! Go sliding! Go skiing! **E.** Come here! Come play outside! All of you laugh! It is snowing. **F.** Look! In the garage, I found the snowshoes. **G.** Every winter I repair snowshoes.

Niswi—3 ***Down:*** **1.** Naawaakwaa **2.** Maang **3.** Nimaajise **7.** Gaye ***Across:*** **4.** Zhaawanong **5.** Makwa **6.** Gemaa **8.** Akiing **9.** Gete

Niiwin-4 **1.** At the lake in winter, **we** tell sacred stories. (Nim- -min) **2.** In what way are **you** called? **I** am named Ginger. (-yan) **3.** Y**ou** are named Ginger. And they, across the river, are named Sue and Cody. (Gid-) **4. They** walked to the powwow. **They** danced. (-wag) **5.** How is **s/he** feeling? (-d) S/he is well. S/he is satisfied. When **s/he** dances, s/he leads a good life. (-d)

Edited by Jennifer Ballinger, Saagajiwe-Gaabawiik.

Akwa'waa (Spearing through the ice)

By Dylan Jennings, Staff Writer

Anishinaabeg are busy during every season. Each change of season brings new harvest opportunities. Even when it gets cold outside and the lakes freeze over, our people still harvest giigooyag (fish).

Much like anything we do, it always starts with the offering of our asemaa (tobacco). We then find a good spot on the lake to chisel a hole in the ice. We have metal chisels, ice saws, and augers nowadays. I wonder how long it would take our ancestors to chisel a hole in the ice without some of the new equipment we have today?

We then clean the ice from the hole and set up a small teepee-like structure over the hole. We cover the structure with balsam and tarps. This gets rid of any light, so that we can see the lake bottom.

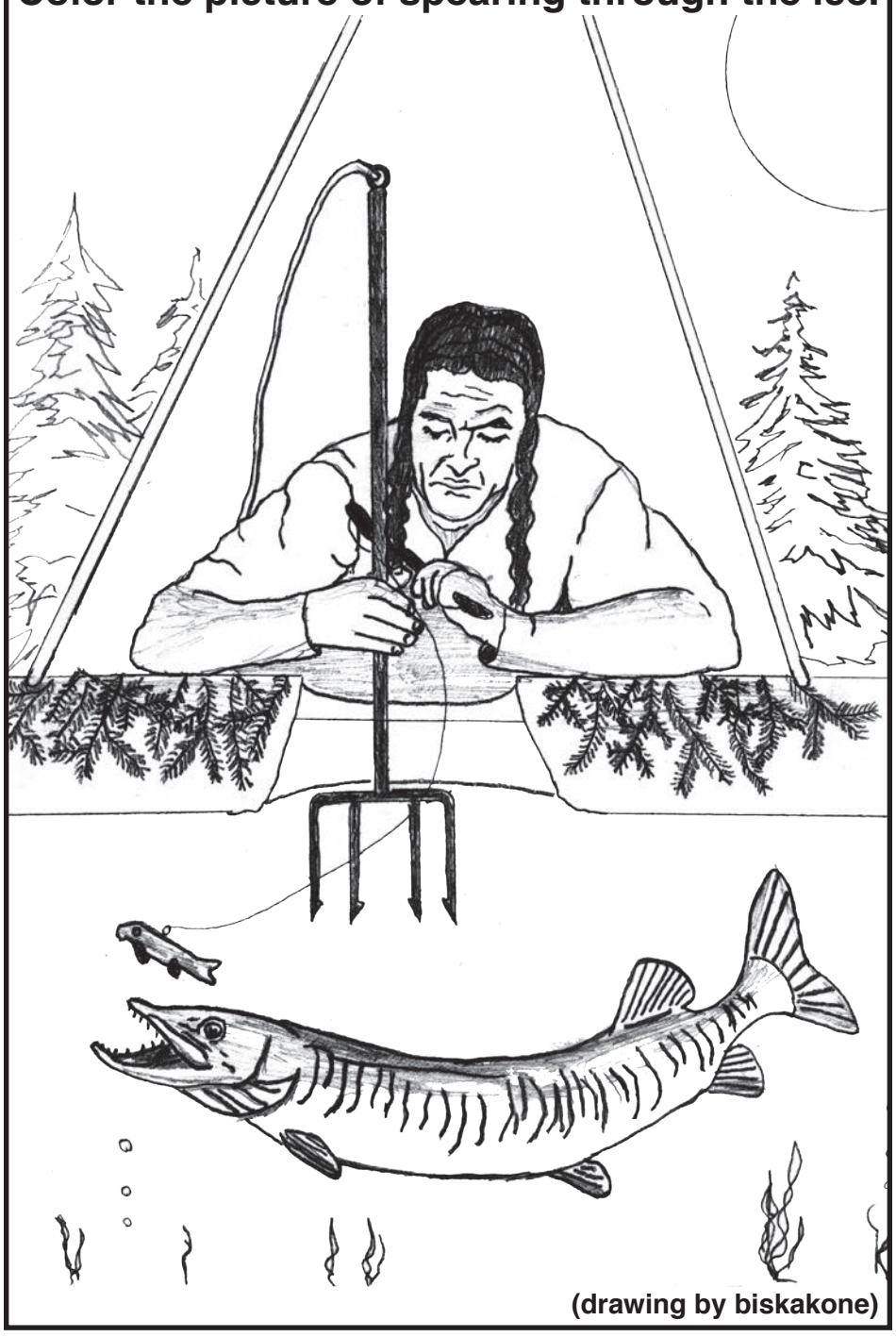
Next we take out a carved wooden fish that we use to attract the bigger fish. We call this a okeyaw (decoy). We send the little wooden fish down into the freezing water and jig it up and down. The way my grandfather taught me to jig the decoy also makes it swim like a wounded fish.

After a while we see something at the bottom of the lake moving in slowly. It's a maashkinoozhe (musky). We wait patiently until he swims right in the middle of the hole, and with one motion we drop the heavy metal anit (spear) right on him. I am bringing home a good meal for my family.

Milania Labarge jigs a decoy up and down, side to side in hopes of bringing in some giigoonyag.

