

# Mazina'igan

A Chronicle of the Lake Superior Ojibwe

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Fall 2021

## Wisconsin officials double down on disastrous wolf policy

By Charlie Otto Rasmussen, Editor

Less than six months after Wisconsin wolf packs were left reeling after an unprecedented breeding season recreational hunt, state officials are pushing forward plans to kill hundreds more animals in 2021. Ojibwe leaders are outraged.

"The DNR Natural Resources Board made clear that its decision to set the wolf quota at 300 has nothing to



Ma'iingan. (COR photo)

do with science or stewardship," said Michael J Isham, GLIFWC executive administrator. "This reckless approach to ma'iingan management is why tribes have filed a brief in support of lawsuits that seek the restoration of federal protection for wolves."

Wolves lost protection from the Endangered Species Act January 4, 2021 in the Lower 48 United States. Then in late February, the Wisconsin Department of Natural Resources presided over a chaotic wolf hunt that ended after only three days when sportsmen killed nearly 100 extra wolves, soaring past a quota limit set at 119 animals. Fresh snowfalls made for efficient hunting as many tag-holders used dog packs run down wolves across much of the state.

Now, despite calls from Ojibwe tribes to back away from ma'iingan hunting seasons, as well as advice from Wisconsin DNR biologists to set a more moderate fall quota, the Natural Resources Board revealed August 11 that it is bent on driving down the state's wolf population. At a meeting in Milwaukee, the Board scoffed at its own researchers for recommending a 130-wolf quota, and considered a kill goal as high as 504 before settling on 300 wolves.

"It's both frustrating and outrageous that the DNR Board is willing to manipulate scientific recommendations in order to deny tribes their share of a science-based quota, undermining Ojibwe tribes' treaty rights and circumventing the process laid out by federal courts," said John Johnson, chairman of Lac du Flambeau Band and Voigt Intertribal Task Force.

(see Disastrous wolf policy, page 19)

## Challenged by high water and burrowing carp, Bay Mills' Waishkey Bay goes under the microscope

By Charlie Otto Rasmussen, Editor

**Brimley, Mich.**—Utilizing a grid of underwater acoustic telemetry receivers, Bay Mills Indian Community is taking a deep dive into better understanding the Waishkey Bay fish community.

Biologist Frank Zomer leads a tribal natural resources team working to capture, tag, and release walleyes and northern pike. Each fish Zomer equips with a surgically-imbedded transmitter "tag" relays a telltale ping as it passes one of more than 30 receivers in the bay and nearby St. Marys River, allowing researchers to monitor fish movements across the bay during key times like spawning.

"Technological advances have greatly increased our knowledge and understanding of fisheries," Zomer said. "In the old days we'd rely on tag reports from fishermen. Maybe a 1% return on tagged fish that each gave us one spot on the map. Now we have a lot of precision in monitoring fish movements."

Zomer said critical habitat for important species like gnoozheg (northern pike) is in flux as recent, historic high water levels on Lake Superior creates new spawning grounds and sinks others.

The Bay Mills homeland is known as Place of the Pike, or Gnoozhekaaning, in Ojibwemowin.

"Pike is a culturally important species, and an important recreational fish for anglers" Zomer said. "They are also a food source for the community, pursued year-round."

(see Finding a place, page 4)



Bay Mills Fishery Biologist Jack Tuomikoski and Fishery Technician Brandon Carrick lifted a survey net from Waishkey Bay in mid-July to collect fish for an acoustic telemetry study. (CO Rasmussen photo)

## Ma'iingan

A friend and helper to Anishinaabe people



B. Johnson

Ojibwe teachings identify wolves as relatives, as teachers, as guides



JKB

Joe Defoe Whiteman, 2021 HCR. See additional photos, pp 14-15



# Panel conjures honest assessments on killing wolves

## *Lessons from a needs-based world view*

By Peter David, GLIFWC Wildlife Biologist

I recently had the honor of serving on a wolf panel organized by the Wisconsin Outdoor Communicators Association. It was held at Trees for Tomorrow, in Eagle River, Wisconsin. That location had significance to me; my first visit to Trees was in high school, a special opportunity I was given apparently after displaying a budding interest in natural resources.

Eagle River also holds many family memories for me, as it was where my father was raised, my grandparents made their life together, and is not far from Black Oak Lake, where my great grandparents homesteaded in 1885. I certainly didn't imagine during that high school trip that I would return nearly half a century later to discuss the hunting of ma'iingan—a word I didn't even know then. And at that point in time, the presence of wolves in Wisconsin was far from certain.

Extirpated a decade and a half earlier after nearly a century of state-sponsored bounty hunting, I was unaware that just months earlier, the first documented presence of a pack of wolves in the state had been made—far to the west near the Minnesota line—over the winter of 1974–75.

At this year's conference I saw additional panelists including noted wolf biologist, a volunteer in the wolf tracking program, a fur trapper, and a hound hunter. Both of the latter had legally harvested wolves in Wisconsin's recent seasons. We each were allotted about seven minutes to make some opening remarks, then a full hour was provided for questions from the audience, a rare luxury in the on-going wolf debate.

One question was directed to the trapper and hound hunter: why kill a wolf? I found their answers refreshingly honest. They avoided the false arguments so often given for a wolf season—like the need to save deer or reduce livestock

depredations, arguments that don't hold up well to scientific scrutiny. Both just indicated that a wolf is a trophy. The houndsman added, "And do you want revenge [for the loss of dogs killed by wolves]? You bet."

And that, in a nutshell, is what this debate about hunting wolves in Wisconsin is really about. Is it ethical to kill a sentient, highly social animal—and one with great cultural and ecological significance—to gain a trophy? To my two fellow panelists, the answer was clearly yes.

But my mind circled back to a story from my father's childhood, one he shared with me when I first showed some interest in hunting and fishing. He could have told me about challenge and thrill of getting his first deer, or the battle of landing his first musky, but he opted to take me back to a duck hunting trip on Thunder Lake—back when it still had its historic wild rice beds—with his uncle, Prosper Stein.

"Pros", as he was known, was legendary as a woodsman. The cabin I am writing from is decorated with his hand carved canoe paddles and waterfowl decoys. He lived much like the native people who occupied the region before him—hunting, fishing (including guiding), logging, gathering wild fruits and plants. He depended on the gifts of the land and his own labor to provide for himself and his family. And like one of my fellow panelists, he was a trapper—a serious trapper.

Pros was legend enough that after he passed, the Catholic church in town used his fishing creel as a collection basket, even though there were some who might have considered him a violator. While not a habitual offender, if the family or a neighbor didn't have enough to get by, he would try to put meat on their table, legally or not. More than one deer, taken out of season, was butchered in the families' small kitchen, behind drawn blinds.

(see *Ma'iingan*, page 21)

# A closer look at mercury contamination

## *Updated musky consumption advisory in development*

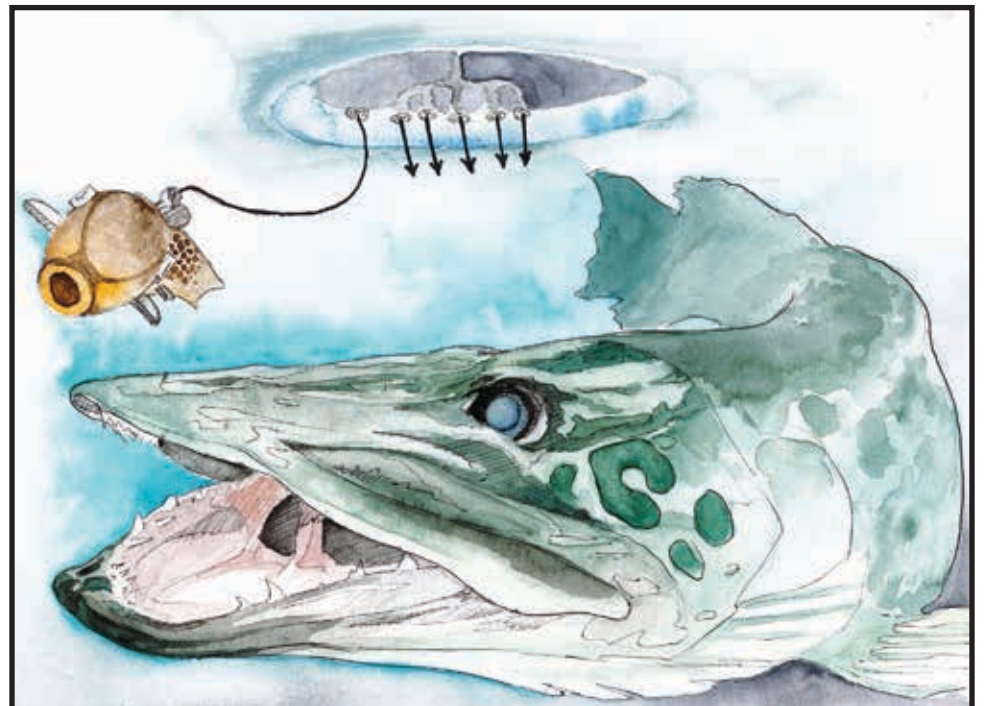
By Hannah Arbuckle, GLIFWC Outreach Coordinator

Maazhiginoozhe, or muskellunge, have been netted and speared by Anishinaabeg (Ojibwe people) since time immemorial to sustain themselves, participate in bimaadiziwin (the Anishinaabe way of life), and today, exercise treaty rights and food sovereignty. Muskies are the second most harvested fish species by GLIFWC member tribes, after ogaa (walleye).

Safe consumption of maazhiginoozhe, however, is increasingly becoming an issue. This is due to harmful chemicals such as mercury that are found in lakes throughout the Ceded Territories of the upper Great Lakes region.

Mercury is a naturally occurring metal that can be released by both natural and human activities. It can be found in air, water, soil, and biota. Fish absorb mercury from the water when it passes over their gills and as they feed on other aquatic organisms.

Mercury levels increase as larger predatory fish eat smaller fish. This is called bioaccumulation. Musky, which sit atop the lake food web, can attain high levels of mercury compared to other fish. Exposure to small amounts of mercury over time from fish consumption, can have toxic effects on human ner-



*Maazhiginoozhe.* (W. Ballinger painting)

vous and cardiovascular systems, especially on the developing nervous system of children and fetuses.

That is why GLIFWC continues to collect and analyze mercury data to develop science-based fish consumption advice for maazhiginoozhe. GLIFWC's Mercury Program began testing mercury levels in subsistence species in 1989 in response to concerns about the health risks to tribal members of consuming contaminated fish.

As of August 2021, GLIFWC has collected samples and analyzed mercury levels from nearly 11,000 fish from Lake Superior and over 300 inland lakes within the Ceded Territories with plans to continue this work into the future. Outreach materials for the safe consumption advice of maazhiginoozhe are currently under development. Keep an eye out for a maazhiginoozhe website and printed brochure later in Fall 2021.

**maazhi = notorious or bad**  
**ginoo = long**  
**zhe = creature or being**

# Ceded Territory news briefs

## Bay Mills planning forest reboot, hopes for future black ash return

As the black ash purge is nearly complete at Bay Mills Indian Community and surrounding forests, tribal scientists are experimenting with replacement trees and looking to the future when baapaagimaak might make a comeback for future generations.

"Pretty much all of our black ash trees are now dead or infected," said Aubrey Maccoux-LeDuc, BMIC environmental specialist. Since its arrival at Bay Mills in 2005, the emerald ash borer has devastated black ash forests, leaving behind skeletal trees across the landscape.

Hopeful that healthy black ash can one day return to the community, biological services staff have been collecting seeds, placing them into cold storage until conditions allow for attempting a new start. Maccoux-LeDuc said 2020 appears to have provided the last good seed gathering opportunity.

Meanwhile, tribal ecologists are experimenting with a variety of other native trees including swamp white oak and maple species to restore wetland forests, preventing former ash range from becoming shrub meadows.

—CO Rasmussen

## NOAA reports hottest month on record

July is typically the hottest month of the year. But this past July, the global temperature soared to the highest ever recorded. According to the National Oceanic and Atmospheric Administration (NOAA), July 2021 reached Earth's hottest temperature on record at 62.07°F, 1.67°F above the 20th Century average of 60.4°F. This exceeded the previous record set in July 2016 and matched in 2019 and 2020 by .02°F.

Record highs were seen throughout North America and the rest of the globe, leaving raising expectations that 2021 will likely prove the hottest year on record. The steadily-climbing temperatures are attributed to continuing climate change due to greenhouse gases and other human pollutants. Find more climate information at [noaa.gov](http://noaa.gov).

—M. Coleman

## Ojibwe treaty hunters set for Michigan, Wisconsin elk seasons

Tribal wildlife managers are firming up plans for annual elk hunts in the Michigan 1836 Treaty Ceded Territory and Wisconsin 1837/1842 Territory. Ranging from 500-700 pounds on the hoof, elk provide Ojibwe communities with highly valued meat for families, hides for drum skins, plus parts for many more uses, both utilitarian and ceremonial.

For Bay Mills Indian Community, an elk hunt means a trip south over the Mackinac Bridge to the Pigeon River Country State Forest region—the core of Michigan's elk range. BMIC is sending five hunters into the area beginning August 31. Much of the hunting is expected to occur over three hunting periods in September with another chance at elk coming in December, said Justin Carrick, BMIC Conservation Dept. Bay Mills wildlife officials distributed four cow elk tags and one bull tag to tribal hunters following a drawing in early August.

West into northern Wisconsin elk range, Ojibwe tribes gather in Chequamegon-Nicolet National Forest each year to open the season with a ceremony in mid-September. Above the manoomin beds of Chippewa Lake, tribal members set up camp for feasts and drums songs as well as to take in pre-hunt orientation from GLIFWC biologists and conservation wardens. For the 2021 season Ojibwe bands share four bulls-only tags in an intertribal hunt that can occur anytime following the opening ceremony. Successful hunters typically share elk meat with other Ojibwe communities in the 1837 and 1842 Ceded Territories.

—CO Rasmussen

## For now, Michigan and Minnesota say "Gawiin" to wolf hunt

While Wisconsin barrels ahead with plans for a second wolf hunt in 2021, its neighbors, Minnesota and Michigan, are taking a more measured approach in regard to ma'iingan. The Minnesota Department of Natural Resources reported that there are no plans for a wolf season at least until Fall 2022 after the new wolf management plan is completed in spring. Minnesota's current wolf management plan was released in 2001.

Minnesota wolf management consists of two groups. The Minnesota Wolf Plan Advisory Committee is comprised of stakeholders and interest groups that provide their input to the Wolf Management Plan. The Minnesota Wolf Technical Team consists of state and tribal biologists that provide scientific research in order to update the management plan.

Work being done on Michigan's management plan is scheduled to be finished in May 2022, after which the new Wolf Management Advisory Council (WMAC) would make a decision on potential future wolf seasons. The WMAC consists of six members, including GLIFWC biologist Miles Falck, who is representing tribal governments. While many in Michigan and Minnesota support the idea of a wolf season, others commend their cautiousness in avoiding the breeding-season slaughter of wolves that occurred in Wisconsin last February.

—M. Coleman

# 2021 Manoomin Season Outlook

## A highly imperfect storm

By Peter David, GLIFWC Wildlife Biologist

Every year I struggle with how to share a glimpse into the upcoming manoomin season. What is true for a particular water or even region is often not true overall, and general truths often don't hold up for individual waters.

And this year is even tougher than most. COVID concerns prevented our normal use of summer interns to gather data. The retirement of GLIFWC's long-time manoomin biologist Lisa David—not only my wife but my partner in rice stewardship, especially this time of year—has left me scrambling until a new hire is completed. Toss in milky skies caused by western wildfires that reduce good flying days and hamper my ability to key in on the characteristic bright green I rely on to estimate rice abundance from the air and, well, my struggles this year feel like the gathering of a highly imperfect storm.

(see [Manoomin outlook](#), page 23)



The north end of Chequamegon Waters Flowage contains a good stand of manoomin going into the 2021 ricing season. Find more wild rice forecasts at [data.glifwc.org/manoomin.harvest.info](http://data.glifwc.org/manoomin.harvest.info). (P. David photo)

# Special state park hunts provide excellent deer harvest opportunities for Ojibwe hunters

While Ojibwe whitetail hunters in the Minnesota 1837 Ceded Territory have a range of public land options, some of the best hunting is available through special state park seasons.

Set up by Minnesota Department of Natural Resources in consultation with tribes, wildlife managers organize the hunts to help reduce deer densities and overbrowsing on native plants and forest communities within the parks. Both state-licensed and tribal hunters jointly participate in the hunt.

"The Band is pleased to work with park managers and provide this opportunity for treaty hunters," said Kelly Applegate, Mille Lacs Band Commissioner of Natural Resources. "There's a high deer population in some of these areas."

Treaty tribes can declare up to half of the available tags in hunts scheduled at Crow Wing, St. Croix, and Mille Lacs Kathio State Parks. Only at Kathio—situated adjacent to the Mille Lacs Reservation—did the bands claim 50% of the quota, making 25 tags available to tribal hunters.

