Mazina'igan

A Chronicle of the Lake Superior Ojibwe

Published by the Great Lakes Indian Fish & Wildlife Commission

SPRING 2024

Mille Lacs decision at 25

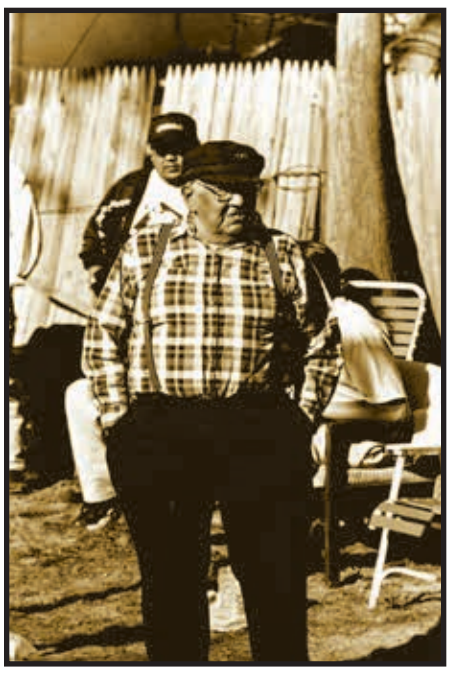
By Charlie Otto Rasmussen
Editor

From ceremonies to special events to simply participating in the open-water fishing season this spring, Ojibwe people are celebrating a quarter-century since the highest court in United States affirmed treaty-negotiated harvest rights in the Minnesota 1837 Ceded Territory and beyond.

The March 24, 1999 *Minnesota v Mille Lacs* ruling served as a bookend to litigation that spanned the 1990s as the Mille Lacs Band of Ojibwe pushed back against state policies denying reserved rights spelled out in the 1837 Treaty to hunt, fish, and gather natural resources off-reservation.

"The Band suffered for a decade waiting for that news to come," said Tadd Johnson, longtime senior advisor to the Mille Lacs Band and a Bois Forte Band citizen.

Johnson remembers the moment when he and MLB Chief Executive Marge Anderson received word at the Band's government center. "A call came in and the receptionist Bonnie Sam [said] 'Hey, Marge, we won our case!'



Mille Lacs Band elder Jim Clark spoke to an intertribal gathering in Washington DC December 2, 1998 prior to the US Supreme Court hearing in the Minnesota v Mille Lacs ***case. (CO Rasmussen photo)***

Suddenly the entire building erupted in cheers and jubilation. That was the end of the workday!"

Unity in law, Ojibwe traditions

At the time, the outcome of *Minnesota v Mille Lacs* was anything but assured. With potential nationwide implications across Indian Country, Ojibwe treaty rights hung in the balance at the turn of the Millennium.

Uncertainty had settled in since the United States Supreme Court on December 2, 1998 considered arguments about whether an executive order by President Andrew Jackson, Mille Lacs' 1855 Treaty, or Minnesota's accension to statehood, had extinguished the terms of the so-called 1837 Pine Tree Treaty. There was a lot to unpack.

Indian law experts and spiritual leaders alike prepared over the nine months leading up to the December hearing in Washington DC.

Attorneys for Wisconsin's "Voigt" tribes—the state's six Ojibwe bands—the Fond du Lac Band in Minnesota, and the US Government helped the Mille Lacs Band prepare their case against a coalition of Mille Lacs Lake property owners and the State of Minnesota. Legal teams conducted research,

(see Mille Lacs, page 3)

Journeys far & near deliver unexpected waabizheshi comeback in Apostles

By Allie Carl
GLIFWC Wildlife Biologist

Waabizheshi. (National Park Service photo)

A decade has slipped by since waabizheshi (the American marten) was rediscovered on Lake Superior's Apostle Islands after more than an apparent 40-year hiatus.

The re-establishment of martens on the islands came as a surprise to many who study the elusive carnivore, and it raised a lot of questions. What might be the most surprising though, is where they came from.

American martens are small but fierce carnivores found in the northern and eastern reaches of the Ojibwe Ceded Territories. While marten populations are currently ample enough in Minnesota and Upper Michigan to sustain harvest seasons, they are listed as endangered in Wisconsin by Ojibwe tribes and state authorities.

Martens were extirpated (locally extinct) by the 1930's due to overharvest and intense logging practices. Only a small remanent population remained in northeastern Minnesota. Consequently, in the 1950's, the state of Wisconsin engaged in a series of reintroduction efforts in attempt to restore martens back to the state. The first reintroductions occurred in 1953 and 1956 when ten martens were brought from Montana and British Colombia and were released on Stockton Island.