To the left: A completed okeyaw ready to be used. (Dylan Jennings photos)

Color the picture of spearing through the ice.



(drawing by biskakone)

There were five Ojibwe words used in the story above, can you remember what they were? Write the correct Ojibwe word on each line.

1) _____ (musky)

2) _____ (decoy)

3) _____ (tobacco)

4) _____ (spear)

5) _____ (fish)

If you enjoyed coloring the picture on the left, check out GLIFWC's Anishinaabe Coloring & Activity Book. The book features line drawings of Ojibwe seasonal hunting and gathering activities, animals, fish and four pages of kid's activities. Email lynn@glifwc.org or call 715.685.2108 to get a copy free of charge.

Treaty natural resources come first for Stone

In late March 1988 Wisconsin treaty tribes were weeks away from their fourth off-reservation spearing season. The ugly anti-Indian protest movement had gained membership and momentum, with plans to turn out by the hundreds at boat landings to hurl both rocks and racial epithets at tribal members. GLIFWC officers and police from participating agencies were charged with holding back the mob and maintaining public safety. It was in this environment that Vern Stone joined the GLIFWC Enforcement Division as an officer.

From the violence and drama of those first few years, Stone went on to become a no-nonsense conservation warden and acclaimed hunter safety instructor recognized by the State of Wisconsin for his work with young people. As former tribal chairman of the Bad River Band of Ojibwe, Stone had the skills to navigate through any number of situations and build relationships with tribal, state and federal colleagues. Recently, Stone expanded GLIFWC's community policing work to include Meals-on-Wheels food deliveries to local elders, taking time to sit and talk.

"Vern provided leadership for younger wardens and shared his style of common sense law enforcement with everyone," said Chief GLIFWC Warden Fred Maulson.

Stone retired in October, completing a 28-plus year career in service to natural resources, and the hunting and fishing rules established by tribes in the Ceded Territory. He often reminded the tribal public that off-reservation rights are sacred and members of Ojibwe treaty tribes have a responsibility to harvest in a good way.

Stone is already well on his way to achieving one of his goals in retirement: catching walleyes on the waters of his home reservation, Bad River, in far northern Wisconsin. Maulson said he's pleased that Stone can now get out and enjoy the resources he's worked to protect all these years. **—CO Rasmussen**

Soulier takes stock of nearly four decade career

After 38 years and a handful of positions with the Bad River Band of Ojibwe, Ervin Soulier has retired. Soulier is best known for leading the tribe's natural resources department (NRD) and as a tribal judge.

"Rather than take the eventual fall, I figured I better go out while I'm on top," quipped Soulier, also known for his wry humor. After being roasted by friend and colleague, Judge Alton "Sonny" Smart, Soulier addressed a large gathering at the Bad River Conference Center November 4.

Soulier recognized his well-respected, award winning natural resources program numbering 24 full time staff and another dozen seasonal workers. He recalled starting with a budget of $100,000 for himself and three others in 1985, and ultimately managed an annual account of $2.5 million.

In 1978, Soulier got his start working part time at the Bad River fish hatchery. Aside from a stint as night watchman, he remained committed to the environment serving as a conservation warden, natural resources technician, and forestry aid before becoming the founding director of NRD for the next 31 years. For 30 of those years, Soulier also served concurrently as tribal judge.

At the request of Bad River officials, Soulier continues to represent the tribe on GLIFWC's Lakes Committee, which primarily deals with policy and management of Lake Superior. **—CO Rasmussen**

Anishinaabe Cultural Days on Madeline Island

On September 24-25, Madeline Island Historical Museum hosted Anishinaabe Cultural Days, a two-day educational gathering to honor and celebrate sacred Anishinaabe traditions. The event included demonstrators in finger weaving, beading, cattail mat weaving, wild rice processing, traditional lacrosse stick making, drumming, and fancy shawl dance. Visitors were also able to visit with representatives from GLIFWC to learn about Anishinaabe perspectives on water, climate change in the Ceded Territory, traditional ecological knowledge, and treaty rights. **—Paula Maday**

Lac Courte Oreilles elder Dennis White shows off some of his finger weaving creations. (Paula Maday photo)

Birch bark baskets of all colors, shapes, and sizes were available for purchase at the event. (Paula Maday photo)

USFS Eastern Region tribal liaison retiring

Larry Heady (center) accepts a resolution from Mic Isham, GLIFWC Board of Commissioners chairman. GLIFWC's Jim Zorn awaits in the background with gifts for Heady. (COR photo)

At the recent Tribal/Forest Service Annual MOU Meeting in Watersmeet, Mich., Larry Heady found himself squarely in the crosshairs of tribal representatives. The US Forest Service (USFS) tribal relations specialist had earlier announced his upcoming retirement and GLIFWC member tribes took the opportunity to tell him what they thought "You have been a staunch advocate and supporter of treaty-reserved rights," said Mic Isham, GLIFWC Board of Commissioners chairman.

Isham presented Heady with a framed resolution from the Voigt Intertribal Task Force during an October 5 meeting at Lac Vieux Desert, recognizing his work at strengthening bonds between tribes and the USFS. Tribal representatives also bestowed gifts and sang an honor song for Heady on the GLIFWC drum.

Heady is wrapping up a 30-some-year USFS career. For the last seven years, he's served as tribal relations specialist for Region 9, an area encompassing the northeast quadrant of the United States. Heady, or Kochemin'k-lenu, is a member of the Delaware Tribe.

—CO Rasmussen

Gichigami dagwaagin assessments

Great Lakes Fisheries Technicians Mike Plucinski (left) and Jake Parisien with a pair of lake trout caught and released from a survey net in Gichigami. (Ben Michaels photo)

Every autumn as Gichigami begins to cool down chinamekos (lake trout) and adikameg (lake whitefish) seek out rocky reefs to spawn. These rocky reefs, which ring the shoreline, are where staff from GLIFWC's Great Lakes Section set gill nets to asses spawning fish to identify discrete stocks, track relative abundance and measure biological characteristics.