Applegate said a good working relationship with Kathio Park Manager Kris Erickson helped in the successful planning for this year's hunt scheduled for November 6-8.

Additional deer hunts in the 1837 Ceded Territory are booked for December 4-8 at Crow Wing (muzzleloader only) and two hunts at St Croix State Park: November 18-21 (regular firearms) followed by a hunt restricted to muzzleloaders (see [State park hunts](#), page 21)



COR



# Finding a place for manoomin in Waishkey Bay

(continued from page 1)

Another important food fish for the Ojibwe, walleye, has a role in the study too. BMIC fisheries staff are monitoring 26 ogaawag fitted with acoustic tags to evaluate movements and habitat preferences to inform the stocking rate of walleye in Waishkey Bay.

From a string of modified fyke nets—mesh-lined, fish-capturing hoop traps shaped like a kid’s play tunnel—BMIC fisheries staff select walleyes and northern for the study. Working at a portable field station, Zomer surgically implants an acoustic transmitter into the underbelly of each fish before stitching up the incision.

Depending on the size of the fish, implanted tags can vary in size with some as big as a ChapStick tube. The battery in the larger tags can last up to a decade while the smaller tags last only a year or two. During surgery, Zomer keeps a spigot of fresh water moving over the fish’s gills during the short procedure and returns each research recruit back into the water. Going to autumn, the Bay Mills crew are left with only a few tags to install.

“We need certain sizes of fish,” Zomer said. “They need to be big enough to handle the tag and still move around normally.”



## Common carp and manoomin

The foundation for the Waishkey Bay fisheries study is rooted in an investigation of the ubiquitous common carp—a species intentionally released across the Great Lakes region around 140 years ago. As part of his work toward earning a graduate degree at Northern Michigan University, Zomer set out to evaluate nature-made obstacles to BMIC’s wild rice program.

“Carp are very visible to community members, especially when spawning in nearshore habitats that can support wild rice. So, when I asked folks why they thought our efforts to restore wild rice weren’t succeeding, common carp were the likely answer for almost everyone,” Zomer said.

Tribal resource managers knew the impacts that common carp can have on wild rice in inland lakes. But in Waishkey Bay, a Great Lakes connected habitat where carp can go anywhere they want, would carp have that same localized level of impact?

“Carp are considered ecosystem engineers because of their spawning and foraging behavior,” Zomer said. “They are very disruptive, stirring up sediment, causing water turbidity, and can uproot wild rice.”

Drawing inspiration from St. Croix Tribe’s work a decade ago at Clam Lake near Siren, Wis., Zomer honed his waterside surgery skills by first working with carp, implanting the very same acoustic transmitters he would later use with northern pike and walleye. Bay Mills fisheries staff laid out a 25-unit acoustic receiver array in Waishkey Bay and the adjacent Upper St Marys River.

As in the Clam Lake study, he also installed a series of in-water exclosures within wild rice beds along shoreline. Rising from the water like bright orange snowfences, the exclosures prevent carp from entering 16-meter square, shallow-water plots variously seeded with rice or unseeded. The cubes of aquatic habitat that cut-off carp access produced lush emergent manoomin growth. Left to develop without the rooting, sediment-slurping common carp churning up the bed, wild rice showed real promise along the west shore. Unprotected areas had poor manoomin growth, producing lower stem counts.

But it didn’t take long for a truly remarkable study result to materialize. Some of those seemingly sluggish, bottom-feeding carp were partial to long migrations. Of 25 tagged fish, several swam as far west as Marquette, while the distance titleholder, Carp #7152, made it all the way to the edge of Buffalo

*Carp exclosures near the Waishkey Bay shoreline reveal the impact the Asian fish have on manoomin. The plot to the right was supplemented with wild rice seed and displays an abundance of growth. Areas outside the right exclosure where carp have variously had access failed to regenerate manoomin. (CO Rasmussen photo)*

Reef near the Keweenaw Peninsula. There, the wayward carp generated an unexpected ping from an underwater acoustic array established by GLIFWC, US Geographical Survey, and Michigan Department of Natural Resources research biologists monitoring whitefish and lake trout.

“This kind of long-distance movement is surprising. If you look at the habitat available in Waishkey Bay, there’s seemingly no reason for a carp to leave. There are a few productive areas between here and Marquette, but there’s also just a lot of sand and rock. Not the best carp habitat,” Zomer said. “The even more surprising part was that those carp went all that way and came right back to the bay during the same summer.”

Meanwhile, fortified with the knowledge of where carp spend their time in Waishkey Bay, Bay Mills resource staff is preparing to seed hundreds of pounds of green manoomin along the west shore.

“Because of the fine-scale movement data we were able to get from this project, we know where carp tend to spawn, where there’s a lot of disruption. We’ll target our seeding in areas less likely to see carp spawning. Hopefully, we’ll be able to expand the wild rice resource,” Zomer said. “The other big thing that we found during the first few years of this project was that carp, alone, were not the only factor negatively affecting wild rice. It was really a ‘perfect storm’ of high water levels, predation on rice by geese, and the incredible disturbance and uprooting caused by common carp.”

For more information contact BMIC Inland Fisheries Biologist Frank Zomer [fzomer@baymills.org](mailto:fzomer@baymills.org).



*Biologist Frank Zomer slides an acoustic transmitter into the belly of northern pike before stitching up the incision. (BMIC photo)*

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MAZINA'IGAN (Talking Paper) is a publication of the Great Lakes Indian Fish & Wildlife Commission, which represents eleven Ojibwe tribes in Michigan, Minnesota and Wisconsin.

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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](http://www.glifwc.org) and our Facebook page.

## On the cover

Over a series of summer days, black ash crafter April Stone (right) guided GLIFWC staff through a traditional skills training course involving harvesting an ash tree, pounding out strips of wood, and creating baskets. (COR photo)

# Widespread chronic wasting disease testing opportunities during waawaashkeshi season

By Travis Bartnick, GLIFWC Wildlife Biologist

Chronic wasting disease (CWD) remains a growing threat to waawaashkeshi (deer) and omashkooz (elk) herds in the Ceded Territories. CWD is a neurodegenerative disease that has been spreading throughout North America for several decades and infects members of the Cervidae family (cervids), such as white-tailed deer, mule deer, elk, moose, and caribou. CWD has been detected in both wild deer herds and captive cervid (deer and elk) herds within or near the Ceded Territory.

Cervids infected with CWD will often show no signs of being sick when they are in the incubation period, which can last a minimum of 16-17 months. During this time, they continue to shed the infectious prions into the environment where it can spread to others in the herd. The infectious prions associated with CWD are a form of misfolded protein. Disease experts are confident that CWD is not caused by a bacteria or virus. There is no known cure, vaccine, or treatment for CWD, and it is always fatal. It is believed the prions can be transmitted several ways, including through contact with infected saliva, urine, and feces.

Although there is no evidence that CWD can infect humans, the Centers for Disease Control and Prevention (CDC) recommends against the consumption of any animal that tests positive for CWD or shows signs of being sick. The World Health Organization (WHO) recommends keeping the agents of all known prion diseases from entering the human food chain.

## How tribal hunters can help

GLIFWC will continue to facilitate CWD testing of deer and elk harvested by tribal members within the Ceded Territories in 2021. GLIFWC biologists will collect CWD samples from all elk harvested by tribal members during the 2021 season in the Wisconsin Ceded Territory. Submitting deer heads for CWD sampling helps biologists track where CWD is on the landscape, which then helps with implementation of additional surveillance, research, and management actions. We often do not know where CWD is on the landscape unless deer and elk are actively being tested for the disease.

In 2021, there will be GLIFWC deer head collection stations set up at tribal registration stations. The station will have a set of instructions, a head collection bin and/or freezer, garbage bags, data forms, a bone saw to assist with removing deer heads and antlers. Removing the antlers is important to minimize space used in the collection bin and to prevent antlers from poking holes in the garbage bags. It is important to keep the head and about 3-5 inches of the neck intact and stored at cool temperatures (at least as cool as a refrigerator). Freezing the head is also an option.

When dropping off a deer head for CWD sampling, it will be important to follow the directions provided at the CWD sampling station, including the hunter's contact information and the location of where the deer was harvested on the data form.

## Copper ammunition incentive in 2021

Thanks to the generosity of tribal CWD surveillance partners at the Grand Portage Band of Lake Superior Chippewa in Minnesota, there will be a limited supply of boxes of copper rifle ammunition available as an incentive to tribal hunters to increase CWD sampling in the Ceded Territory this year. This is a first-come, first-served program due to the limited supply of copper ammunition that is available, so a box of ammunition cannot be guaranteed to all participants.

The most common calibers manufactured in copper rounds include .243, .270, .30/06, and .30-30, and .308, but others are available in lower quantities. The GLIFWC CWD sampling form will have a place for the hunter to list their preferred caliber of ammunition.

Once the deer season ends, the ammunition will be distributed to those who participated, until the supply is gone. There may be a delay in distributing the ammunition incentives due to the ongoing ammunition manufacturing shortage.

**Important!** Tribal hunters MUST follow the instructions at the CWD sampling station and completely fill out a CWD sampling form with their contact information and the location of where the deer was harvested to receive a box of copper ammunition.

If a data form is not completely filled out and included with the deer head, the deer will not be tested and the hunter will not be eligible for a box of copper ammunition. The contact information is important to inform the hunter of

**GLIFWC encourages Ojibwe hunters to bring their deer to a tribal registration station and request to have their deer CWD tested.**

## Making the Switch to Copper Bullets: Protecting your family and our environment from lead poisoning

### What happens when you hunt using lead or copper bullets?

- Lead bullets shatter on impact, spreading tiny fragments through most of the animal's body, including the meat and guts
- Copper bullets stay together and mushroom out on impact, and will more easily go through bones



A copper bullet on the left and a lead bullet on the right after a shooting demonstration. (Photo: Paul A. Scott / Milwaukee Journal Sentinel)



X-ray of an animal shot with lead. Notice how far the bright white spots of metal spread in the body (Photo: The Scavenger Hunt)

### What happens if your family eats lead fragments in meat?

- At certain levels in the blood, lead can be very toxic to people
- During pregnancy it can cause low birth-weight babies, premature births, miscarriages, and stillbirths
- In babies and children under 6, even small amounts can cause lifelong learning disabilities, and stunted growth

### How are eagles hurt by lead?

Eagles will scavenge gut piles left behind by hunters, and are very sensitive to lead



**There's no safe amount of lead during pregnancy or for children under 6**



Travis Bartnick,  
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Deer hunters: bring your deer heads for a FREE box of lead-free copper bullets by visiting your tribal deer registration station (supplies limited)



CWD testing status, as well as to be able to distribute any copper ammunition. The location of where the deer was harvested is very important to track where deer have been sampled on the landscape, and for biologists to coordinate an effective response to any deer that tests positive for CWD. (see Waawaashkeshi, page 20)

## We need your input! Tribal deer hunter CWD survey

A collaborative team led by the University of Minnesota, GLIFWC, and tribal partners in Minnesota, Wisconsin, and Michigan have developed a survey to gain a better understanding of tribal hunters' deer harvest practices, knowledge of CWD, and support for various CWD management actions.

The survey results will help guide the development of community specific CWD outreach materials and the development of a CWD response plan that reflects tribal priorities. Please consider taking the survey and sharing this with others within your community.

Your feedback is important and the survey takes approximately 20-30 minutes to complete. Anyone interested in participating in the survey can access it here:

[umn.qualtrics.com/jfe/form/SV\\_0D4VWlviPVDGpjT](https://umn.qualtrics.com/jfe/form/SV_0D4VWlviPVDGpjT)

In addition, the survey can be accessed by scanning this QR code with your smartphone:



**SCAN ME**



# Ceded Territory SCIENCE

## Six Years of an ogaa closure on the Minocqua Chain of Lakes:

### Where are we now?



In the 1990s, the Minocqua Chain (fig 1) was a premier ogaa (walleye) destination in the state of Wisconsin, with 2.4–5.6 adult fish per acre throughout the chain. Along with this, there was evidence of natural reproduction within each lake until the mid-2000s when natural reproduction began to decline.

By 2015, the adult populations fell to less than 1.5 fish per acre in all lakes with little to no evidence of natural reproduction. In that same year, Lac du Flambeau, Walleyes for Tomorrow, Wisconsin Department of Natural Resources, and GLIFWC created an ogaa rehabilitation plan for the Minocqua Chain of Lakes. The goals were to 1) re-establish natural reproduction in all lakes, and 2) increase the adult population to three ogaa/acre in Minocqua and Kawaguesaga Lakes and two ogaa/acre in Tomahawk Lake.

The plan was to discontinue harvest of ogaa by state and tribal anglers for a minimum of five years with the option to extend the closure based on survey results. During this time period, adult population estimates and recruitment surveys were conducted to monitor progress toward the goals. Along with harvest limits and monitoring efforts, a plan was developed to stock extended growth fingerlings at 10 per acre every other year. Prior to stocking, electrofishing surveys were conducted to determine if natural reproduction had occurred in that year.

Unfortunately, in 2020, the aforementioned goals were not met. Adult densities were approaching the goal but there was still little evidence of natural reproduction. For the 2020 season, the partners agreed to continue the no-harvest period for one more year.

In April of 2021, population estimates were conducted on the chain (fig 2), and found Minocqua, Kawaguesaga, and Tomahawk had reached an adult density goal of three fish per acre, however, there were limited signs of natural reproduction (fig 3). A contributing factor may be a highly skewed sex ratio of approximately 0.35 males per female. When the chain had significant natural reproduction there was sex ratio of approximately four males for every female (fig 4).

An analysis conducted by GLIFWC shows that the probability of a strong year class is less likely when there are more females than males in lakes in

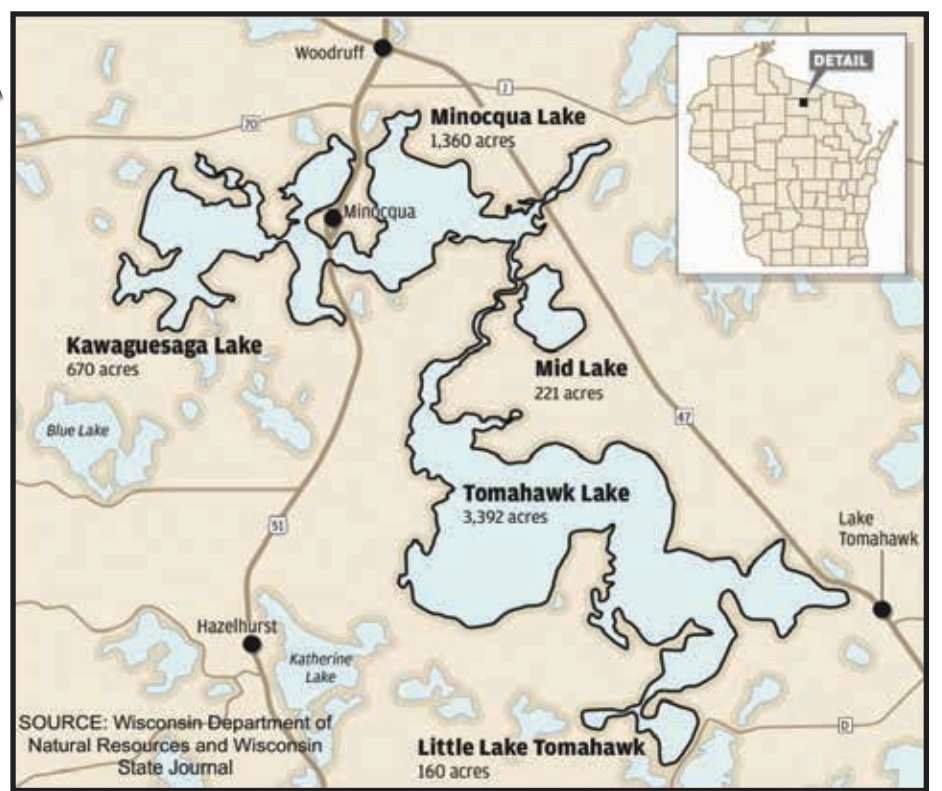


Figure 1. Map of the Minocqua Chain of Lakes.

the Ceded Territories. Managers looked into what could be causing this shift in sex ratios and found that extended growth ogaawag from the hatcheries were primarily females. It is not known how long this has been an issue or what the underlying cause of it is. Having not met recovery goals and the discovery of a new potential problem, the partners decided to update the rehabilitation plan and discuss new approaches. (see [Minocqua Chain of Lakes](#), page 10)



Figure 2. Ogaa caught on the Minocqua chain during spring population estimates. (E. White photo)