Over the next 10-15 years, sporadic marten reports emerged from on the islands, but the last recorded observation occurred in 1969. The marten reintroduction on the Apostle Islands was ultimately considered a failure by the Wisconsin Department of Natural Resources.

In the meantime, from the 1970's to 2010, large-scale marten reintroductions and augmentations (bolstering existing populations) occurred on the Wisconsin and Upper Michigan mainland with some success. Wisconsin reintroductions were concentrated in the Chequamegon and the Nicolet National Forest, while nearby Michigan reintroductions occurred in the Porcupine Mountains, Hiawatha National Forest, and in Marquette, Baraga, and Iron counties.

These martens were primarily brought in from Ontario, Canada and northern Minnesota, but Wisconsin did acquire additional martens from Colorado as well in exchange for Wisconsin river otters.

(see Apostle Islands waabizheshi, page 12)

zhigaagawenzhiig
(ramps or wild leeks)

K. Smith

Zhigaagawanzh is a perennial that grows from a bulb. They are strongly rooted in the soil.

Springtime harvesting must be done in a sustainable way so this plant relative will be available for future generations.

Only take what you need.
—K. Smith

zhigaagawenzhiig

Ningabii'anong run/walk

25th Anniversary of Mille Lacs v. Minnesota

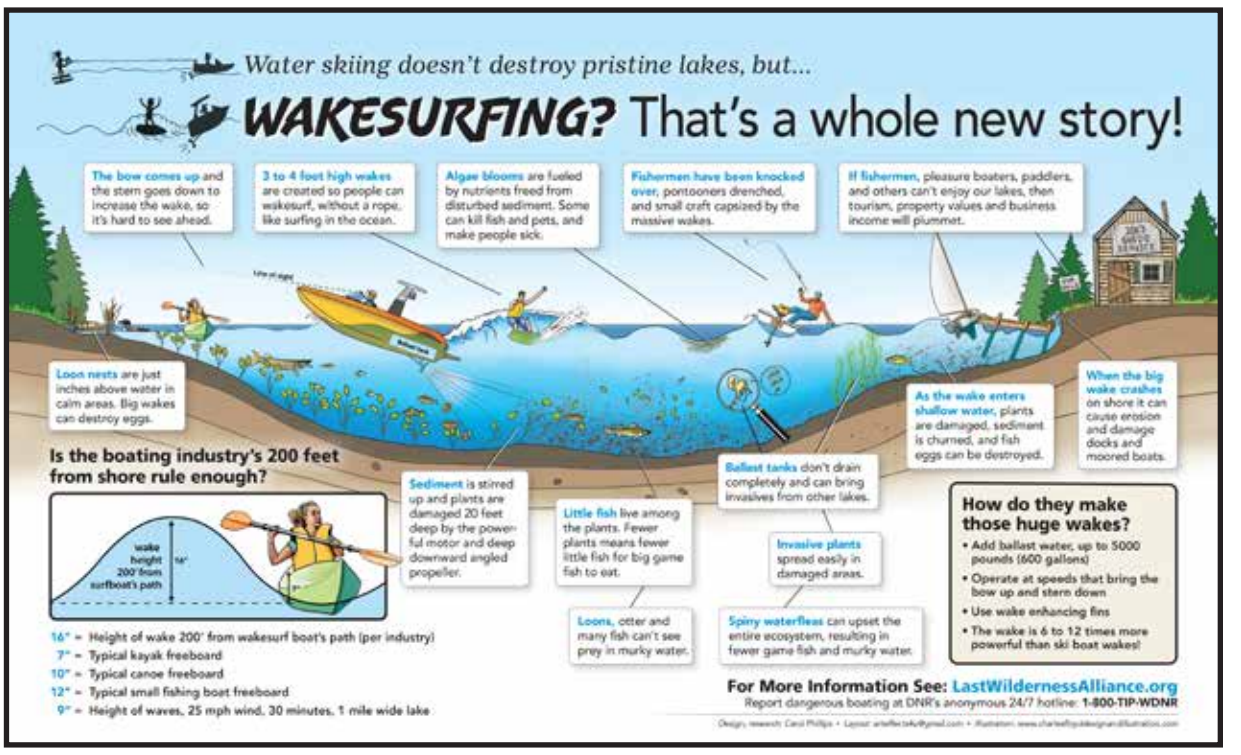
March 21, 2024

Run
Walk
Pray
Celebrate

A rude awakening:

Wake boats can threaten lake ecosystems

Editor's note: Wake boats are increasingly appearing on freshwater lakes. For wake surfers in tow, the water-blasting summertime trend can be a lot of fun. But at the water line and below, the scouring action of water displacement imposes a burden on aquatic ecosystems. In a narrative exploration of wake boat impacts, author Mark Luehring looks ahead to the upcoming boating season.