Since assessments began, splake numbers have increased in Copper Harbor, which is home to many stocked and wild lake trout. In 2016, the crew collected genetic samples from fish which will be looked at to determine the extent of interbreeding between the splake and native fish.

Splake, a lake trout/brook trout hybrid, are planted by state natural resource agencies for the sport fishery. Stocking of lake trout was stopped in 1996 in much of Lake Superior, because survival of stocked fish was low, the lake-wide abundance of wild lake trout was stable or increasing, and the abundance of lake trout on several large spawning reefs was good. Backcrosses (offspring of splake which breed with native brook trout and lake trout) have been identified in Lake Superior.

—Bill Mattes

Chinamekos continued

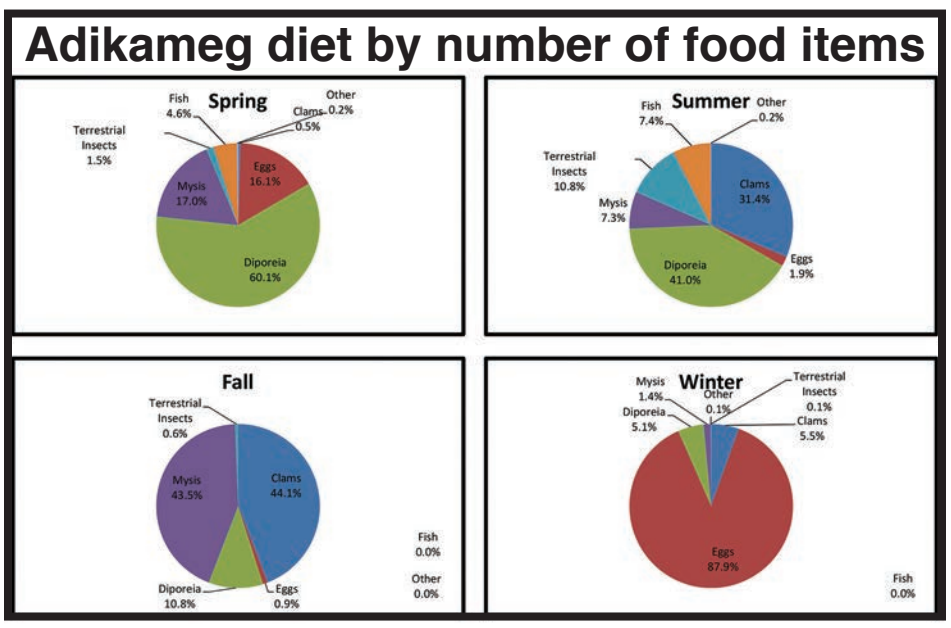
(continued from page 13)

to changes in growth and the amount of prey that each fish consumes. Generally the warmer the water the more food fish eat and the faster they grow. However, lake trout may decide to just go deeper—where cooler waters can be found. This may lead to changes in where fish are located for harvest or what they eat if the prey fish (what they eat) do not also change locale. So far, with the available data no significant changes are apparent (see graphs, page 13).

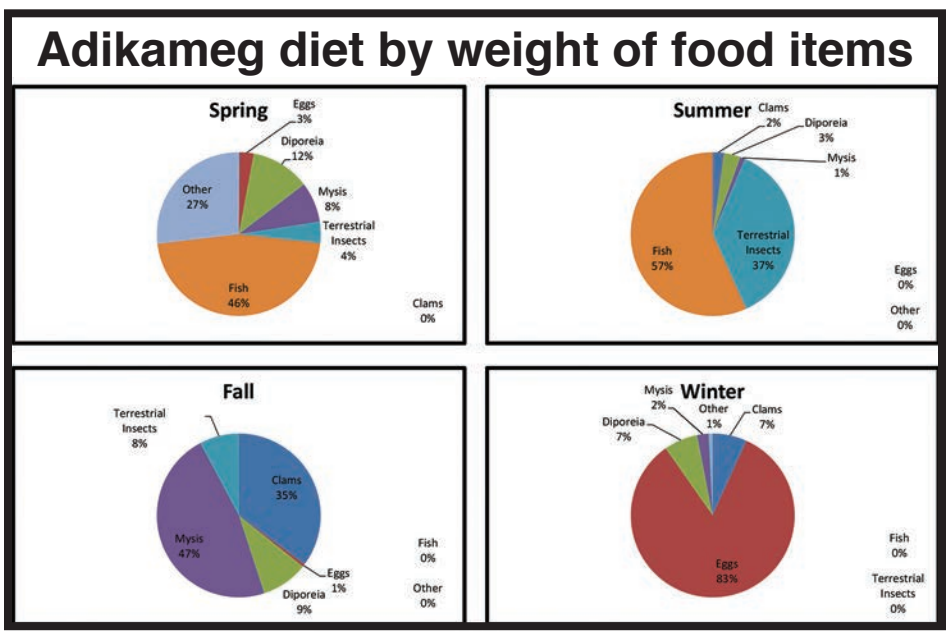
Adikameg study

(continued from page 13)

So far in Lake Superior, data indicates that whitefish diets vary by season (see graphics below), where diporeia make up between three to twelve percent of the diet by weight as compared to Lake Michigan's over 50% of lake whitefish diet. This is not too surprising; diporeia abundance has historically been much lower in Lake Superior. However, unlike Lake Michigan, Lake Superior abundance has remained stable over time and the invasive mussels have been confined to a few harbors and bays in part due to the uninvitingly cold Lake Superior environment.



By the numbers. Diporeia or scuds, a bottom dwelling small shrimp like zooplankton, make up a large number of lake whitefish diet items found in spring and summer. Clams and mysis, a shrimp like zooplankton that lives in the water column (off the bottom), make up a large portion of fall diets. In the winter, eggs make up the bulk of items eaten—these are mainly cisco (a.k.a. lake herring) eggs.



By the grams. Other fish make up the bulk of lake whitefish diets in the spring and summer by weight, as individual diporeia do not weigh much compared to the occasional rainbow smelt or small cisco which are eaten. In the fall, mysis are again important as are clams, whereas eggs again make up the bulk of the winter diet by weight.