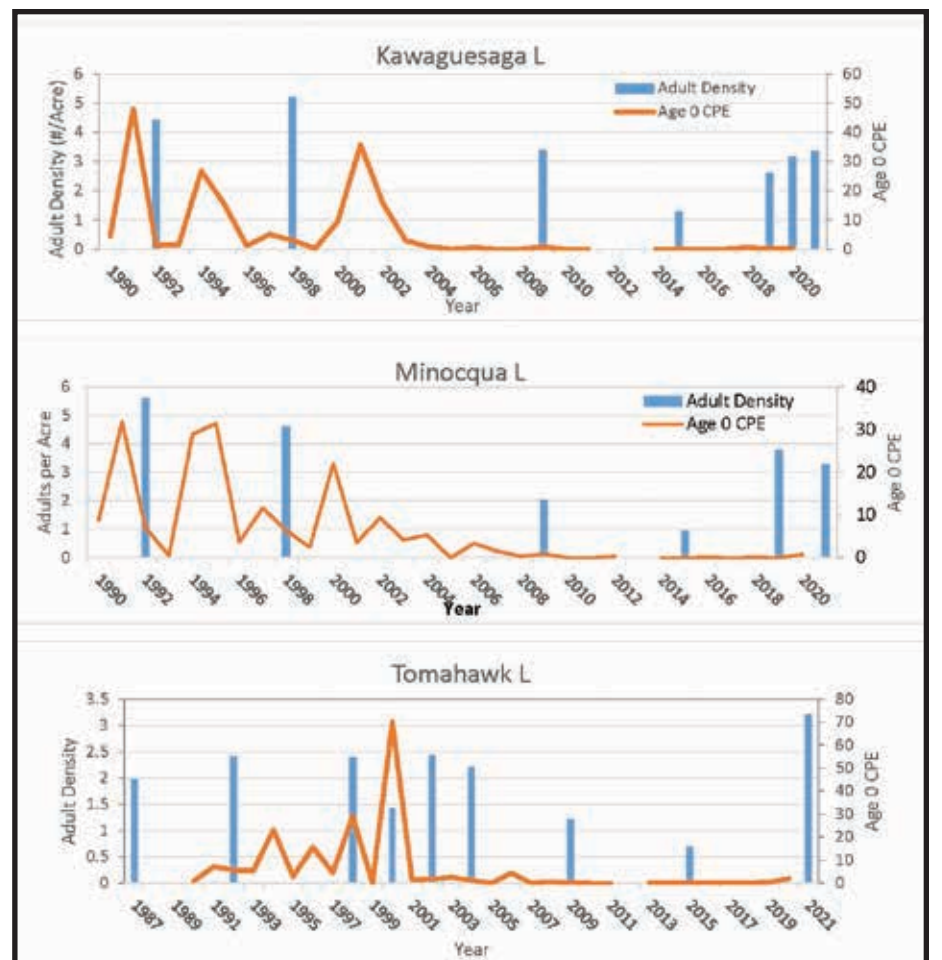


Figure 3. Adult density and Age 0 CPE in Kawaguesaga, Minocqua, and Tomahawk Lakes.



# Fishery managers take stock of Lake Mille Lacs at mid-season

*By Franklin Bajenske and Savannah Obert-Pfeiffer  
GLIFWC Inland Fisheries Interns*

At the Minnesota Fisheries Technical Committee meeting July 20, representatives from Fond du Lac Band, Mille Lacs Band, GLIFWC, and the Minnesota Department of Natural Resources (MNDNR), discussed data, policy, and surveys for both current and future initiatives.

During the data portion of the meeting, tribes and states both shared their harvest levels for this year to date.

As of July 19th, Ojibwe tribes harvested 50,523-lbs of their 62,200lb share of ogaa (walleye), reaching 81% of their allocation. For ginoozhe (Northern Pike) tribes were allocated 50,000 lbs and harvested 2,584 lbs, reaching only .05% of their allocation. For asaawe (yellow perch,) tribes were allocated 101,714 lbs and harvested 114.8 lbs reaching only .001% of their allocation.

By comparison, as of July 1, the state brought in 48,398 lbs out of their allotted 87,700 lbs of ogga reaching 55.1% of their allocation. For ginoozhe, the state was allocated 50,000 lbs and harvested 1,809 lbs reaching .03% of their allocation. For asaawe, the state was allocated 135,000 lbs and harvested 620 lbs reaching only .004% of their allocation.

Policy discussions focused on the timing of setting quotas for next year, whether a single year or a multi-year management plan was appropriate, and how to create a system so that unplanned closures and quota overages do not occur. Although a consensus

was not achieved, these topics will continue to be discussed at future meetings.

Asaawe on Mille Lacs have been declining since the early 2000s, along with asaawe harvest. The current asaawe harvest quota was set back when populations were high, leaving this quota outdated. The research subcommittee is looking for a scientific way to adjust the quota for this species, but current modeling methods have provided limited insight on how to manage the fishery.

In the following year, the status of Mille Lacs fisheries will continue to be closely monitored. GLIFWC will continue to conduct its fall juvenile ogaa survey to monitor the success of natural reproduction in the ogaa population.

MNDNR will continue their fall gill netting survey to monitor trends in the fish community, and both organizations will continue monitoring harvest with creel surveys.

In addition to these monitoring efforts, GLIFWC and the Mille Lacs Band DNR will continue gathering data from their ongoing telemetry study to better understand the movements of ogaa in Mille Lacs.

In the future, the state and tribes will continue to meet and discuss the best management practices on Mille Lacs to maintain the fisheries.

*Inland Fisheries Staff contributed to this article. Direct questions to inland biologists at 715.682.6619.*



*GLIFWC creel teams count, measure, and weigh tribally-harvested fish at Mille Lacs Lake boat landings. (CO Rasmussen photo)*

# Lake Mille Lacs: Biologists examine yellow perch downward trend

*By Mark Luehring, GLIFWC Inland Fisheries Biologist*

Swimming under the almost ever-present wavy chop of Mille Lacs Lake in the 1837 Ceded Territory of Minnesota, walleye get the most attention. Tribal members harvest walleye for subsistence, and anglers from throughout the midwest travel to Mille Lacs to fish for the glassy-eyed predator.

Biologists and scientists continue to study the walleye on Mille Lacs Lake to learn more about these toothy swimmers and their vulnerability to harvest, climate change, and changes related to invasive species.

More recently, however, some of the attention is starting to focus on yellow perch. Fish like walleye do not exist on their own, and yellow perch are recognized as an important part of the fish community in many places where walleye thrive.

Yellow perch are known for their delicious, mild flavor, making them another favorite target of tribal and state harvesters. They also complement walleye as a prey species since they hatch after walleye in the spring, and remain generally smaller than walleye through their life-cycle.

Life cycles throughout the fish community may have been altered in Mille Lacs since invaders like zebra mussels and spiny waterfleas became established and plentiful. The walleye population declined in the early part of the last decade when these invaders became abundant, and it appears that the yellow perch population has also declined.

In Minnesota Department of Natural Resources fall assessment gill nets, yellow perch catches reached a high of 49-lbs per net in 1998 before dropping to around 2-lbs per net in 2019 and 2020. Harvest of yellow perch also dropped from a high of over 500,000-lbs in the 1980s to under 3,000-lbs in



*Walleye do not exist on their own, and yellow perch are recognized as an important part of the fish community in many places where walleye thrive. A yellow perch captured during a GLIFWC fishery survey on Lake Mille Lacs. (M. Luehring photo)*

2020. While the walleye population has increased from the low levels observed around 2013-2016, the yellow perch population seems to have continued to trend downward.

Given the apparent decline, members of the joint state/tribal Minnesota 1837 Ceded Territory Fisheries Committee have begun to review yellow perch data more closely.

Even though yellow perch abundance overall does not seem to be increasing, forage gill net surveys sug-

gest that good perch hatches occurred in 2013, 2017, and 2020. These perch likely provided or will provide (in the case of the 2020 year-class) some boost in the available food for walleye and other predators in the big lake, even if they are not able to survive to harvestable size for anglers or tribal members.

Researchers plan to continue monitoring the yellow perch population on Mille Lacs with an eye towards developing recommendations to promote long-term sustainability.

Essential Ojibwemowin

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**asaawe—perch**  
**ogaa—walleye**

# Determining the future of whitefish at Buffalo Reef

## Larval adikameg surveys provide clues

By Ben Michaels, GLIFWC Fisheries Biologist

During spring and summer 2021, Great Lakes section staff, in partnership with the United States Geological Survey and Keweenaw Bay Indian Community, implemented a multi-year study aimed at determining the effects of mining waste material (stamp sand) on relative abundance, growth, and diet for larval whitefish at Buffalo Reef in Lake Superior's Grand Traverse Bay. Biologists seek to better understand the importance of Buffalo Reef regarding the number of whitefish, or adikameg in the Ojibwe language, that the reef produces and contributes to the Keweenaw Bay fishery.

To accomplish these objectives, crews deployed very fine-meshed surface trawls (Figure 2), which are designed to catch larval fish and zooplankton at a range of depth strata (10 to 40 ft) across different locations around the Keweenaw Peninsula. There were very few larval whitefish observed in the trawl samples that were collected throughout the sampling period; however, crews were able to capture hundreds of the elusive larval fish using seines (Figure 3) in the very nearshore (< 4 ft) sandy areas (Figure 1). It's unclear why so few larval whitefish were observed in the trawl samples, but it's possible that they exclusively inhabit very shallow depths during the summer.

Growth and diets of larval whitefish obtained from Buffalo Reef are being analyzed and compared to those that were collected from other locations around

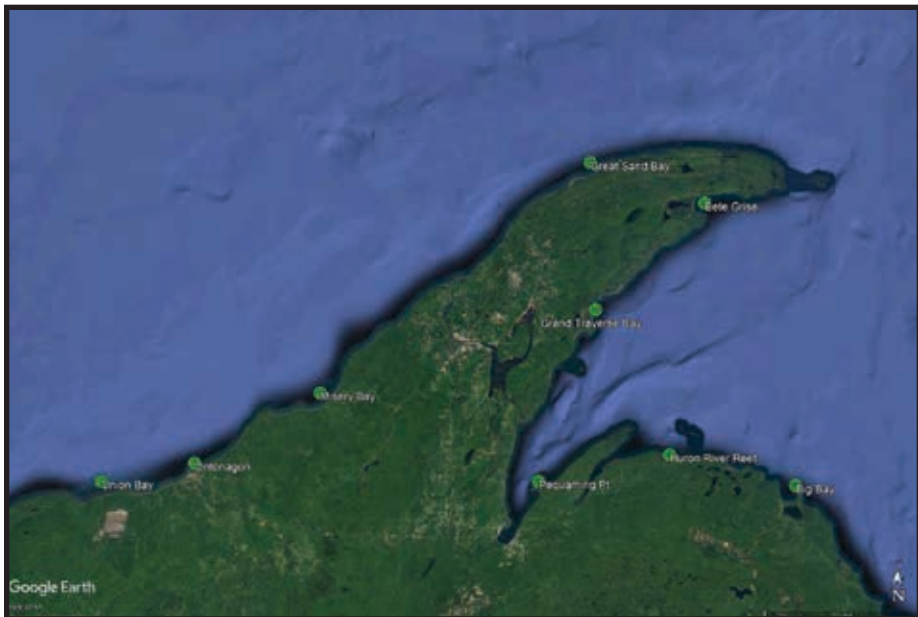


Figure 1. Locations where trawling and/or beach seining for larval whitefish occurred during spring and summer 2021.



Figure 2. Mike Johnson and Joslyn Beaulieu-Newago deploy trawls (one for zooplankton and the other for larval fish) off the back of GLIFWC's assessment boat at Bete Grise, located near the northern tip of the Keweenaw Peninsula. (CO Rasmussen photo)

the Keweenaw peninsula; biologists hypothesize that larval fish growth will be reduced near Buffalo Reef due to the presence of toxic stamp sand and its associated negative impact on the zooplankton community. Additionally, fish ear bones, or otoliths, will be extracted from larval whitefish so that their chemical composition can be determined. If the chemical composition of larval whitefish otoliths sampled on Buffalo Reef differ from those taken near other reefs around the peninsula, then biologists can use that unique chemical signature to determine the proportion of fish observed in the commercial fishery that were produced on Buffalo Reef.

The future of whitefish in Grand Traverse Bay is unclear, but with the constant ecological threat from stamp sands, the prospect of maintaining a self-sustaining, thriving whitefish population remains in peril. Data collected from this study and other studies is helping to inform various stakeholders about the ecological and economic ramifications associated with the presence of stamp sand. This has helped spur action to implement work to mitigate the impacts of stamp sands and protect Buffalo Reef.

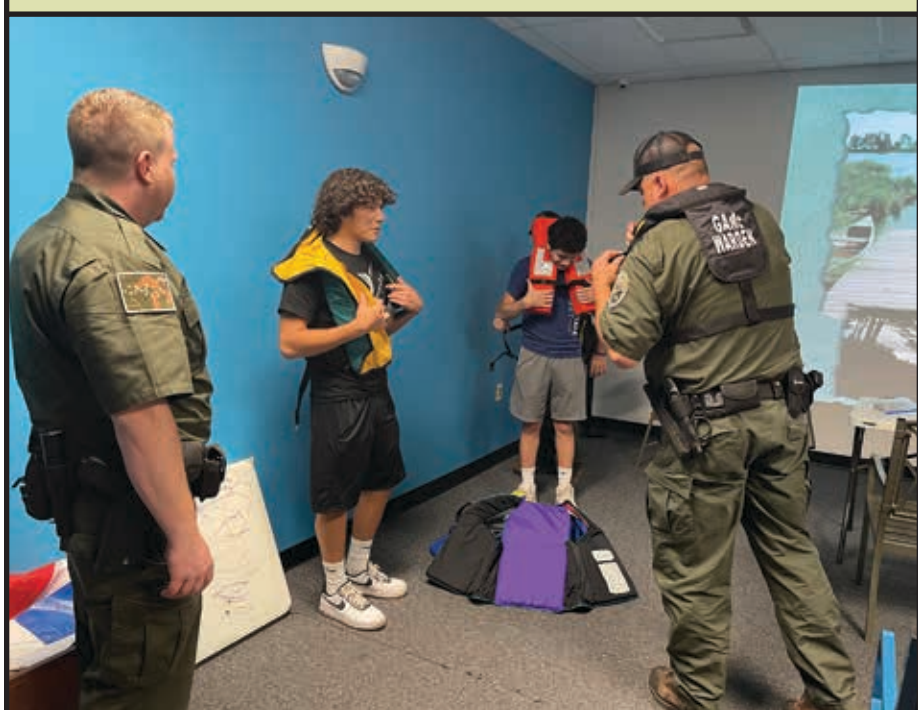
Currently, a Buffalo Reef Task Force is working to find a permanent solution to keep the stamp sands from continuing to cover the shoreline and the near shore Buffalo Reef. This effort to save Buffalo Reef will need funding from both public and private organizations to ensure that the reef's capacity to provide fish into the future is not further or completely negated. See *DNR—Saving Buffalo Reef* ([michigan.gov](http://michigan.gov)) for more information on what you can do to help save Buffalo Reef.

(Great Lakes Section Leader, Bill Mattes, also contributed to this article)



Figure 3. Mike Johnson, GLIFWC Great Lakes Section Intern, pulls a beach seine through the water in Grand Traverse Bay, near Buffalo Reef, in the hopes of capturing larval whitefish. In recent years, GLIFWC biologists have noticed declines in larval whitefish abundance in this area which may be related to the presence of nearby stamp sand.

## In-person safety classes return



GLIFWC Wardens Riley Brooks, Jonas Moermond, and Jason Higgins worked with Lac du Flambeau youth to complete the boating safety education course. Over three days in late July, they instructed tribal teenagers on navigation, laws, ethics personal safety and the proper use of boats at the LdF Youth Center. (J. Coleman photo)





# Great Lakes initiatives bridge knowledge systems

By Hannah Arbuckle  
GLIFWC Outreach Coordinator

The bridging of Traditional Ecological Knowledge (TEK) with other knowledge systems is becoming increasingly acknowledged as a key factor in the successful management, healing, and protection of the Great Lakes. TEK and other knowledge systems are often able to complement each other, and provide more holistic ways of viewing Great Lakes waters and ecosystems, spot upcoming issues, and analyze possible solutions. One school of thought on this collaboration terms it “two-eyed seeing,” while another describes it as braiding knowledges. There are several initiatives around the Great Lakes that demonstrate the ways in which such braiding is occurring across jurisdictions.

It is important to note that TEK is only one component of Indigenous knowledge systems. Overall knowledge held by Indigenous peoples includes environmental, socio-economic, cultural, and other elements that are practiced within indigenous communities. There are many names that these knowledge systems are known by, including TEK, indigenous knowledge, and native science.

In the winter of 2020-21, staff from National Oceanic and Atmospheric Administration (NOAA) reached out to GLIFWC to collaborate on an Ojibwe language weather poster. The project’s goal is to introduce Ojibwe ways of understanding weather

and to mesh that in visual form with western science perspectives. The poster will include Ojibwe stories, language, and knowledge accompanied with western science figures and information provided by NOAA. In addition, the poster will include an Anishinaabe artist’s perspective of the significant relationship between Anishinaabeg and the weather.