Tribes respond to pipelines from the Dakotas to Michigan

By Phoebe Kebec, GLIFWC Policy Analyst

As tribal delegations caravan to the Standing Rock Reservation in North Dakota offering their prayers and support, GLIFWC staff continue to track the progress of new and expanded pipeline projects in the Ojibwe Ceded Territories. Enbridge Energy announced that it is indefinitely postponing the construction of a new pipeline, the Sandpiper.

Although it will not be pursuing the Sandpiper, it is proposing to re-route the aging Line 3 pipeline along the same corridor originally proposed for the Sandpiper. Enbridge Energy is also proposing to make improvements on the underwater portion of Line 5, which runs under the Straights of Mackinac. GLIFWC member tribes continue to express concern about the risk these pipelines pose to treaty-reserved resources.

Tribal support for Standing Rock

Since July 2016 all eleven GLIFWC member tribes have formally supported the Standing Rock Sioux Tribe in its opposition to the Dakota Access Pipeline. After issuing its resolution of support in August, the Lac Courte Oreilles (LCO) Band Tribal Governing Board spent ten days collecting food and supplies for a sprawling intertribal camp at Standing Rock.

"We traveled to Standing Rock in a show of diplomacy, sovereignty and kindness. We wanted to carry out our resolution by doing our part to support the protectors at the camp and to support the efforts of Standing Rock to stop the Dakota Access Pipeline," said LCO Tribal Governing Board Member Jason Schlender.

When the LCO delegation arrived in camp around the end of August, they were struck by the amount of food and water that had already been donated, including around 20 tents filled with food. Since returning home, LCO has remained in touch with camp organizers about the camp's ongoing needs, especially for the coming winter months.

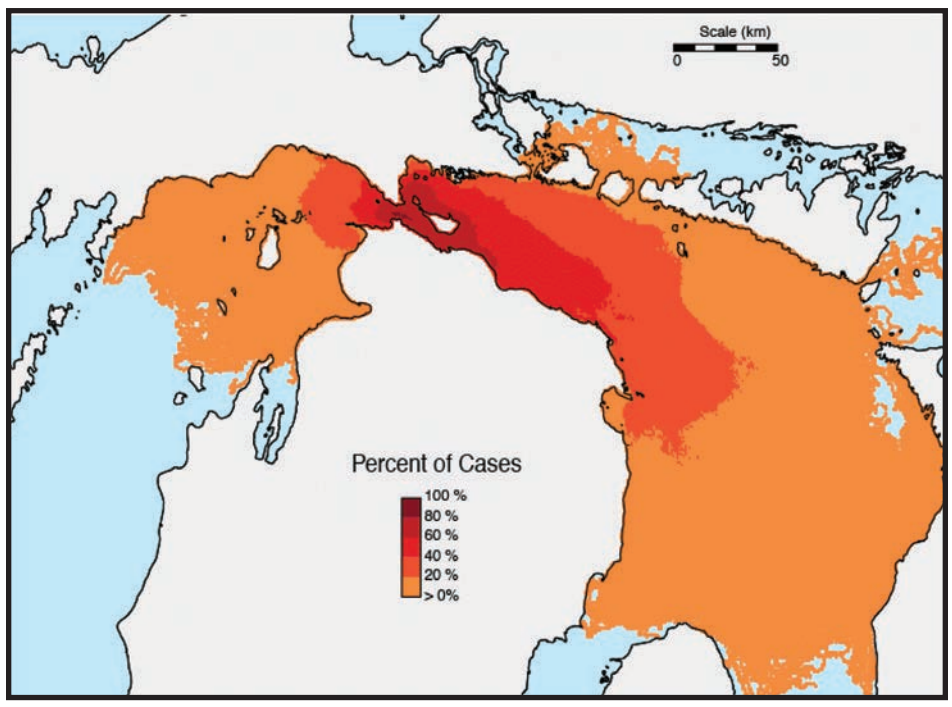
"We're going to be putting together a winter donation drive for Standing Rock to collect jackets and other winter supplies," Schlender said. For more information on this effort contact Jason Schlender at (715) 634-8934, extension 7387.

Many additional tribal members have also visited the camp. Jill Hartlev, Bad River tribal member, reflected on a week at the camp: "My first impression was that it was much bigger than I thought it would be. Because we came in late September, I figured that most of the people would have returned home to go back to work and school. It was an amazing, international gathering. I saw people I knew from all over the country."

The camp, located on both sides of the Cannonball River, is home to thousands of people at any given time. Everyone is fed three meals a day. The main camp contains a gathering circle for songs, cultural presentations and discussion. When Hartlev was there, she witnessed the presentation of seven international flags, including the flags of Kenya, Italy and of the Sami people. Each presenter shared stories of environmental degredation in their own territories.

"The flags really impressed me," said Hartlev. "They line the road going into the main sacred camp. It took me a day or two, but eventually I found Bad River's flag in the same area as the other Wisconsin tribes."

The Red Lake Nation flag along with hundreds more are represented at a camp near the Standing Rock Reservation. (submitted photo)



A University of Michigan study predicts that an oil spill from Enbridge Line 5 could have devastating impacts on 1836 Treaty waters, home to a vibrant fishery. (University of Michigan Water Center graphic)

Updates on Enbridge Pipelines

Proposed Sandpiper Line

In early September, Enbridge Energy announced its decision to indefinitely postpone the building of the Sandpiper Line. This announcement came after Enbridge Energy bought a stake in the Bakken Pipeline System, which includes the Dakota Access Pipeline.

Proposed Line 3 replacement

Line 3 has been in operation since the 1960s, transporting oil from Canada to Superior, Wisconsin. This pipeline is maintained under Enbridge Energy's long term maintenance plan. Recently, the amount of oil that moves through the pipeline has been decreased due to concerns that the pipeline can no longer safely withstand the pressure of the oil under maximum operating conditions. Because of the age of this pipeline, Enbridge proposed to abandon this pipeline and construct a "new Line 3" along the right-of-way originally conceived for the Sandpiper.

The Minnesota Office of Administrative Hearings (OAH) issued an order on October 12, 2016, providing a timeline of activities related to the permitting of the Line 3 Replacement Project.

A draft Environmental Impact Statement (DEIS) is due by April 2017; a final Environmental Impact Statement is due by August 2017; with a final decision by the Public Utilities Commission on the certificate of need and route permit expected in April 2018. The process provides opportunities for public comment, however it remains unclear in the order how the OAH intends to accomplish government-to-government consultation with the tribes.

The Mille Lacs Band and other tribes opposed the route proposed for the Sandpiper project due to the risks that a rupture of a pipeline would pose to tribal water and wild rice resources, along with the environmental degradation associated with the development of a new corridor. The risk to treaty resources remains the same with the Line 3 Replacement re-route.

Line 5 repairs

Built in 1953, Line 5 runs along the bottom of the Straights of Mackinac, the geographical feature separating Lake Huron from Lake Michigan. As of last August, Enbridge Energy was out of compliance with agreements it made with the State of Michigan regarding the structural support for the pipeline. The Straights are incredibly important to the tribes who signed the Treaty of 1836 and reserved the right to fish these waters in their treaty. The tribes enjoy a healthy commercial fishery, harvesting whitefish, lake trout and other fish from these waters.

The 1836 tribes, along with other tribes and non-tribal communities in Michigan, are concerned about the age and condition of Line 5 and have called for its decommission.

Instead of decommissioning Line 5, Enbridge Energy is attempting to obtain permits required for the installation of additional, underwater support structures. GLIFWC and many of the American Indian tribes in Michigan requested denial of this permit in favor of decommissioning the pipeline.

In August 2016 Enbridge entered into a consent decree with the U.S. Department of Justice and the Environmental Protection Agency to settle a lawsuit related to the 2010 Kalamazoo oil spill. Enbridge estimated that it has recovered 1.15 million barrels from the Kalamazoo River after Line 6 ruptured. The consent decree, however, goes beyond repairs to Line 6 and requires Enbridge to repair Line 5 and other pipelines that run through treaty Ceded Territories.

The Chippewa Ottawa Resource Authority (CORA) objected to the consent decree as the federal agencies involved failed to consult with the tribes prior to entering into the settlement. CORA has also expressed concern that the minor repairs Enbridge agreed to perform, would not resolve the fundamental safety problems of the pipeline.

(see Pipelines, page 23)

Walking on

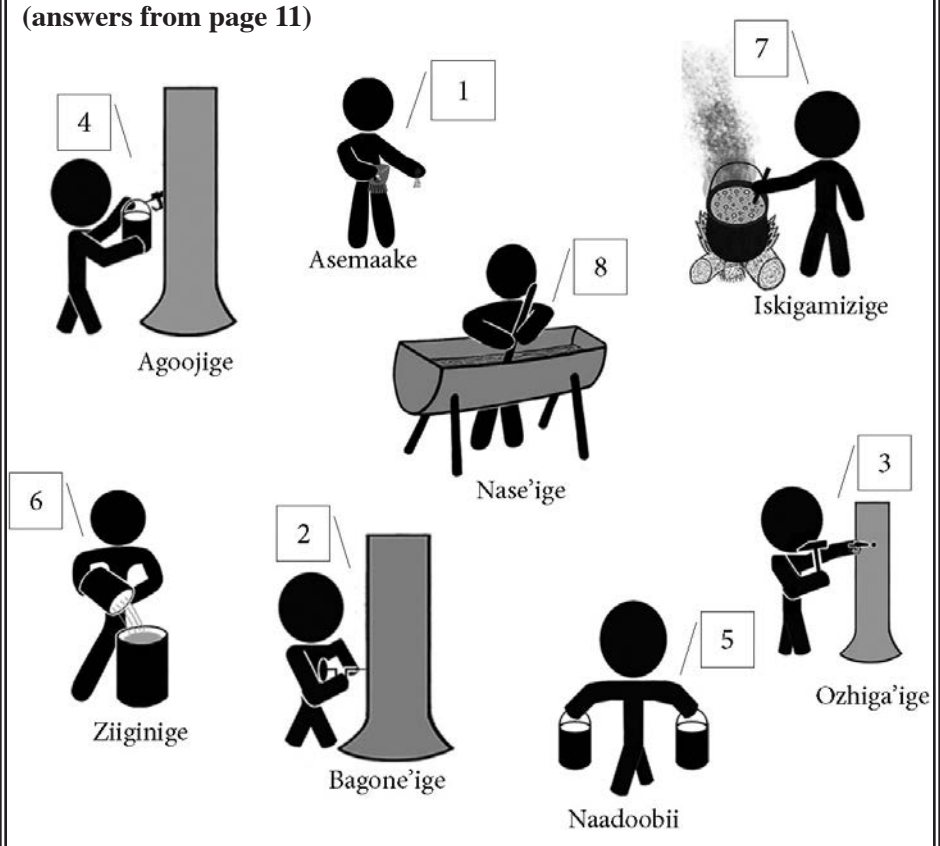
Ivy Vainio photo

Ogichidaa and acclaimed writer Jim Northrup died August 1, several months after publicly revealing a terminal cancer diagnosis. A United States Marine, Northrup enlisted in 1962 and fought in the Vietnam War on a 13-month tour of duty from 1965-66. He ultimately returned home to the Fond du Lac reservation where he developed a writing career rooted in observational native humor and also delved into the experience of war. His long-running column, "Fond du Lac Follies," appeared in several native newspapers.

Northrup worked at GLIFWC for a brief time more than a quarter century ago and went on to publish a string of books, story collections, and plays. He lived a four-season Anishinaabe lifestyle and worked to regain the Ojibwe language diminished by his boarding school experience as a child. Northrup's Ojibwemowin name is Chibenashi. The head of a large family, Northup leaves behind many relatives including his wife Pat, children, grandchildren, nieces and nephews. He was 73. **—CO Rasmussen**

Aaniin eni-izhichigeng iskigamizigeng?