The International Joint Commission (IJC) is currently undertaking several efforts to further understand how TEK and western science can be bridged in their routine science efforts. In April 2021, the IJC hosted a virtual Indigenous Knowledge Gathering, attended by Indigenous knowledge holders, academics, scientists, water resources practitioners, students, IJC staff, and other experts. In addition to listening to the perspectives and teachings of other panelists, GLIFWC staff shared “A Tribal Climate Adaptation Menu,” which they developed with other partners, as a tool to assist in integrating TEK, culture and perspectives with western science in climate adaptation projects.

IJC presenter and Keweenaw Bay tribal member Jerry Jondreau noted: “When we just use the English language to communicate these things, there is an inherent hierarchy that’s built in. Words matter, and languages matter; and how you speak about things matters. We really wanted to try to create this air of parity, equality, and equity between human beings and non-human beings that share the space with us: relatives, not resources.”

The Indigenous Knowledge Gathering highlighted the importance of bridging knowledge

systems, and how creating tools that do so is vital in achieving this goal. In addition, a workgroup is working to develop a project to help provide guidance to the IJC Commissioners on how to bridge knowledge systems in their routine assessments.

On May 18th 2021, IJC Canadian Commissioner Henry Lickers, a member of the Seneca Nation Turtle Clan and scientist, delivered a keynote address titled “Bridging Knowledge Systems” at the International Association for Great Lakes Research virtual conference. He explained that TEK and western science are similar in that they both use scientific methods such as observation, experimentation, and validation. He believes that the way to successfully bridge knowledge systems is to follow the Haudenosaunee Great Way to Peace, which requires a balance of respect, equity, and empowerment.

The U.S. Caucus of the TEK Task Team, under the Great Lakes Water Quality Agreement is reinvigorating its efforts to support the integration of knowledge systems in work that is being done to protect and restore the Great Lakes under the Agreement. The overarching goal of the U.S. Caucus is to support the inclusion of TEK in interjurisdictional efforts to restore and protect the chemical, biological, and physical health of the waters and ecosystems of the Great Lakes.

The recent release of “Guidance Document on Traditional Ecological Knowledge Pursuant to the Great Lakes Water Quality Agreement” provides information on how management agencies around (see **Great Lakes initiatives, page 20**)

## Sea lamprey control season targets juvenile and spawning adult parasites

By Bill Mattes, GLIFWC  
Great Lakes Section Leader

As soon as ice left the streams in early March, GLIFWC’s Great Lakes Section and the Keweenaw Bay Indian Community Natural Resources Department crews were pulling on chest waders, working the Wisconsin and Michigan tributaries to Lake Superior. The focus from March to April was to capture sea lampreys migrating downstream.

Sea lampreys migrate downstream to Lake Superior during the fall and spring. Once in the lake, they attach to and feed upon fish.

The downstream trapping, done in cooperation with the USFWS Sea Lamprey Control Program, and the USGS Hammond Bay Station are part of a larger initiative to look at the efficiency of supplemental ways to reduce sea lamprey numbers in streams.

The primary control to reduce the number of larval sea lampreys is lampricide applications, which target and kill up to 90% of larval sea lampreys in streams flowing into the Great Lakes.

To learn more supplemental control, visit the Great Lakes Fishery Commission website at [glfc.org/supplemental-controls.php](http://glfc.org/supplemental-controls.php).

As the waters warmed in April the focus shifted from downstream trapping to trapping adult sea lampreys ascending the streams to spawn and die.

Adult sea lampreys are trapped, a portion are marked and released to be recaptured, and the remainder are exterminated. This mark-recapture work allows biologists to estimate their abundance and track the effectiveness of the overall sea lamprey control program, administered by the Great Lakes Fishery Commission, in the Great Lakes.

Publications from the 3rd Sea Lamprey International Symposium are currently being released as open access articles *Journal of Great Lakes Research Supplement on Sea Lamprey International Symposium III (SLIS III)* ScienceDirect.com by Elsevier. Recently, an article entitled, “Sea Lamprey Control in the Great Lakes: A Tribal/First Nations Representative’s Perspective” was completed by GLIFWC Biologist Bill Mattes and coauthor Jane Kitson, which addresses how the Sea Lamprey Control Program may move toward bridging knowledge systems (see related article).

For more information on the control of sea lampreys in the Great Lakes visit Great Lakes Fishery Commission—Sea Lamprey ([glfc.org](http://glfc.org)).



Clockwise from left: Adult sea lamprey from the Brule River trap fill a 55-gallon tub. A larval sea lamprey captured during springtime downstream trapping on the upper Marengo river. Downstream trapping fyke-nets set on the Marengo River at the Four-Corners road crossing. (B. Mattes photos)



# Indigenous knowledge on the healing nature of fire featured in new film

The smoke in the air this summer serves as a reminder that fire is a natural and unavoidable phenomenon throughout the Great Lakes region. For thousands of years, fire has artfully shaped the landscape we enjoy today, which in turn has provided diverse forests, ample fresh water and quality habitat for wildlife.

In the early 1900s however, as this region became further developed and settled, fire came to be seen as the enemy, ‘destroying’ forest resources, property, and even taking lives. Federal and state agency fire suppression policies created a shift in mindset from living with fire towards excluding all fire, which has resulted in a deterioration in forest health. Tree and vegetative density has increased, leading to pest and disease pressures and increased fuel loads, loss of biodiversity, and changes to forest types and nutrient cycling.

In order to restore a healthy balance with fire in our forests, many fire practitioners are looking to Indigenous knowledge on the use of intentional, periodic low-intensity fires. That story is told in the soon-to-be-released short film—*Oshkigin: Spirit of Fire*. The film features Vern Northrup, a retired Bureau of Indian Affairs wildland firefighter and elder of the Fond du Lac Band of Lake Superior Chippewa who remembers early in his career the sage advice that not all fire is bad. It reflects on his motivation to bring fire back in a thoughtful way to not only restore fire-adapted landscapes but also the culture of his people.

Damon Panek, a National Park Service wildland firefighter, Ojibwe culture specialist, and White Earth Band of Chippewa member is also featured and highlights the importance of fire in maintaining Ojibwe culture and way of life by restoring the plants vital for food and healing.

Other contributors to the film include Melonee Montano with Fathom Tribal Fire LLC and tribal member of the Red Cliff Band of Lake Superior Chippewa and Lane Johnson, a research forester with the University of Minnesota Cloquet Forestry Center, which is located on the Fond du Lac Band of Lake Superior Chippewa Reservation. Their voices paint a picture of how fire has and will continue to shape the fire-dependent places and people of the Great Lakes region.

Created through support by the St. Louis County, Minnesota Firewise program and Dovetail Partners, the film was produced by Old Saw Media, a Duluth-based production company. Various screening events are planned to spark conversation and inspire future use of fire. The project team sincerely appreciates Fond du Lac Band of Lake Superior Chippewa and Red Cliff Band of Lake Superior Chippewa for allowing footage for the film to be captured on their reserve lands.

Contact Tom Deschenes at [tom@oldsawmedia.com](mailto:tom@oldsawmedia.com) or Gloria Erickson at [gloria@dovetailinc.org](mailto:gloria@dovetailinc.org) to inquire about opportunities to host a screening of *Oshkigin: Spirit of Fire*. A trailer for the film can be viewed at [OldSawMedia.com](http://OldSawMedia.com). —Ashley McFarland, Lane Johnson, & Tom Deschenes



*Smudging, the smoking of traditional pipes, and ceremonial fire at a sweat lodge are just a few examples of how ishkode is an integral part of ceremonies carried out by the Ojibwe people.*



*Damon Panek, White Earth Tribal Member, speaks for the asemaa (sacred tobacco) before starting the cultural burn, which occurred in 2017 on Stockton Island, Apostle Islands National Lakeshore. Majority of the plants used to make traditional asemaa are fire adapted or fire dependent. (Old Saw Media photos)*

# Minocqua Chain of Lakes

(continued from page 6)

Based on this information, the tribes agreed to extend the ogaa harvest closure until 2025 and so did Wisconsin’s Natural Resources Board. During this time period, the goal is to meet the other rehabilitation goal of re-establishing natural reproduction, which likely includes new approaches to address the highly skewed sex ratio.

Biologists will continue to monitor the status of ogaa in these lakes and will recommend actions to achieve the agreed upon rehabilitation goals (i.e., science based stewardship). This may include extending a harvest closure beyond the sunset date or implement a conservative harvest regulation.

For Additional information on the updated rehabilitation plan contact GLIFWC biologists at 715-682-6619.

—Frank Bajenske & Savannah Obert-Pfeiffer, GLIFWC Interns and Aaron Shultz, GLIFWC Inland Fisheries Biologist

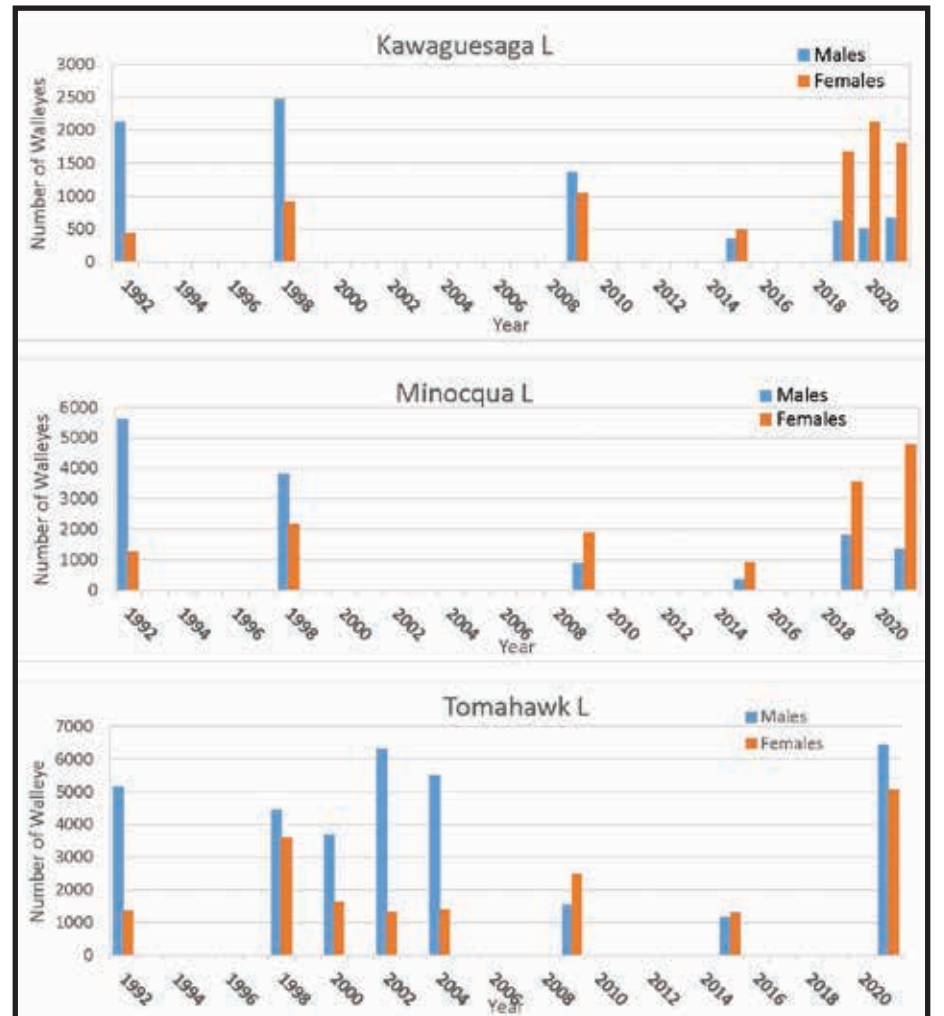


Figure 4. Male and female population estimates for the lakes in the chain.

## Manomin labels available



Tribal members of GLIFWC tribes are eligible to receive 25 FREE manomin bags and labels. Bags are food safe and can be sealed with a common Food Saver™ heat sealer. Labels include up-to-date nutrition information in accordance with the new nutrition label requirements. To request bags and labels, call Owen Schwartz at (715) 682-6619 x2147. Please be prepared to provide tribal your ID number. (O. Schwartz photo)



# Anishinaabe insights

## Sport versus sustenance: Divergent views on hunting Oshki-nitaagewin—First Kill Ceremony

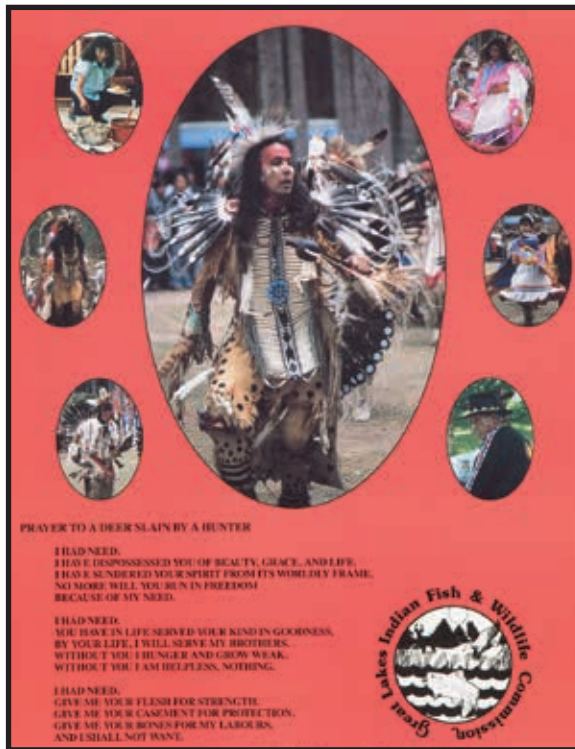
By Michael Price  
GLIFWC TEK Specialist

At GLIFWC, we recently had a discussion about oshki-nitaagewin, First Kill Ceremony, where a young hunter takes the life of an animal for the first time in order to provide food and sustenance for their family. This ceremony is practiced in most Anishinaabe communities. The young hunter is usually in his or her teens when this ceremony takes place, and an experienced adult, usually a parent or family member, takes the responsibility to guide the young person on their first hunt.

The Anishinaabe language reveals some in-depth insight into this tradition. “Oshki” refers to “young” or “new;” “nitaage” means “to kill or butcher,” but it also means “to mourn;” the suffix “win” converts a verb to a noun. In the Anishinaabe understanding, killing something for food and mourning its death are intricately woven together in this word.

oshki—young/new; nitaage—to kill, butcher, or mourn;  
win—converts verb to noun

In his book entitled *Ojibway Heritage*, Anishinaabe scholar and elder Basil Johnston presents the “Prayer for the Slain Deer,” which acknowledges the dependency that human beings have on the animal world, as well as all of creation, and the humility that the hunter should possess.



GLIFWC’s 1990 poster featured the Prayer to a Deer Slain by a Hunter.

Many traditional Anishinaabe believe that, if they show reverence and humility, the animal will give of themselves to the hunter so that he or she can provide food for their family. It is not seen as a sport.

I have seen Anishinaabe hunters hang an eagle feather from the barrel of their rifle to indicate that this is ceremony. Many Anishinaabe either smoke the pipe or smudge before going on a hunt. This ensures that the hunter is mindful and aware of their actions from a spiritual perspective.

The idea of hunting animals for sport became widely popular in America through Theodore Roosevelt’s essays in the late 1800s. Roosevelt cleverly wove together the ideas of sport-hunting and wildlife conservation and made hunting a part of American masculine identity. Wealthy men with money and leisure time could travel on hunting expeditions in the west and afford the experience of killing bison, grizzly bears, elk, and pronghorn sheep.

Founded in 1887 by Roosevelt and George Bird Grinnell, the Boone and Crockett Club was established in New York City that promoted the idea of ethical sport hunting and conservation. Surplus lands, which became available after the Dawes Act broke up Indian reservation land holdings in 1887, became wilderness areas and national parks. Hunting continued to be a gentlemen’s sport among wealthy New York City elites.

Unfortunately, this hunter-conservation movement caused many game animals to become near-extinct by the 20th Century, which set the stage for the (see *Oshki-nitaagewin*, page 20)

## Omeshkoozog back in Nagachiwanong? Hey, you betcha!

By Seth Bichler  
GLIFWC Policy Analyst

The Fond du Lac Band of Lake Superior Chippewa (Fond du Lac) has undertaken several years of study resulting in a new detailed plan on how to return elk (omashkooz) to a small portion of Minnesota—a region where they were extirpated along with other native species due to European colonization.

Nagachiwanong, or “where the water ends” describes the Fond du Lac homeland in the 1854 Ceded Territory, which includes the westernmost extent of the Lake Superior shore and the St. Louis River basin. Fond du Lac’s plan calls for elk to be reintroduced as early as 2025 if consultation with the state goes smoothly.

Fond du Lac has a long history of natural resources enhancements both on the main reservation near Cloquet and within the Ceded Territories. No one

thing can be attributed as the inspiration for the proposal to reintroduce omashkooz.