(answers from page 11)



1. Asemaake—she/he makes a tobacco offering
2. Bagone'ige—she/he is drilling
3. Ozhiga'ige—she/he is tapping a tree
4. Agoojige—she/he is hanging something
5. Naadoobii—she/he is hauling something
6. Ziiginige—she/he pours something
7. Iskigamizige—she/he is boiling sap
8. Nase'ige—she/he stirs to granulate sugar

Trapping workshop

(continued from page 15)

and bobcats, #1.5 coil spring traps were placed. Dog-proof traps were used in raccoon and skunk trap sets. Wardens checked the traps every day looking for animals, fresh signs of animal activity, and refreshing scent or bait. This routine was conducted for six days.

Warm temperatures and rain made trapping particularly difficult during the week. Water levels fluctuated, forcing wardens to continually adjust their sets to the changing conditions. Scents and commercial urine used for terrestrial fur bearers had to be refreshed.

With patience comes success and on the final day the rustling of leaves signaled that the wardens had caught an animal. As they approached up a small creek they could see a raccoon that had been caught in a dog proof trap. The trap is designed to not cause any further pain to the animal, but to simply hold the animal by the leg until the trappers arrive.

The privilege of becoming a trapper is one of enhancing the connection with the earth and the animals that live on it. Respecting and honoring the animal includes preparing the fur properly to obtain the best looking, quality fur.

Tree of life

(continued from page 1)

fire, but because of the proliferation of cabins and houses across the northwoods, forest fires are quickly put out. In recent decades the timber industry has focused on producing stands of fast-growing aspen (popple) for fiber, which quickly overtops its competitors after clearcutting because it readily sprouts from the roots. Finally, hotter, dryer summers can stress wiigwaasaatigoog, weakening them and leading to "birch decline" and premature death. Like most plants at or near the southern edge of their range, wiigwaasaatig is at serious risk from the warming climate.

In the last several years a new threat to wiigwaasaatig has emerged. Harvesters are cutting large numbers of young trees, branches and even mature wiigwaasaatig to supply twigs, branches, poles and small logs to the craft and decoration industry. These materials are turned into wreaths, planters, log bundles and other decorations and sold across North America. They are marketed to homeowners and businesses, even showing up in such places as restaurants and hotel lobbies. As the demand and the monetary incentive for these products ramps up, wiigwaasaatig is at serious risk of being over-harvested.

In response to this escalating and increasingly unsustainable harvest, the Lac Courte Oreilles (LCO) Governing Board issued an emergency closure order (posted at *www.lco-nsn.gov/public-notices.php*) to prohibit the harvest of these products on reservation lands. Soon to follow were closures on the Bad River and Red Cliff reservations as tribes become increasingly concerned about preserving wiigwaasaatig populations for future generations. GLIFWC and US Forest Service enforcement officers are stepping up monitoring of off-reservation harvesting of these materials, to ensure all harvesters (tribal and non-tribal) are complying with regulations. Illegally harvested materials are confiscated and placed out for bid or sale by the Forest Service, or in some cases, gifted to GLIFWC to be used as educational material in tribal youth outreach camps.

There's an old saying that "the road to hell is paved with good intentions." Harvesters are simply trying to make some needed cash. They and the people buying these decorations—from "snow birds" wanting a taste of the northwoods to business owners looking for rustic decorations for their lobby—may not realize that this trade is taking an increasingly heavy toll on already-declining birch populations. Tribal members and non-members alike are increasingly concerned about the heavy harvest of young wiigwaasaatig, and what this means for the future. Wiigwaasaatig is struggling to survive in a landscape that's becoming more and more hostile towards this sacred tree. Widespread, heavy harvest of young trees could be the straw that eventually breaks the back of the Ceded Territory's wiigwaasaatig population.

—GLIFWC Forest Ecologist Alex Wrobel contributed to this report


This hoop house of a major northwoods buyer is stuffed with wiigwaasaatig twigs and branches. April 2016. (Steve Garske photo)

Ghost net recovery

(continued from page 15)

vessel crossed over a suspected net. The net dragger is a huge chain link with welded spikes on it. It's very heavy and can sink to the bottom real fast to snag or capture a net.

After the net dragger has been dropped, our next indicator that we have hooked onto a net is when the boat reduces speed. This tells us that the net dragger has something attached to it. Once the dragger has something attached, we stop the boat and start the net puller, a generator-powered machine with block teeth that helps to pull the dragger and the net into the boat.

Matt and I focused on removing decayed fish, lures, and other fishing equipment from the net as it came up, while Dan operated the net pulling machine. I have to admit that this was challenging for me because I was not expecting the smell to be that bad from the rotting fish.

Once the net was lifted onto the vessel and brought to shore we had to dispose of the net at a local landfill. We also cleaned the boats. At the end of five days, we recovered three nets and a total of 6,000 feet of net. This was quite the experience for me. Recovering ghost nets is not an easy or clean job. However, we received lots of gratitude from the local state fishermen and Michigan DNR. That gratitude is enough to make this job rewarding and worth the effort.

If you suspect or encounter a ghost net in the Ceded Territory, please call the GLIFWC Enforcement Division at (715) 682-6619 or visit *www.glifwc.org/Enforcement/enforcement.html* and click on the link to Report a Ghost Net.

Health center welcomes tribal, general public

Provides inclusive options for healing, wellbeing

By Charlie Otto Rasmussen, Editor

Watersmeet, Mich.—When Rose Martin entered this world on the banks of the Wisconsin River in 1924, midwives and traditional healers anchored the Ojibwe healthcare system. Some, including a five-year-old tuberculosis-stricken Martin, were routinely treated at faraway hospitals through much of the 20th Century when local care rarely offered a full range of treatment options. Enter today's tribal clinics.

Martin and some 250 more celebrated the opening of the latest native health center in the upper Great Lakes on September 7. Rain and a chilly breeze did little to dampen an itinerary that included drum songs from Four Thunders, jingle dress dancers, words from dignitaries, and a feast.

Area veterans led a flag raising ceremony outside the new health center. (COR photos)

"The services that this clinic provides, eating well, eating traditional foods and getting out there exercising treaty rights are all directly connected," said Lac Vieux Desert (LVD) Tribal Chairman Jim Williams Jr. "It's about living a good life." Williams' son Garret, who has type one diabetes, and Martin paired up for the red-ribbon cutting at the clinic's entrance.

The new 33,000 square feet LVD Health Center replaces a series of small tribal clinics the tribe has operated since 1988. The clinic is open to tribal members and the general public alike providing dental, optical, podiatry, chiropractic, behavioral health, and urgent care, along with several physicians. A one-fifth mile walking path on the health center campus offers a safe exercise route for clinic employees and community members.

"We place a strong emphasis on wellness and prevention," said Sadie Valliere, LVD health director. "Modern medicine and holistic, traditional medicine are all at home here in the clinic."

Rose Martin and Garret Williams prepare to make the ceremonial ribbon-cutting September 7 at the Lac Vieux Desert Health Center grand opening.

In the center of the modern medical facility, architects designed an Anishinaabwin room. Harkening to the lines of an Ojibwe lodge, rounded ceiling covers, a comfortable rectangular space with bench seating along the walls, and a pair of four-shelf corner cases that house the four Anishinaabe medicines: cedar, sweet grass, tobacco, and sage. Natural birch bark accents appear throughout the room.

"We've got the important pieces in place and are excited to move forward," Valliere said. "One of our biggest challenges has been planning for the future."

Funding for LVD's health center came from a variety of sources including major grants from Shakopee Mdewakanton Sioux and Chickasaw Nation.

Essential Ojibwemowin

mino-bimaadizi–s/he leads a good life

Support for healthy eating and the Ojibwe language through ANA

Left photo: Owen Maroney, GLIFWC dietician, addressed the Head of the Lakes Diabetes Conference September 15 in Superior, Wis. Maroney stressed the health benefits of traditional foods in the native diet, sharing recipes from GLIFWC's Administration for Native Americans (ANA)-supported cookbook, Mino Wiisinidaa! (LaTisha Coffin photo)

Lower photo: ANA Program Specialist Jeaninne Bruguier visited with GLIFWC staff September 22 to review progress on Ojibwe language outreach efforts. ANA supports tribal self-sufficiency through discretionary grant funding, training and technical assistance. GLIFWC ANA Project Director Jim St. Arnold, (left) Web Designer Melissa Rasmussen, Bruguier, and Ojibwemowin Specialists Levi Tadgerson & Wesley Ballinger. (COR photo)

Youth leadership councils on the rise in Ceded Territory

By Paula Maday, Staff Writer

This past fall, a group of youth from Standing Rock, North Dakota ran all the way from their reservation to Washington, D.C. to protest construction of the Dakota Access Pipeline through their sacred tribal land. Through the power of social media, their journey became very public very quickly, inspiring and drawing attention to Native American youth leadership all around the nation.

Here at home in the Ojibwe Ceded Territory, tribal youth leadership efforts have been in development for some time now. Karen Washington, St. Croix tribal education and youth director said, "There's a teaching about the seventh generation. And there's a lot of people that believe they will be part of that change."

St. Croix students attending Cumberland High School want to be a part of that change. For them, 2016 marks the first year for the Bimaadiziwin Club, the school's first ever Native American Club. Cheyenne Hindsley, Native American coordinator and Bimaadiziwin Club advisor, says the club is modeled after modern tribal councils, and aims to promote the wellbeing of Cumberland district Native American students through spiritual, mindful, and social aspects. "It was something that I wished for when I was here," she said. "We always had a room, a place to call our own, but we needed a program to help our kids learn the language, learn the culture. It will encourage kids to be here every day and to feel good about being here."

The club name was derived from the idea of Mino Bimaadiziwin (living the good life) and chosen after an elder came to visit with the group to share the seven grandfather teachings. The mission and the goals of the club revolve around this idea, and include: advocating for cultural awareness, boosting the understanding of pride, respect, and diversity in the schools and community, and inspiring all club members to realize their potential as respectable, responsible, caring people.

The club's major activities for the year include collecting donations for Standing Rock and mentoring Native American students at Cumberland Elementary School. They are currently fundraising to support special events during Native American month in November and Native American week in the spring. With recognition from the school as an official club, the Bimaadiziwin Club gains sovereignty over spending any money that they earn, something they couldn't do a year ago.

Bimaadiziwin Club members are excited and ready to make a difference during their inaugural year as an official school club at Cumberland High. (Photo courtesy of Cheyenne Hindsley)

To be an officer in the club, Hindsley has implemented guidelines. Students must have passing grades (C or higher) in all classes, maintain good attendance, and have demonstrated leadership skills. Similar to tribal elections, nominations are made, campaigning occurs, and then voting takes place.

"Alongside being a student here at Cumberland, these students are taking initiative in being a proud kid from the rez," she said. "My goal and my hope for the students here is to have the culture incorporated into their education."

The Red Cliff Band started its Youth Council in 2015. According to advisor Misty Nordin, the council has so far been focused on learning and research. "They're learning how other youth councils work, learning about issues that affect our tribe, such as treaty rights, and finding out how they can best serve their community," she said.

Participation in Red Cliff's Youth Council ranges from 5-12 people per meeting. Nordin says they don't have officers and "operate more like a traditional council, wherein people with certain skills lead activities requiring those skills. Everyone has a chance to be a leader." The council also chooses to use a talking stick within their meetings instead of following Robert's Rules of Order, a popular guide for conducting meetings and making decisions as a group. "It just works better for us," Nordin said.

While they're still developing, investing the time to truly understand their role within the tribe, the Red Cliff Youth Council takes action when they feel it's necessary. Earlier this year, the group sprang into action when the Bad River reservation suffered severe flooding. Together, they collected and delivered much-needed donations to their neighboring tribal community in distress. "They felt very strongly that they wanted to do that," Nordin said. "So they did it."

Youth leadership efforts around the Ceded Territory come in many different shapes and sizes. These are just two examples of what is happening out there, and there are more. As work continues—both on the reservation and off—native youth are developing their voices, and looking to use those voices to make a difference. Bernice Taylor, a 16-year old St. Croix tribal member perhaps said it best, when she said to me simply, "I want our voices to be heard."