However, the previous successes of the band’s Resource Management Division in stocking lake sturgeon into rivers where they had been absent showed that reintroductions can be done, according to tribal Wildlife Biologist Mike Schrage. One thing is certain, elk never disappeared from the hearts of the Ojibwe people. “[E]lk have historically been, and continue to be, an intrinsic part of our culture and traditions.” said Fond du Lac Chair Kevin R. Dupuis Sr.

Beyond Minnesota, GLIFWC tribes played a critical part of a successful reintroduction of omashkooz into what is now called Wisconsin, near the Lac Courte Oreilles Reservation on the Chequamegon National Forest within the 1837 Ceded Territory.

The tribes have shared an equal part of the harvest of Wisconsin elk for several years now, although they chose to forego the right to take their half in 2020 due to precautionary concerns



M. Schrage, Fond du Lac Resource Management Division

about harvest from what is still a relatively small herd. Another smaller elk herd was also established further south in Wisconsin, outside of the Ojibwe Ceded Territories in Ho-Chunk traditional territory.

Other eastern states such as Kentucky and Michigan have also successfully reintroduced elk into forested areas, bringing benefits such as increased tourism and hunting opportunities. Although the existing Minnesota herd was itself translocated from the Yellowstone ecosystem, prior to colonization, “[t]here certainly were elk all the way to the East Coast,” Schrage said.

The plan outlined by Fond du Lac will require coordination with and approval by the Minnesota (see *Omeshkoozog*, page 19)



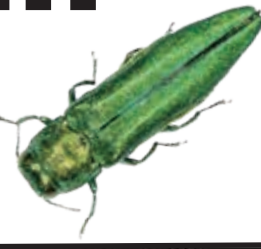
“[E]lk have historically been, and continue to be, an intrinsic part of our culture and traditions.”  
—Fond du Lac Chair Kevin R. Dupuis Sr.

# As baapaagimaakoog succumbs to infestations, GLIFWC, tribes honor trees' cultural role



## Emerald ash borer emerges in Iron County, Wisconsin

### Destructive forest invasive continues to chew its way into the northwoods



By Steve Garske, GLIFWC Invasive Species Coordinator

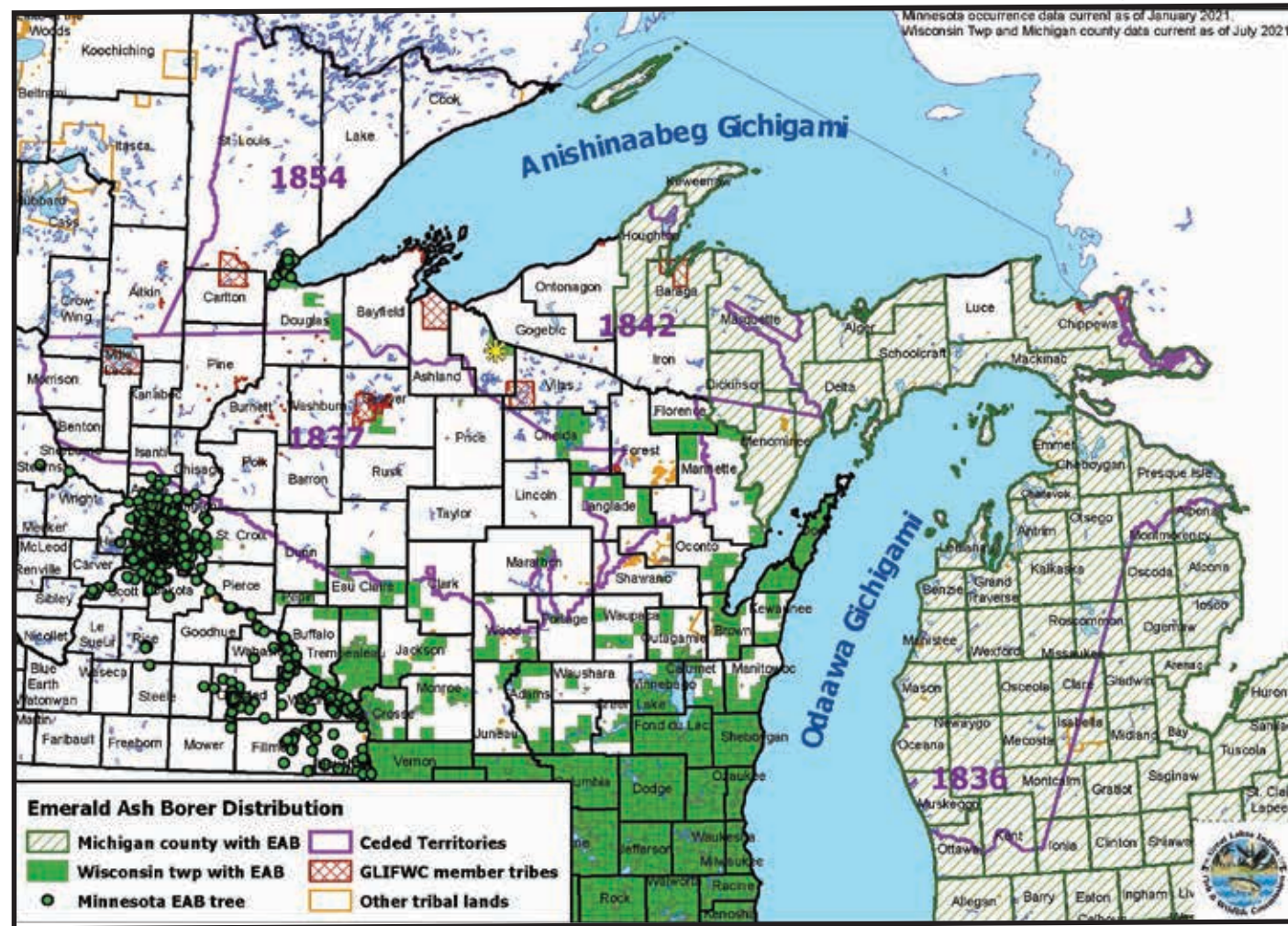
Last June, Iron County became the 60th county (of 72) in Wisconsin where an emerald ash borer (EAB) population has been found. This latest northwoods population was verified in June of this year by Department of Natural Resources Forest Health Specialist Linda Williams.

Williams was traveling past the site in Oma Township south of Hurley earlier in the year, when she noticed light-colored patches on the trunks of black ash trees, caused by woodpeckers pulling off pieces of outer bark to get at the delicious (to them) EAB larvae.

The EAB is a small, iridescent green beetle that's native to eastern Asia, where it's a minor parasite of several Asian ash (*Fraxinus*) species. It first became established in North America in the Detroit suburb of Canton, Michigan in the early 1990s, probably as a hitchhiker in solid wood packing material.

Since then it has decimated ash trees across much of the eastern and central US and adjacent Canada. The EAB was first discovered in Wisconsin in the southeastern part of the state in 2008, and the first Minnesota population was found a year later in St. Paul.

Ash trees are a major component of northern hardwood and lowland forests across most of the Ojibwe Ceded Territory. The seeds of white ash (*Agimaak*) and green ash (*Emikwaansaak*) in particular are a major food source for birds ranging from pine grosbeaks



Distribution of EAB across the three Ceded Territory states. The yellow asterisk (\*) shows the location of the recently discovered EAB site in Oma Township in Iron County, Wisconsin. Wisconsin Township data is from [dnr.wisconsin.gov/eab/index.jsp](https://dnr.wisconsin.gov/eab/index.jsp). Minnesota data is from <https://mnag.maps.arcgis.com/apps/webappviewer/index.html?id=63ebb977e2924d27b9ef0787ecedf6e9>. Michigan county data was compiled from <http://www.emeraldashborer.info/state-detection-table.php> and other sources.



S. Garske

to wood ducks, as well as small mammals and insects. Ash leaves are eaten by deer and other mammals, and the trees provide cavity nest sites for woodpeckers and other woodland birds. Several species of insects and mites depend exclusively on ash trees for their survival.

Black ash or *Baapaagimaak* is the EAB's favorite food. It also happens to be the most common tree in swampy and boggy woods across the Ceded Territory. As they transpire and grow, stands of black ash pull significant amounts of water from the ground and release it to the air. But when they're gone, water table levels can rise, transforming diverse wetland communities into ponds.

When and how the EAB became established in Oma Township is an open question. The fact that some of the ash trees at the site have already been killed by the EAB indicates that it's probably been there for at least 5-6 years. Adult females can fly a mile or more on their own, but usually travel only a few hundred feet if healthy ash is available nearby. Long-distance dispersal has been due almost entirely to the movement of infested logs and firewood by people.

Flecking on a nearly dead green ash tree in Superior, Wisconsin in 2018. The light-colored patches are caused by woodpeckers pulling the outer bark off the trunk to get at the EAB larvae below. Note the green "epicormic" shoots on the lower trunk.

Williams notes that travelers from southern Wisconsin and other places that are heavily infested with the EAB may not realize that the beetle is still absent from large areas of northern Wisconsin. The same is true for northern Minnesota and much of Upper Michigan. She recommends that landowners watch for woodpecker flecking in late winter, and take a closer look at and flecked trees for other signs of EAB.

These signs include progressive canopy thinning and dieback, cracking bark, and epicormic sprouts (also called "suckers" or "water sprouts") on the trunk, which quickly appear as the tree struggles to stay alive. One of the rare bits of good news in the EAB story is that the spread of the EAB into the northwoods has been significantly slower than many people had anticipated. Part of the reason may very well be that much of the general public have taken the warnings about moving untreated firewood to heart.

Travelers are urged to continue to only use firewood from local sources, in order to prevent the spread of emerald ash borer and other invasive forest insects and diseases as well.

Asian longhorned beetle, hemlock woolly adelgid, butternut canker, oak wilt, beech bark disease and other highly destructive forest invasives can all be carried on infested firewood.

## Black ash, paper birch part of traditional skills training for Bio staff

By Charlie Otto Rasmussen, Editor

Odanah, Wis.—The rhythmic pounding sound of iron striking wood rebounded off the walls of the historic preservation office, filling the courtyard of Chief Blackbird Center with the steady resonance of a one-two echo. Under a pop-up canopy on the cut grass, GLIFWC Biological Services staff worked in tandem, striking a bare six-foot black ash log to break-up the connective layers between seasonal growth rings. The hard work of creating basket strips is underway.

Under the guidance Bad River Tribe's April Stone, GLIFWC Bio staff were immersed in their latest skills training class—making black ash baskets from trees they harvested and processed themselves. It's a program Division Head Jonathan Gilbert launched more than a year ago.

"In biology, scientists are really good at setting up a harvest activity by establishing seasons, quotas, the monitoring the harvest, and reviewing the post-harvest data," said Gilbert, a 38-year GLIFWC veteran. "Some of us might hunt and fish, but a lot of GLIFWC's scientists don't have that experience that comes from doing some of these traditional activities."

The ash log originated from the wilds of Wisconsin's Iron County Forest. Stone collaborated with County Forest Administrator Eric Peterson on a permit for the treaty-harvest of a pair of black ash trees. Stone, Peterson, and GLIFWC staff rendezvoused in the Tyler Forks bottoms on a sultry July 7 and cut the trees, known as *baapaagimaakoog* in Ojibwemowin.

"The Bio staff really likes doing these things, find it really fascinating," Gilbert said. "It builds camaraderie and establishes connections between staff."

Earlier in the summer, Red Cliff artist Pat Kruse taught Bio staff how to harvest birch bark and make baskets. During the long months of COVID-19 isolation, many skills classes were accomplished virtually, oftentimes



Carrying a freshly cut black ash log from the Tyler Forks river bottom, Phoebe Kebec, Adam Oja and Dawn White. (CO Rasmussen photo)

by GLIFWC staff with particular know-how to share. As for the black ash project, Stone is returning for one more lesson: processing pounded-out wood strips and weaving traditional baskets.

"For me, what we do, it's the infusion of culture into our work at GLIFWC. These really important skills are important for scientists to know and understand," Gilbert said.

The black ash tree, *baapaagimaak*, provides the raw material for utility containers including pack baskets, hamper-style baskets as well as smaller decorative baskets. *Baapaagimaak* baskets can be found on trap lines with fur harvesters in the winter and berry-picking plains in the summer. Well-cared for baskets are reported to last as long as 100 years.



GLIFWC Climate Scientist Hannah Panci pulls a pounded-out strip of wood from a black ash log. (CO Rasmussen photo)



Gikinoo'amaagewikwe (instructor) April Stone explains how pounding black ash separates seasonal growth layers. (CO Rasmussen photo)



Friends and coworkers joined GLIFWC Biological Services staff July 21 to process a black ash log. Staff took turns in pairs, pounding the logs and removing strips of wood. (CO Rasmussen photo)



# Healing Circle helps reconnect communities, provides for individuals

By Charlie Otto Rasmussen, Editor

Children, women, and men—some 300 strong—came together in July for the spirit-restorative gathering, GLIFWC's Healing Circle Run (HCR). Marking its 21st season the summertime standard linked 10 Ojibwe communities as participants carried ceremonial staffs along the highways of Wisconsin, Upper Michigan, and Minnesota.

"The people that came out seemed really hungry for miles, hungry for healing, hungry for doing things in a good way," said Jenny Krueger-Bear, an HCR organizer and administrator in GLIFWC's Biological Services Division.

Healing Circle is variously a run and a walk, each contributor establishing their own pace over the 665-mile distance. But ultimately, it is a prayer. Participants carry wooden staffs, unique items consecrated over a dozen years leading into the first Healing Circle Run in 2001.

Staffs from the boatlanding protest-era Peace Runs, Waabanong Run, and Mikwendaagoziwag Run, adorned with ribbon, feather, and meaning, are carried on the rural stretches of Ceded Territory roadways connecting Ojibwe reservations. Each day begins and ends with a ceremony and talking circle where people exchange fears, aspirations, and oftentimes very personal feelings as they clasp the 7-foot staff, Mitiginaabe.

"It's a setting where people share things, share details about their lives in confidence," said Miles Falck, a GLIFWC biologist who is keeper of Mitiginaabe throughout the year. "Sometimes its seeking healing for themselves, for family members, for ma'iingan, or for the earth, aki. It's where all the challenges a person faces or sees in the world can be addressed."

With uncertainty whether the COVID-19 pandemic would force another virtual HCR as in summer 2020, GLIFWC staff ended up with a short planning window going into the July 10 start date. Falck and Krueger-Bear led a group that included Dan Soulier, Phoebe Kebec, and Kristen Thannum to work on logistics. Once they determined that improved COVID-19 conditions would allow for in-person interaction, HCR details came together quickly, moved along by guidance from Neil Kmiecik, who founded Healing Circle with the late Jim Schlender Sr.

(see HCR, page 15)





# HCR 2021 brings tribes, people together

(continued from page 14)

In total, 16 core runners—including Kmiecik and brother Gary, or Kemo—completed the entire circuit, which started and ended at Pipestone Falls on the Lac Courte Oreilles Ojibwe Reservation. Falck said the run's founding maxim, "each step is a prayer," permeated each day, and was diffused through each footstep taken across the Ceded Territory.

"This isn't so much an event as it is a way for people to make a deeper connection with the world and with others," Falck said. "COVID has really isolated people over the last year-and-a-half."

There have been some tough community losses, elders, from COVID-19. I think a lot of people really welcomed the opportunity to be together."



Healing begins with the individual.

As a person heals,  
they can help their family to heal.  
As communities heal,  
they can help their nations to heal.

As individuals, families,  
communities, and nations heal,  
they can help  
Aki and our planet and animal relatives  
to heal.



Page 14 photos (clockwise): Ketegitigaaning Strong, Lac Vieux Desert Clinic HCR participants; St. Croix volunteers complete the last leg of the run into Lac Courte Oreilles; 2021 Healing Circle Route; Jaylyn Labine, Sokaogon Chippewa, puts in miles.

Page 15: (clockwise top) Lac du Flambeau Boxing Club with Alicia Paula and Booj LaBarge; Miskwaabekong Proud, walking into Red Cliff together from the top of the big hill; Jenny Krueger-Bear and Neil Kmiecik; Kemo Kmiecik and Tara Chapman; Kiins Stark, Jayda Schlender, Kiara and Aandeg Schlender; Joe Bouchard with a thumbs-up on the KBIC to Watersmeet segment; Healing Circle Run prayer, which is printed on the back of the t-shirts; Team Sokaogon heading down to the Lac Vieux Desert Roundhouse; Kianna Storm Bear and baby Nova Ode Bigboy-Bear. (J. Krueger-Bear and M. Falck photos)





# How do ma'iinganag communicate?

By studying ma'iinganag (wolves) for many years, researchers have learned a lot about how they communicate with each other. Wolves can use vocalizations, or sounds, to communicate feelings or situations, but they also position their body parts in ways that provide information to other wolves.

## Vocalization

In a way, wolves have their own language. They use specific vocalizations in different situations to communicate with other wolves, and with other species, like humans—for example, when they bark at humans approaching their den of pups. This “language” is made of sounds rather than words—mostly howling and growling. Wolves use three common types of howls: chorus howls, lone howls, and bark howls.