Four seasons on the Brunsweiller

Staff with GLIFWC's Climate Change Program have been studying the phenology of treaty harvested resources near the Brunsweiler River and Mineral Lake Research Natural Area (RNA), within the Chequamegon-Nicolet National Forest in northern Wisconsin.

The US Forest Service's RNA system was designed to support and maintain areas with high quality examples of terrestrial and aquatic ecosystems, habitats, and populations of plant or animal species, and is managed in a way that allows natural processes to predominate, without human intervention. The RNA system has been useful for the establishment of research projects such as GLIFWC's phenology study.

One of the stops along the GLIFWC phenology study route is a bridge that crosses over the Brunsweiler River. Throughout the 2016 field season, Climate Scientist Hannah Panci routinely took photos at this location to record the seasonal changes along the river. Making frequent, regular observations can help us better understand the timing of seasonal and biological changes and can give us a better idea of how climate change could impact or will continue to impact resources of concern.

—T Bartnick and H Panci

Pipelines

(continued from page 20)

Additionally, Michigan's Sault Tribe and the Grand Traverse Band recently joined a lawsuit against the federal agency in charge of pipeline safety, the Pipeline and Hazardous Materials Safety Agency (PHMSA), alleging that authorizing the transportation of oil through Line 5 was illegal.

The lawsuit, brought by the National Wildlife Federation, claims that PHMSA failed to adequately assess impacts to the natural resources when it approved Enbridge's 2013 emergency spill response plan. The tribal parties additionally claim that PHMSA has a trust responsibility to protect the resources reserved by the tribes in the Treaty of 1836, along with a responsibility to carry out government-to-government consultations with the tribes prior to issuing decisions. The court has not yet ruled on the merits of the suit at *Mazina'igan* press time.

GLIFWC staff continues the technical review of EIS documents for the proposed pipelines in cooperation with the natural resource departments of Commission member tribes. GLIFWC specialists are also following the developments in the courts, and within state and federal agencies, on decisions regarding the permitting of infrastructure projects that pose threats to off-reservation resources.

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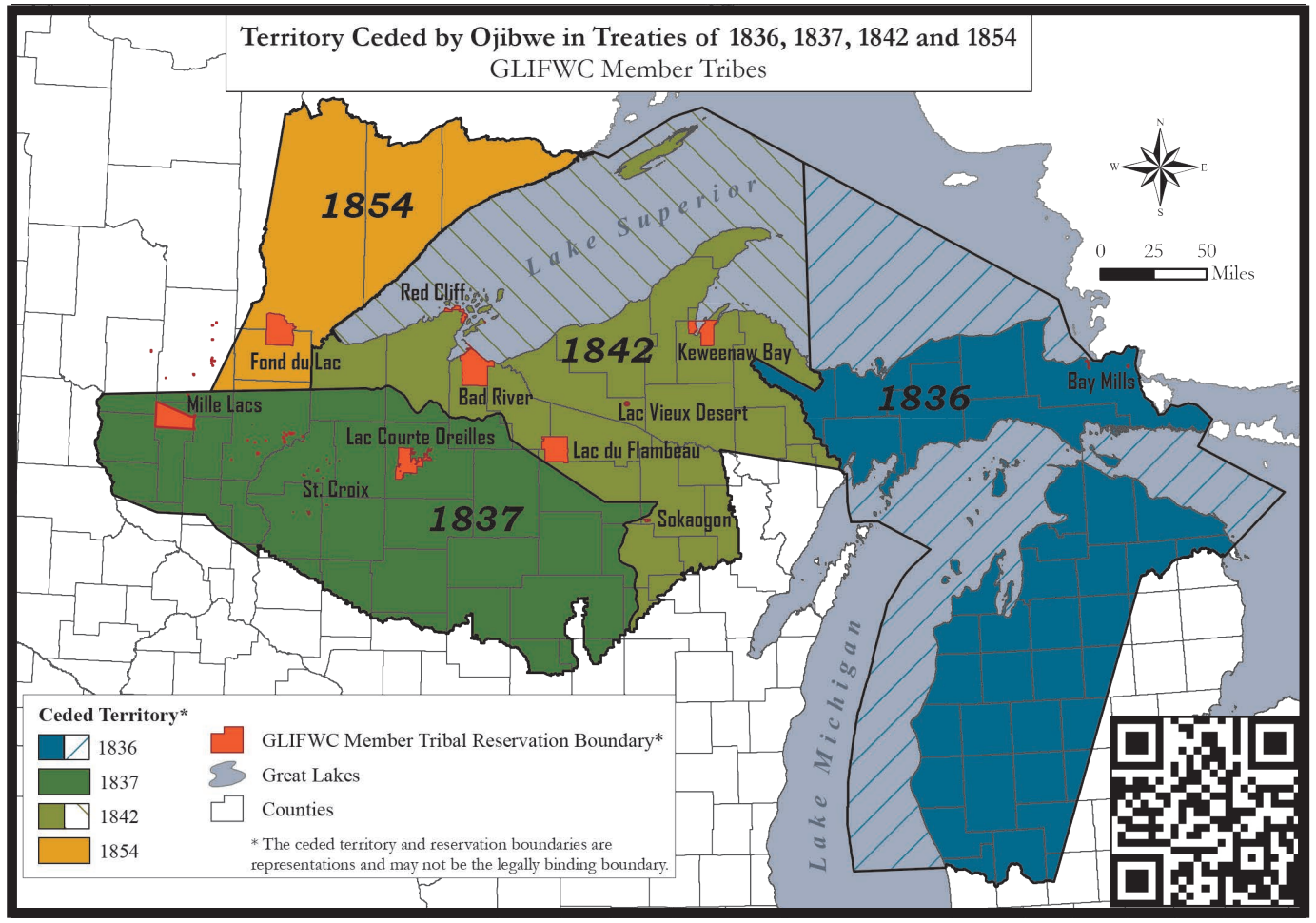
Although **MAZINA'IGAN** enjoys hearing from its readership, there is no "Letters to the Editor" section in the paper, and opinions to be published in the paper are not solicited. Queries as to potential articles relating to off-reservation treaty rights and/or resource management or Ojibwe cultural 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.



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A Chronicle of the Lake Superior Ojibwe

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