**Chorus howls** take place when multiple wolves in a pack howl together. This kind of howling is used for socializing with other wolves and also for locating distant pack members. Wolves also use chorus howls to ask for the location of a pack member. Another purpose for chorus howling is that it can keep away other wolf packs from the territory. The wolves in a pack can change their pitches while chorus howling. It can make their pack seem larger and convince neighboring packs that there are too many wolves to compete with for more territory. (It's like a warning). And sometimes, it seems to be just for fun.

**Lone howls** refer to a single wolf howling alone. They are used to find other wolves or packs in the area for several reasons—for instance, finding a mate or locating the pack if a wolf becomes separated.



Ma'iinganag use different sounds to communicate with each other.

Finally, **bark howls** are described as alternating between howls and barks, and they are typically used when a wolf is feeling threatened. The bark howl is a type of “final warning” to whatever is threatening the wolf. Wolves can use growling for a similar purpose—either to threaten, or to give a warning to whatever threatens them. Growling can be used to tell another wolf not to do something. Growling and other vocal cues are used during dominance-play behavior or when a wolf is claiming food. (see Ma'iingan, page 22)



Ear placement also has meaning for wolves. Researchers have studied ear positions enough to get a basic idea of a canine's mood or intentions by looking at the ears. The ears forward wolf is alert and serious.















A tail held high is a good indicator of confidence—it is typical in a dominant male or female, and observed in lower-ranking members occasionally.

## Search-A-Word

L U F ' L C L H B  
 F O Y L H K W L A  
 E C N O O E O Y R  
 X V R E H W R U K  
 W U K C O I G I X  
 S T A I L P A C K  
 Z C Q G L Y B R O  
 L A O L L W O H P  
 N A G N I I ' A M

bark cache chorus growl  
 howl lone ma'iingan pack  
 tail wolf



Message	Head	Tail	Other
“I want to play”	Ears forward play grin 	Up and wagging 	“Play Bow” 
“You are my leader; you are my superior”	Head lowered ears back tense grin eyes averted 	Down—often tucked between hind legs 	Fur is flat to make itself look smaller 
“I am the leader”	Head high ears forward mouth relaxed direct stare 	Held high 	Fur fluffed, animal is relaxed 
“Don't hurt me; I don't want to fight.”	Head down ears back mouth closed eyes averted 	Low—often tucked 	Animal rolls on back and shows his belly 



# Ojibwemotaadiwag Anishinaabewakiing. They speak Ojibwe to each other in Indian Country.

Aaniin gakina awiya! Dagwaagin. Gigikenimaawaa ina wiyaasi-dakoniwewinini gemaa wiyaasi-daloniwewikwe? Gidaa-anamikwaawaag. Daga ikidon, "Chi-miigwech!" Owiidookawaawaan iniw Anishinaaben, giigoonyan, awesiinyan, bineshiinyan. Megwayaak, agwamoyang, owiidookaanigonaaing. Miinawaa akawe, gidaa-agindaanaawaan inaakonigewinan. Gigiigooyike na? Gigiiose na? Nisidotaw gidoodem. Bizindawig ingiw Gichi-aya'aag. Gigwayakobimaadiz, mino-bimaadiziwin. Apegish menoseyeg omaa dagwaaging. Mino-ayaag! Gaye ojibwemodaa!

(Greetings everyone! It is fall. Do you all know a warden (male) or a warden (female)? You should greet them. Please say, "Many thanks!" They help those people, fish, animals, birds. In the woods, when we all are on the water, they help all of us. And first, you all should read the regulations. Do you go fishing? Do you hunt? Understand your clan. Listen to those Elders. You're living the right kind of life, the good Life. I wish you all good luck here in the fall. You all be well! Also, let's all speak Ojibwemowin!)

### Bezbig—1

**OJIBWEMOWIN (Ojibwe Language)**

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

—Short Vowels: A, I, O  
Dash—as in about  
Inigwi—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: Verbs  
An action that takes no object.**


**Abi.**—S/he is at home/sits.  
**Agindaaso.**—S/he reads/counts.  
**Ojibwemo.**—S/he speaks Ojibwe.  
**Bimose.**—S/he walks.  
**Bimishkaa.**—S/he paddles along.  
**Binaakwe'ige.**—S/he rakes stuff.  
**Biinichige.**—S/he cleans.  
**Giigoonyike.**—S/he fishes.  
**Giiyose or Giiwose.**—S/he hunts.  
**Nandawishibe.**—S/he hunts ducks.  
**Andobinewe.**—S/he hunts partridge.  
**Gikinoo'amaagozi.**—S/he learns/goes to school.  
**Manoominike.**—S/he harvests wild rice.  
**Gaandakii'ige.**—S/he poles the boat.

### Niizh—2

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

A. Nindab noongom. Nindagindaas. Niwii-pimose gaye.  
B. Gidoojibwem ina? Gojitoon noongom! Nanda-gikendan!  
C. Gibimishkaan ina? Ziibing imaa nindaanis gii-pimishkaan.  
D. Giiwedinong, niwii-kiiyosemin imaa, aangodinong akandoowining.  
E. Nigozisag giigoonyikewag. Giiyosewag miinawaa.  
F. Waatebagaa. Niwii-pinaakwe'ige wayiiba.  
G. Howah! Oshki-manoomin miinawaa gaazhideg manoomin.

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



**Ajidamoo(g)  
Red Squirrel(s)**

---

### Niswi—3


**IKIDOWIN ODAMINOWIN (word play)**

**Down:**

- Please
- Or
- Greetings/Hello
- S/he hunts partridge
- Also, Too
- Those (animate)
- Wow! Alright!

**Across:**

- In the woods
- It is fall.
- S/he sits/is at home.
- S/he hunts.



**Ajidamooons(ag)  
Small/Baby(ies)**

### Niiwin—4

**Aaniin ezchigeyan?**—What you doing? 364  
**Aaniin ezchigewaad?**—What are they doing?  
**Nindagindaas.**—I am counting. 222  
**Nindagindaan(an).**—I am counting it(them) (non-living) 101  
**Nindagindawaa(g).**—I am counting him/her (them). (Living) 20-30-40  
**Bezbig, niizh, niswi, niiwin, naanan, ningodwaaswi, niizhwaaswi, nishwaaswi, zhaangaswi, midaaswi.** 459  
**Counting something: Bezbig, niizho, niso, niyo, naano,...**  
**Niizhtana—20 Nisimidana—30**  
**Niimidana—40 Naanimidana—50**  
**Ningodwasimidana—60**  
**Niizhwaasimidana—70**  
**Nishwaasimidana—80**  
**Zhaangasimidana—90**

- Ningodwaak. Ningodwaak ashi bezbig. = \_\_\_\_\_. Howah!
- Niizhwaak ashi niizhtana shi niizh. = \_\_\_\_\_. Ikidon!
- Niswaak ashi ningodwaasimidana shi niiwin. = \_\_\_\_\_
- Niwaak ashi naanimidana ashi zhaangaswi. = \_\_\_\_\_
- Gigii-agimag ina ingiw zhiishiibag? Aaniin minik? Niizhtana na? \_\_\_\_\_. Nisimidana na? \_\_\_\_\_. Niimidana na? \_\_\_\_\_

**Online Resources**  
[ojibwe.lib.umn.edu](http://ojibwe.lib.umn.edu)  
[glifwc.org](http://glifwc.org)  
[glifwc-inwe.com](http://glifwc-inwe.com)  
[ojibwe.net](http://ojibwe.net)

**Translations:**  
**Niizh—2** A. I am at home today. I read. I will walk too. B. Do you speak Ojibwe? Try it now! Seek to learn it! C. Do you all paddle along? On the river there, my daughter paddles. D. To the north, we hunt there, sometimes in a blind. E. My sons go fishing. They hunt also. F. There are bright leaves. I will be raking soon. G. Alright! Fresh new wild rice and cooked wild rice.  
**Niswi—3** **Down:** 2. Daga 2. Gemaa 3. Aaniin 4. Andobinewe 6. Gaye 8. Ingiw 10. Howah **Across:** 5. Megwayaak 7. Dagwaagin 9. Abi 10. Giiyose  
**Niiwin-4** 1. One hundred. One hundred + one = (101). Howah! 2. Two hundred + 20 and two = (222). Speak it! 3. Three hundred + sixty + four. (364). 4. Four Hundred + fifty + nine. (459) 5. Did you count those ducks? How many? (20? 30? 40?)

There are various Ojibwe dialects; check for correct usage in your area. The grammar patterns may help a beginner voice inanimate and animate nouns and verbs correctly, as well as create questions and negate statements. Note that the English translation will lose its natural flow as in any world language translation. This may be reproduced for classroom use only. All other uses by author's written permission. Some spellings and translations from The Concise Dictionary of Minnesota Ojibwe by John D. Nichols and Earl Nyholm. All inquiries can be made to **MAZINA'IGAN**, P.O. Box 9, Odanah, WI 5486; or email [lynn@glifwc.org](mailto:lynn@glifwc.org).





# Hybrid internships, LTE positions help provide valuable experience for students

By Bailey Seefeldt, PIO Summer Intern

This summer brought a host of young workers to GLIFWC offices with their sights on the future. They go by interns, limited-term employees (LTEs), and grad students, but they all came to work with staff to gather valuable experience for their future careers.

More than just the 8th rendition of a Commission-wide summer internship program, these employees are a grab bag of college-aged workers that came to learn and grow in their field through a combination of remote and in-person experiences. They come from universities across the country, from a variety of backgrounds and degree programs, to spend their summers working with GLIFWC.

This year's summer internship program brought two Inland Fisheries Section interns. **Savannah Obert-Pfeiffer** is a junior at Michigan Technological University, studying Sustainability Science and Society. She said she enjoyed her time at GLIFWC learning about many applications and opportunities in her field of study. In addition to working with the Inland team on a Comparative Walleye Recruitment study, she also helped the Great Lakes team in setting gill nets for their Siscowet study. She was excited to be able to participate in person, when she expected the internship to be mainly remote. She looks forward to finding more opportunities to explore the field of sustainability science in her future. As school resumes, she is excited to play on the Rugby team.

**Franklin Bajenske** graduated from Northland College last May with a degree in Fisheries and Wildlife Ecology. During his time as an Inland Fisheries Section intern, he enjoyed the opportunity to build on his knowledge of fisheries science through field work. He was excited to finally ride onboard an electrofishing boat and spend his summer outdoors. This summer has mostly had him working on the Mille Lacs Acoustic Telemetry Project, collecting and analyzing data about fishery movements. In his free time, he enjoys playing Frisbee and fishing.

**Augustin Rasmussen** is a junior at UW-Superior, studying Exercise Science and Public Health. After graduation he's considering pursuing graduate studies in physical therapy or nutrition. This summer he interned with the Planning & Development Division, working on a presentation about the health benefits of harvesting traditional indigenous foods. He's been able to learn more about Native American culture and foods and apply his knowledge of health to uncover how an indigenous diet can create a healthy lifestyle. He enjoys the outdoors and has spent time hunting and gathering the foods that he is currently researching. He plays tennis at UW-Superior and looks forward to the upcoming season.

The Public Information Office welcomed two summer interns. **Morgan Coleman** spent much of her summer internship working on the Sea Grant project, creating a website with educational resources for Ojibwe children's books, and developing a children's book to teach young people about the Great Lakes region. She begins her Master's in English at the University of St. Thomas in September, and she loves the field of English for the way literature can be interpreted differently depending on one's own background and experiences. She enjoys writing and performing onstage in choir and theater.

I am the second Public Information Office intern. This summer I mainly worked on the Mazina'igan publication, adding keywords to the Mazina'igan archive, writing articles for this edition, and updating the mailing lists to reduce waste. I also worked on some additional projects for the Division of Intergovernmental Affairs, looking through agendas of meetings regarding the Memorandum of Understanding, and compiled documents of conservation codes from tribes outside of GLIFWC. I am an enrolled member of the Keweenaw Bay Indian Community, and going into my senior year at UW-Eau Claire, studying English and Spanish language. I love language and the way it allows people to communicate in such complex ways, and I love examining the impact language has on culture.

The Climate Change Program welcomed graduate student **Matt Munns** to assist with several projects, including the phenology calendar and the GLIFWC Member Tribe Climate Change Assessment Survey. Matt studies Environmental Conservation at UW-Madison. He has previously collaborated with GLIFWC in a sea lamprey management project, which led to the development of his current internship. His favorite part of the experience has been learning about Anishinaabe history and perspectives on conservation and connecting with people that share his passion.

**Jenny Oren** has almost completed her Master's degree in Environmental Conservation at the University of Wisconsin-Madison's Nelson Institute. Jenny's project this summer focused on creating communication materials about Ojibwe perspectives on ma'iingan (wolf). Her favorite part of the summer was visiting in-person events like the Healing Circle Run and experiencing the importance of community firsthand. She is currently working with Wisconsin's Green Fire, a position which allows her to stay involved with GLIFWC and wolf-related issues in Wisconsin.

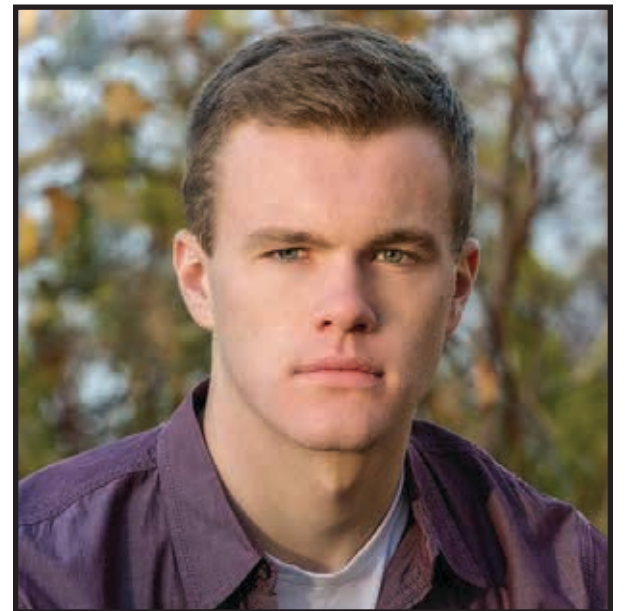
**Lisa Fink** partnered with GLIFWC on a project to understand the member tribes' perspectives on invasive species. She is a PhD candidate at the University of Oregon studying Environmental Science. She found GLIFWC through an online webinar held by the US Fish and Wildlife Service, where she heard (see GLIFWC internships, page 19)



Savannah Obert-Pfeiffer



Franklin Bajenske



Augustin Rasmussen



Morgan Coleman



Bailey Seefeldt



Matt Munns



# Omeshkoozog back in Nagachiwanong?

(continued from page 11)

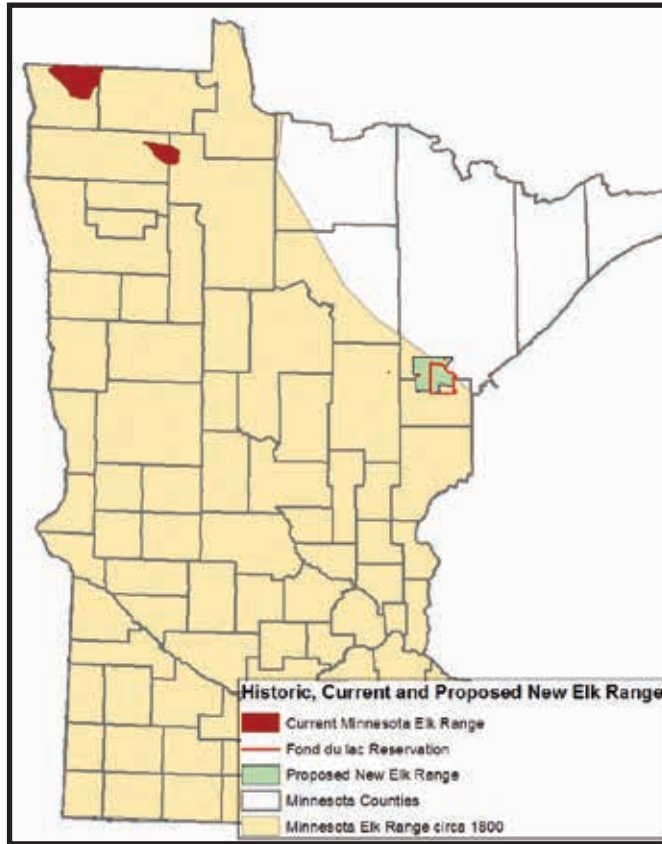
Department of Natural Resources (DNR) and calls for some elk to be moved gradually from their current range in far northwestern Minnesota. Because that area is largely dedicated to agricultural land use, the herd there reproduces quickly, and consequently a large percentage must be culled annually by state-licensed hunters to keep the animals within strict numerical limits.

The current plan calls for several years of capture and transport of small numbers of elk from existing Minnesota herds to establish a new herd in the Fond du Lac State Forest and on the reservation itself.

Eventually, according to Schrage, that herd could provide a sustainable food source for subsistence treaty-hunters both on and off-reservation as well as hunting opportunities for non-Indian hunters off the reservation.

Fond du Lac has been very deliberate and methodical in creating its plan to reintroduce omashkooz into the Nagachiwanong region. In many ways, the area is well-suited for an elk herd because so much of it is public land and heavily forested. The tribe made sure to gauge public opinion, both tribal and otherwise, in northeast Minnesota before submitting its plan to the Minnesota DNR and found widespread support for the cause.

Cooperation and coordination with the DNR will be an essential part of a successful reintroduction since the animals must ultimately reside both on and off-reservation to have a chance at long-term herd viability. "FdL will not get elk out of northwest



Minnesota without Minnesota DNR buy-in," commented Schrage.

One justification for sourcing elk from within Minnesota is to reduce the risk of chronic wasting disease (CWD) being spread into the Ceded Terri-

tories. CWD was less prevalent on the landscape when the elk from Kentucky were used to establish the Wisconsin herds, but it is a major concern now. Unlike Wisconsin years ago, Minnesota is fortunate to have an in-state source of elk to draw from.

Another potential variable that could change considerations would be the successful development of a live-animal CWD test. Currently, the only way to confirm if an animal carried CWD is through a post-mortem test.

A live-animal test would be a game changer for many reasons, not least of all that it could allow sourcing of elk from multiple states, but that development could still be many years away from successful deployment.

While the process is still in its early-to-middle stages, and Schrage expects adjustments to be made to the plan following DNR feedback, he is hopeful that a herd will be established that would benefit both tribal members and all local citizens. From Fond du Lac's perspective, the elk reintroduction is a way to reinvigorate cultural practices and traditional food-gathering with a creature that has been absent from the 1854 Ceded Territories for far too long.

"The Band's Reservation Business Committee believes restoring a wild elk population to areas where band members retain their historic treaty rights is in the Band's best interest," said Chairman Dupuis.

To see the plan, visit [fdlrez.com/rm/downloads/elkproposal\\_070621.pdf](http://fdlrez.com/rm/downloads/elkproposal_070621.pdf)

## Keweenaw siscowet survey



Inland Fishery Intern Savannah Obert-Pfeiffer (right) headed out on the Big Lake in late-June to join fellow college students Jossie Beaulieu-Newago and Mike Johnson on GLIFWC's annual survey of siscowet lake trout. Conducted in Lake Superior on the east side of the Keweenaw Peninsula, data from the survey is shared each year with GLIFWC's research and management partners. Using a variety of net mesh sizes, researchers capture, record data, and release multiple age groups of siscowet. Beaulieu-Newago and Johnson worked as limited term employees for the GLIFWC Great Lakes Section. (M. Plucinski photo)

## Disasterous wolf policy

(continued from page 1)

Despite clarification from state wildlife researchers, members of the DNR Board—as well as anti-wolf organizations—continue to claim that a 1999 Wisconsin wolf management plan allows hunters to drive down ma'iingan numbers to 350 animals. That threshold—established when the state's small wolf population was still early in its recovery—was only instituted to trigger a suite of management considerations, including lethal controls for wolves that deplete on livestock, and a hunting and trapping season. DNR Deputy Secretary Todd Ambs reminded the board that 350 served as a wolf recovery touchstone, not a population cap. The board, however, remained indifferent.

"The board showed a real lack of respect for tribal communities, for ma'iingan," said Johnson, who also provided testimony during the August 11 meeting. Ma'iingan is a clan animal, a central figure in the Anishinaabe creation story, and cherished as a relative, or family member, to many native people.

Ojibwe bands are evaluating their options and plan to respond with a wolf declaration shortly. For tribes, the best use of wolves comes in the form of live animals, on the land, helping to enhance and maintain healthy ecosystems. The Voigt Intertribal Task Force develops policy recommendations for GLIFWC-member tribes in the 1837 and 1842 Ceded Territories. Please visit [glifwc.org](http://glifwc.org) for more information.

## GLIFWC internships

(continued from page 18)

from GLIFWC's TEK Outreach Specialist, Melonee Montano. She has enjoyed connecting with people and the beautiful Great Lakes region, and learning about indigenous attitudes towards invasive species.

Finally, Lydia Host (not pictured) is a graduate student at the Harvard T.H. Chan School of Public Health. Since her graduation in 2016 from Tufts University with a degree in English Literature, she has worked in food service; on projects for early childhood education in Pottstown and Union City, PA; and on housing insecurity and public art in Philadelphia. In the past six months, she has had the privilege of working with GLIFWC to study groundwater governance and management among Tribes in the Great Lakes Basin. Her favorite color is purple, her favorite fruit is the raspberry, and her favorite letter is the silent g in "phlegm".

GLIFWC would like to say chi-miigwech to all students who worked with us this summer.

Morgan Coleman contributed to this article.



Jenny Oren



Lisa Fink



# Finding mino-bimaadiziwin: A view from New York to Wisconsin

By Yaz Liow for Mazina'igan

1227 miles away from the GLIFWC headquarters is a concrete jungle, New York City, my home. I traveled the distance to learn about mino-bimaadiziwin, or “the good life,” through a program called Where There Be Dragons. After spending 25 days camping, reflecting, and learning in northern Wisconsin, it comes as no surprise that I’ve been juggling new experiences. Different priorities. Different perspectives. Different communities. Different definitions of the good life.

The good life seems to be a common topic of Wisconsinite conversation, especially with Lake Superior as a prompt. At its core, the good life is about relationships. When we harvested a black ash tree and wove its wood into baskets, we spoke to it and thanked it with an offering of tobacco. We forged a relationship with the tree over days of pounding, peeling, and weaving. We listened to its story as we unraveled its years of life, one ring at a time, turning it into a craft of our collaborative efforts.

On the other hand, I’ve never had a conversation with a New Yorker about the good life. Instead, we talk about the successful life. Conversations circle around the abstract idea of success, performance, and monetary gain—all under the guise of “preparing for the future.” The New Yorker’s relationship with work and grandeur overshadows their relationship to themselves, others, and the environment around them.

Although we are all on our own separate journeys, we are travelling together. Our hearts, bodies, minds, and spirits are loosely aligned, gravitating together. I came to Wisconsin eager to learn about the people around me. From their stories, I was surprised to learn about myself. I had forgotten to listen to myself in pursuit of success. I discovered that my mind and body were screaming at me for nourishment and care. My heart wanted company, and my spirit needed freedom.

Every morning of the program started with a check-in that prompted us to share our physical and emotional state, and our needs. Uncomfortable with the spotlight, I struggled to ask myself how I was doing. My New Yorker brain initially thought the exercise useless, but then I had a revelation. How am I supposed to engage with my community when I, a part of the community, am not fully present? How am I supposed to support it when I cannot support myself?

## Waawaashkeshi

(continued from page 5)

### Additional ways to sample hunter-harvested deer

Minnesota, Wisconsin, and Michigan state DNRs will also be conducting CWD surveillance and offering CWD testing for deer hunters in those states. It is best to check with the local state DNR biologist or visit the DNR CWD website to get the most up-to-date information on CWD testing locations.

Tribal members who get their deer tested through state CWD testing programs will generally receive their results in 1–2 weeks. Testing through GLIFWC can take about two weeks, depending on the location of the registration station and time of year. Test results may take longer during and immediately after the state gun deer seasons when most samples are sent to the diagnostic laboratories. Some individual tribal communities might also be offering CWD testing for their members, so be sure to check with your tribal natural resources department for more information.

### Tribes active in disease management

The Voigt Intertribal Task Force approved the establishment of a tribal CWD management area in 2018, which will remain in effect in 2021. The tribal CWD management area has special regulations concerning the transport, disposal, and registration of deer harvested within the tribal CWD management area.

The purpose of the special regulations is to prevent hunters from transporting whole deer or deer parts with a higher risk of being infected with CWD back to their communities. Deer harvested within the tribal CWD management area must be registered remotely to prevent whole carcass transportation outside of the management area. Parts of the deer, including the spinal column and head, cannot be transported outside of the area. Carcass waste must be disposed of in a landfill or carcass waste collection site within the management area.

The tribal CWD management area consists of tribal wildlife management units 37, 38, 42, and 52, in portions of Oneida, Lincoln, and Langlade Counties of Wisconsin (see map), between the Lac du Flambeau and Sokaogon (Mole Lake) tribal communities. The Wisconsin DNR will have disease testing drop-off sites located within the tribal CWD management area. All state DNR agencies have developed CWD websites with maps and additional information on the location of testing sites and carcass waste collection sites.

Please visit GLIFWC’s CWD webpage ([data.glifwc.org/cwd/](http://data.glifwc.org/cwd/)), which includes an interactive map of known locations of CWD-positive wild deer and captive cervid facilities that have tested positive for CWD. There are also safe handling and disposal recommendations, answers to frequently asked questions, and links to a video series that covers safely field dressing and boning-out deer meat using methods to avoid areas where CWD prions accumulate in deer.

The good life instills a sense of awareness, gratitude, and understanding. Everything happens for a reason, no matter how negative the experience may seem at the time. I listened to an elder chuckle about the time someone threw stones at him. Initially frustrated and angry, he soon softened up. “The rocks are our grandfathers,” he explained. “How nice of them to visit me.”

I returned home more mindful of myself and others. Wisconsin reframed my thinking to be more community oriented. Mino-bimaadiziwin may seem incompatible with city life, but I think they go hand in hand. A “successful” life is meaningless without intention and community. No doubt it’s more difficult to speak to the concrete streets than a forest floor, yet they still came from the same earth. The same earth that I come from, and the same earth I will forever be a part of.

*Editor’s note: Liow is an incoming first-year at Yale University. They hope to pursue a major in Classics or Comparative Literature.*



Liow weaving a black ash basket near the Lake Superior south shore. (JP Figueiredo photo)

## Great Lakes initiatives

(continued from page 9)

the Great Lakes can support the bridging of TEK with their actions. Members of the U.S. Caucus are beginning to explore the best ways to connect the activities under the Agreement with appropriate TEK.

While these are just a few of recent initiatives around the Great Lakes to bolster the role TEK plays in interjurisdictional Great Lakes management, they show that governments and intergovernmental bodies are recognizing its importance and working to understand how all knowledge systems can be utilized.

## Oshki-nitaagewin

(continued from page 11)

passage of the Endangered Species Act of 1973. Today, in 2021, this idea of killing animals for sport was displayed in Wisconsin by the controversial wolf hunt which had little to do with conservation science or ethics.

From an Anishinaabe perspective, there should be a certain level of sorrow and humility in the process of killing an animal for sustenance. Hunting can be a highly emotional experience for some and an exhilarating experience for others. This is why *oshki-nitaagewin*—First Kill Ceremony—is an integral part of Anishinaabe well-being, *Mino-bimaadiziwin*.

# Upper Michigan students explore healing through art

By Bailey Seefeldt, PIO Summer Intern

**Baraga, Mich.**—At Keweenaw Bay Ojibwa Community College (KBOCC), students are preparing for future careers while connecting with their community and heritage. This past spring, KBOCC students were offered the opportunity to learn new skills and create beautiful art to demonstrate how art is an act of healing. Funded by the National Endowment for the Arts, the project is entitled Great Lakes Indigenous Arts, Education, and Healing project, or GLIAEH, and its purpose is to inspire young indigenous people to embrace the healing properties of creating art.

Students were invited to join up to four workshops centered around practical applications of art, healing, and entrepreneurship skills. GLIAEH was created in collaboration with the Northern Michigan University's (NMU) Center for Native American Studies, and the NMU School of Art and Design. Indigenous students from both NMU and KBOCC participated in workshops to build skills and a greater understanding of their cultural connection to art and healing.

One workshop, taught by Ojibwe artist Michelle Reed, provided students with materials and instruction to create their own hide dolls dressed in regalia.

April Lindala, GLIAEH Project Lead and Professor of Native American Studies at NMU, said that hide dolls had been a part of the plans since the very first idea of the GLIAEH project.

"When [Michelle] and I were young, we never saw a lot of dolls



Brain-tanned hide doll with horse hair wig, Teton Trade Cloth dress, pucker-toed hide moccasins and other accessories. Created by Holly Sparks, Garden River First Nation and Sault Ste. Marie Tribe of Chippewa Indians.



Cradleboard made by Serene Gauthier.



Michelle Reed demonstrates how to prepare hide for cutting accessories for the hide dolls regalia. ([art.nmu.edu/gliaeh/gallery.html](http://art.nmu.edu/gliaeh/gallery.html) photos)

that looked like us; representation matters. To be a young girl and see a doll that looks like you and wears an outfit that reflects culture is significant," Lindala said.

Creating these dolls was no quick task. The workshop was held over six days with around 30 hours of worktime. Still, each student who participated now has a handmade hide doll, and the accomplishment of having created something beautiful.

Another workshop, taught by Ojibwe artist Raeanne Madison, featured instruction on creating cradleboards, as well as information about their cultural significance. The cradleboard, or tiikiinaagin, holds a rich history and represents traditional values surrounding raising children.

Additionally, KBOCC's Business Chairperson Megan Haataja held a workshop on art and entrepreneurship. In this workshop students learned about the intersections of art and business, and learned about the steps of creating and sustaining a successful business. KBOCC's Terry DeRocher Lerma taught a workshop directed towards art and healing in indigenous communities. Participants compared the different ways cultural artifacts and artistic practices have been valued in Euro-American communities versus indigenous communities. Students were encouraged to pursue their own research into the ways in which different cultures interact with art and healing practices.

These workshops were all offered remotely online, and the hide doll and cradleboard workshops also welcomed students to work in a socially distanced studio space if they desired. The GLIAEH project was intended to be held in summer of 2020, but the global pandemic forced organizers to delay the workshops and restructure the program to be successful in a safe manner.

After the workshops, students were invited to share photos of their work on GLIAEH's web gallery. To see more student works and read more about the project, visit [art.nmu.edu/gliaeh/gallery.html](http://art.nmu.edu/gliaeh/gallery.html).

## Ma'iingan continued

(continued from page 2)

Suffice it to say that over the course of his life, Pros had killed a stunning number of animals.

That morning on Thunder Lake, the ducks were not cooperating, but the boredom was finally broken when a hawk swooped in to scout the decoys. This was 1930, my dad barely a teen; Wisconsin still had a wolf bounty in place and predators in general were seen as a threat to game abundance. Dad pulled up and crumpled the bird, then looked expectantly to the uncle he so admired, anticipating praise for his quick reflexes, his efficient and effective kill of the competition.

Pros responded not with a mentor's praise, but with a tongue lashing that my father could relive, in detail, four decades later. The language was considerably more "colorful", but the message was this: killing is never thoughtless, never casual, never for fun. You never kill anything without purpose and need, and you respect the animal you have taken. It was a message that was markedly similar to the Ojibwe world view I would not learn until much later, a view that goes even further. In that view,

you do not take an animal's life, so much as accept it as a gift, an answer given to a request made out of need.

Thus, it was jarring to me when the houndsman stated—and repeated several times—that what happened in February "should be celebrated."

What happened in February was the killing of 20% of Wisconsin's recently delisted wolf population in just 60 hours. What happened in February was state-licensed hunters taking not only the entire state quota, but all the animals the tribes tried to protect so they could provide cultural and ecological benefits the tribes depend on, and then another 18 animals just for good measure.

And all that happened in February was nestled in the middle of the wolves' breeding season, ensuring that not only the existing generation was decimated, but the next as well. But trophies—and revenge—were gained, so some will find reason to celebrate, and to look forward to another chance come November. But I know that many tribal and non-tribal folks—including Pros, if he were still around—will be having none of that.

## Call for artists

GLIFWC's Public Information office is looking for Ojibwe artists to work on upcoming posters, and other projects (i.e. booklet covers, floral designs, etc.). If you are interested in working with us, please email [pio@glifwc.org](mailto:pio@glifwc.org).

## State park hunts

(continued from page 3)

December 1-5. Mille Lacs Band and Fond du Lac Band hunters frequently participate in the hunts, while St. Croix Tribe members also travel the short distance from the Danbury, Wis. area to pursue white-tailed deer at St. Croix State Park. Several youth-only hunts are also available at St. Croix and Banning State Parks as well.

Apart from special seasons, hunting is prohibited within Minnesota state parks, allowing deer densities to increase until special hunts are scheduled.

For tribal members interested in joining these state park hunts, see your local registration station clerk. Permits are generally available the week prior to each scheduled hunt.

—C. Rasmussen



# Ojibwe culture, Great Lakes educational resources available for young readers

By Morgan Coleman  
GLIFWC/Sea Grant Intern

The Great Lakes and Ojibwe culture are intertwined on many levels. Understanding the land and the lakes is crucial to understanding Ojibwe cultural identity. Teaching children about this connection early can help them become educated citizens and activists.

To help connect educators and parents to quality reading material, a children's guide to the Great Lakes and a website with educational resources for Ojibwe children's books will be available this fall. For a sneak peek, check out this list of featured books.

Joanne Robertson's *The Water Walker* is the true story of Josephine Mandamin, an Anishinaabe water activist who helped found the Mother Earth

Water Walkers in 2003. The book follows Nokomis (Grandmother) Josephine as she walks countless miles to raise awareness for the water. Robertson introduces children to some basic Ojibwemowin vocabulary, as well as the issues facing water and what we can do to help. Nokomis serves as an inspiring example of indigenous activism for kids to look up to.

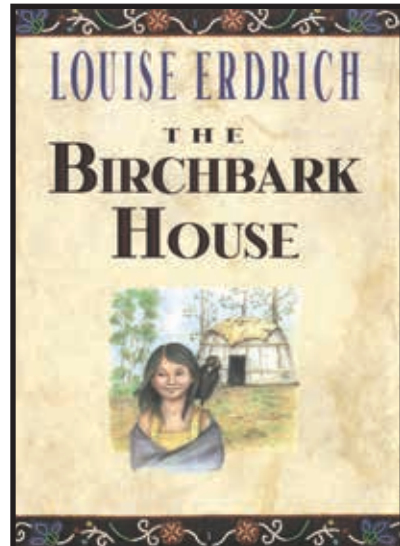
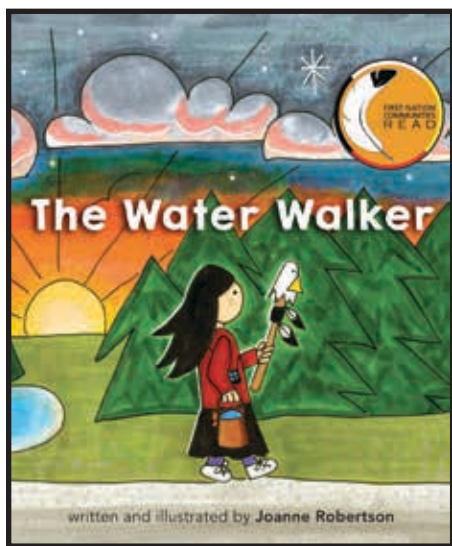
Recent Pulitzer Prize winner Louise Erdrich's *The Birchbark House* follows a young girl named Omakayas, or Little Frog, through a year in her life on Mooningwanekaaning, the Island of the Golden-Breasted Woodpecker—what we now know as Madeline Island in Lake Superior. Omakayas is a wonderful narrator, and her story illustrates the importance of personal relationships with the natural world.

Gordon Regginti's *The Sacred Harvest: Ojibway Wild Rice Gathering* is an honest look at how the ancient Ojibwe practice of wild ricing carries on today. Following an Ojibwe

family on Leech Lake, a young boy named Glenn goes ricing for the first time. Regginti explains the process as well as the historical and cultural significance of wild rice in Ojibwe culture in an easy-to-understand fashion.

GLIFWC's *Growing Up Ojibwe* is a great introduction to many aspects of Ojibwe culture, told from the perspective of a 15-year-old Ojibwe boy named Tommy Sky. Learn about spearfishing, lacrosse, wild rice, the Ojibwe language, and more! This book serves as a great educational resource for those who may be new to Ojibwe culture.

**Editor's note:** GLIFWC/Sea Grant Interagency Intern Morgan Coleman is a recent graduate of the University of Wisconsin-River Falls, and she will be starting her Master's degree at the University of St. Thomas this fall. Coleman drew from experiences earning an English degree to review and compile literary resources on Great Lakes Ojibwe.



## Ma'iinganag communications



(continued from page 16)

### Lip curl, ears, tail

Wolves and other canines use physical expressions to communicate with each other. One such way of communicating is through facial expressions—examples being lip curls and ear positioning.

Wolves use **lip curls** to tell each other not to do something or to provide a warning. The animals curl their lips in situations like dominance-play behavior, or when they are claiming food or a cache (hidden food).

**Ear placement** also has meaning for wolves. Researchers have studied ear positions enough to get a basic idea of a canine's mood or intentions by looking at the ears. Ears that are tipped back are typically a sign of discomfort or submission while ears tipped forward are a good indicator that something has caught the wolf's attention and interest.

The "ears forward" wolf is alert and serious. Researchers have also been able to recognize communication patterns in a wolf's **tail** position. A tail held high is a good indicator of confidence—it is typical in a dominant male or female.

If the tail is just hanging, relaxed, then the wolf is probably relaxed, while a wagging tail is a good indicator of the wolf with excess energy that may begin to exhibit play or social behaviors.

If the tail is positioned down next to the legs, but not tucked, then the wolf is starting to feel uncomfortable or losing confidence.

If the tail is completely tucked between the legs, the wolf is extremely uncomfortable, lacking confidence or being submissive, depending on the context. These behaviors are strong indicators of a wolf's mood or condition. They can be seen throughout a wolf's life in many different social or survival situations.

For more information on wolves visit [wolf.org/wolf-info/wild-kids](http://wolf.org/wolf-info/wild-kids) and learn about wolf packs, vocabulary, fun facts, wolf families, and play the Wolf Quest video game.

(Reprinted with permission from **Wild Kids**, Winter 2018, a publication of the International Wolf Center, Ely, Minnesota [wolf.org](http://wolf.org))

### Original Man and Ma'iingan

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

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

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

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

—**The Mishomis Book: The Voice of the Ojibway**  
By Edward Benton Banai





## Load up the ricing canoe!

### *Lisa David sails into retirement*

Lisa Dlutkowski arrived at GLIFWC in 1993, taking on the role of the agency's first Michigan Ceded Territory Biologist. She went on to build a family and embraced key development roles in the 1999 Wild Rice Research & Management Symposium and 2009 Minwaajimo Celebration.

In 2010, the Indiana native—today known as Lisa David—stepped into the newly created Manoomin Biologist position, working with husband Peter on wild rice stewardship across Ojibwe Country.

After an accomplished career, she makes the move to retirement this year. The Voigt Intertribal Task Force hailed her contributions to protecting and enhancing treaty resources in the Ceded Territory in a June 3 resolution.

From all of us at GLIFWC, very best wishes on your retirement, Lisa!

—C. Rasmussen



## Manoomin outlook

(continued from page 3)

So, please take all the rest of this with a grain of salt, and please spend some time before the season confirming my hunches or proving me wrong by scouting on your own. But, here is what I think:

Go west young ricer. Or old ricer, or middle-aged ricer.

It's clear that overall abundance in north-central Wisconsin (Iron, Vilas, Oneida and Forest Counties) is way below average. In fact, with the possible exception of 2010, when brown spot disease devastated Wisconsin's rice beds, it may be the worst year I have seen in that region. While some sites have fair to average beds, they are few in number, and I doubt if the tribal rice chiefs will opt to open more than a couple of the date-regulated rice waters in that area. Even river beds, the most consistent producers, looked fair at best overall. I was surprised that lakes in this area have not seemed to have fallen much from the recent wet years that have held them high. I don't think we will see good abundance in this area until they do; I am hoping that may be next year. For this year, Island Lake in Vilas will help fill some pantries, as will the west lobe of the Big Lake Thoroughfare.

Moving westward in Wisconsin, things brighten a bit, as good stands become more common. Spring Creek Wildlife Area in Price looks at least average, and abundance is pretty good on both north of and south ends of the Chequamegon Waters (Miller Dam) Flowage down in Medford County.

Conditions continue to generally improve as one moves towards the higher density of rice waters in Northwest Wisconsin, but results are very inconsistent. The Hayward area that was quite good last year is less so this year. Pacwawong in Sawyer county has a lot of rice, but from the air it looked like it may be headed for an outbreak of Brown Spot disease, which—while of no health concern to humans—could greatly limit seed production. Nearby Totogatic Lake in Bayfield County is supporting many acres of rice, but much of it at quite low density.

As is often the case, Burnett County is likely to lead the way in harvest in the state. Clam Lake looks good again, and coupled with Long Lake and North Fork Flowage, picking in this area could be quite good if the weather cooperates.

Further west, into Minnesota, brings the whole other end of the spectrum, water-wise. The mild drought of last year—which triggered really nice abundance on many waters—has continued, and gotten worse. So far, it does not seem to have hurt the rice—some beds look great—but it might hurt ricers, at least the human variety.

From the ground, I saw a couple of places where water-level gauges had to be extended downward in order to get a reading, as the lake levels dropped to lows rarely seen. Depending on how the rains fall in the final weeks of the growing season, it may be hard to get a canoe into some places. It reminded me of some of the old stories I have heard about tribal members strapping on snowshoes to pick rice and provide for their families in drought years. Hopefully it will not come to that.

So, with all this in mind, I can confidently predict that you and your ricing partner are likely to have a harvest that falls somewhere between bare minimum and bountiful. The good news is, ricing is always a gift, either way.

Three final messages: Please use GLIFWC's website to save you some miles in your scouting. Sites listed as poor or fair not likely to be worth a trip unless they are right in your back yard. Every driving mile reduced helps protect rice from perhaps the greatest threat it has ever faced, in climate change. Secondly, when manoomin is scarce, it can be all the more tempting to get into the beds a little early. Please think of the rice, and other ricers, and let the rice mature before seeking out this gift. And finally, I expect this to be my last year sharing these annual thoughts. It has been a pleasure. I hope that next fall, Lisa and I might cross your path in a rice bed somewhere.

Have a great season!

## Red Cliff Fish Company staff complete food safety training

By Augustin Rasmussen, Planning & Development Intern

During the week of July 26th, Red Cliff Fish Company staff participated in a 3-day Seafood HACCP (Hazard Analysis and Critical Control Point) training hosted by GLIFWC.

The three-day course included classroom learning at the Red Cliff Community Health Center and hands-on training at the Red Cliff Fish Company. The HACCP course was taught by Ron Kinnunen, MSU Senior District Extension Educator Emeritus, Michigan Sea Grant Program, Jim Thannum, head of GLIFWC's Planning and Development division, and Owen Schwartz, GLIFWC Community Dietitian. Kinnunen and Thannum have been teaching the course for over two decades. Schwartz earned her HACCP training certification in 2018 and will continue to work alongside Kinnunen and Thannum in upcoming HACCP training courses.

The first day of class involved the history and principles of HACCP, moving onto hands-on training with monitoring instruments, thermometers, salometers, and recording thermometers on the second day. On day three, participants demonstrated to the instructors what they learned by preparing their own HACCP plans.

"By the end of the course, Red Cliff Fish Company staff were fully trained and ready to apply what they learned," Schwartz said. The company sells wild-caught Lake Superior fish from a retail shop as well as wholesale markets.

The Seafood HACCP course provides training for the seafood industry and regulators consistent with federal law and is required for sale of fish and fishery products within the United States. The training also teaches fish processors to identify, evaluate, and control hazards related to foods and food products.

The Seafood HACCP course is offered annually by GLIFWC in partnership with Michigan SeaGrant, typically in early December. GLIFWC provides the training for free to eligible members of GLIFWC's member tribes who are fishermen or fish processors, to their employees, and subsistence harvesters.

If you are interested in participating in the next HACCP training contact Owen Schwartz at [ohschwartz@glifwc.org](mailto:ohschwartz@glifwc.org) for more details.



At Red Cliff Fish Company processing facilities, staff learned how to best maintain records and avoid hazards related seafood. From left, HACCP Instructors Jim Thannum (GLIFWC) and Ron Kinnunen (Michigan Sea Grant) review recordkeeping procedures. (A Rasmussen photo)



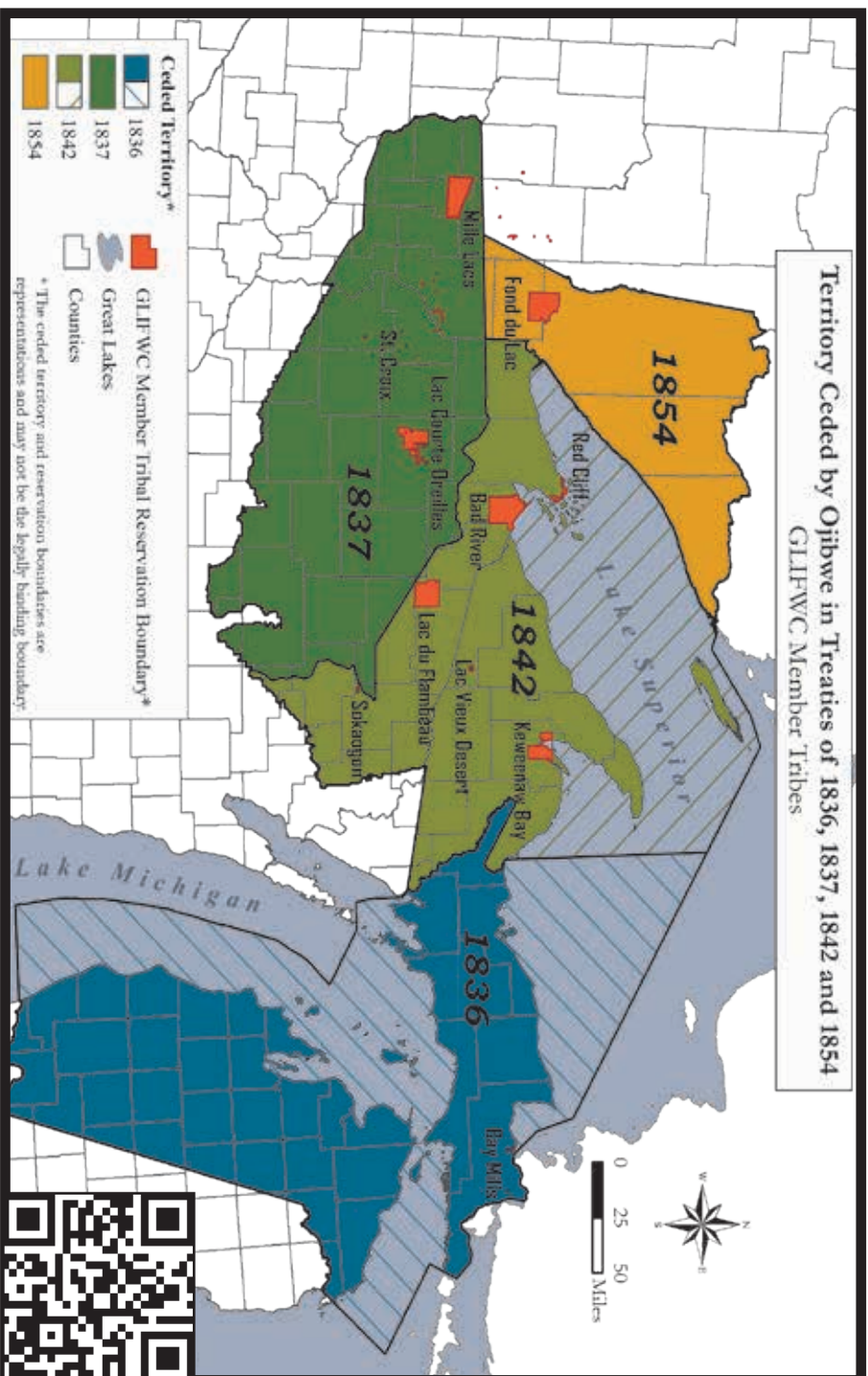
GLIFWC HACCP Instructor Owen Schwartz (right) demonstrates how to use calibration equipment to ensure food safety. (A Rasmussen photo)



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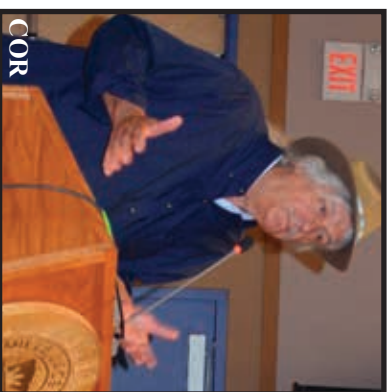
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## History at center of 2021 in-person/virtual Sandy Lake Tragedy Ceremony

**Mille Lacs, Minn.**—When grit, skill, and determination are not enough, it can take a chance encounter to dramatically change the course of history. For the Ojibwes of the upper Great Lakes who journeyed to Washington DC in 1852 under the leadership of Chief Buffalo seeking an end to removal efforts, catching the attention of US Senator George Briggs in a restaurant proved pivotal.

“Briggs was a very good friend of President Millard Fillmore,” said History Professor Rick St. Germaine July 28, a Lac Courte Oreilles Ojibwe and special guest at



**Professor Rick St. Germaine**

the Mikwendagoziwag Ceremony held at Mille Lacs Band Reservation.

“Briggs arranges a meeting between Buffalo’s Indian delegation and President Fillmore. There’s a classic, a classic-style ceremony that happened like the one we had here this morning led by Joe Nayquonabe”

Not long after Chief Buffalo’s delegation met with the President, government efforts to force Ojibwe from their homelands ended. It’s a fascinating story captured in the GLIFWC film [youtube.com/watch?v=u6VatLfy3CE&t=3s](https://www.youtube.com/watch?v=u6VatLfy3CE&t=3s)



**DAGW AAGIN 2021**

**INSIDE:**  
The fight for Ma'ingan's future  
Baapagimaak reckoning  
Reconnecting the Healing Circle