By Mark Luehring
GLIFWC Inland Fisheries Biologist

On a beautiful June morning, the bright yellow sun shone in a clear blue sky as it crested over the towering lakeshore white pines, glistening on the glass-calm waters of a northwoods lake. The water rippled ever so slightly at the surface with emerging aquatic insects. An intermittent splash and resulting ripple ring could be seen near the shoreline from fish surfacing to feed on bugs and minnows. The dew shimmered in the sunlight before dripping off the shoreline trees and shrubs like mini raindrops filtering through the branches.

A pair of loons swam near their nesting area, searching for a bluegill or perch meal to share with their young. A male smallmouth bass fanned his fins on his rocky nest, guarding his clutch of eggs. A fresh green aquatic weedbed strained towards the warmth and light of the sun, each stalk trying to grow taller than its neighbor. Juvenile perch hid among the base of the stalks, and adult crappies cruised near the surface, looking for that perfect crappie minnow sized meal. In a nearby bay, a bed of wild rice has reached its floating leaf stage in good density, with the promise of a harvest to come in the fall. Out in the middle of the lake, tiny walleye hatched a month before swam and drifted with the prevailing currents, looking for zooplankton to feed their big appetites. A casual kayaker paddled quietly along the shoreline, noticing as a doe slipped behind a big oak tree.

All at once, a big rumble came up. It started out near the middle of the lake. The waters stirred, pushing the walleye fry and the zooplankton wildly in the water column. It started in one spot, but quickly moved around the center of the lake, until much of the water column was in turmoil. The lakebed, 20 feet down, began to reshuffle. Invertebrates burrowed for cover as the lake floor all around **(see Wake boats, page 13)**

Celebrating 50+ years of the Gurnoe decision

On January 6, 1972 the Wisconsin Supreme Court decided in favor of the Bad River and Red Cliff tribes in the *Gurnoe v. Wisconsin* ***case, which came to be known as the Gurnoe decision. Based on the 1854 Treaty, the court found that fishing in the off-reservation waters of Lake Superior was a protected treaty right and that any regulations that the state seeks to enforce against the Chippewa are reasonable and necessary to prevent a substantial depletion of the fish supply. The State of Wisconsin and the tribes have successfully negotiated agreements for the treaty commercial fishing activity since the time of the decision. For more information see Lifting Nets: Gurnoe Decision on GLIFWCs YouTube Channel:*** *youtube.com/watch?v=ZmcdaUtLU1E.* ***(H. Paap photo)***

Friday, March 8, 2024
Legendary Waters Event Center
5:00 pm–7:00 pm

Holding stable, loon populations remain at risk from climate shifts, heavy wakes

Illeana Alexander
GLIFWC Tribal Climate Adaptation Specialist

Maang on nest. (S. Jessmore photo)

Maang is the most vulnerable flier in the publication *Aanji-bimaadizimagak o'ow aki* (GLIFWC Climate Change Vulnerability Assessment, Version 2). Though not mentioned frequently in Traditional Ecological Knowledge (TEK) interviews with elders and knowledge holders for the Assessment, maangwag (loons) are important beings across their range. As a clan animal, they are highly regarded and respected.

Maangwag prefer to live in large lakes with clear water, abundant fish, and irregular shorelines with lots of cover for nesting. Maangwag migrate, spending their autumns and winters on the coasts of Turtle Island and returning to inland waters around ice-out to breed. Historically, the range of maangwag once extended farther south in Wisconsin, Minnesota, and Michigan.

Because maangwag nest close to the water's edge, their nests are very sensitive to changing water levels and shoreline disruptions. Changes in water levels due to climate change, human interference, storm surges, and drought all have negative impacts on maang.

Rising water levels and storm surges can destroy sensitive nesting habitat and wash out maang nests; storm surges can also cause erosion and increased water flow, muddying the water and making it more difficult for maangwag to see their prey and successfully catch fish.

In addition to human water level management, maangwag are sensitive to other human disturbances. Waves from wake boats can wash out nests and discourage maangwag from living on lakes. Lead fishing sinkers, fishing nets, and oil spills also pose significant threats to their populations.

Maangwag are sensitive to climate change in other ways. Warmer weather may impact migration timing and could also push their range even further north. Increased temperatures may cause diseases like avian botulism to spread faster. Earlier ice-out may increase or alter the timing of black fly outbreaks—insects that affect maangwag and can even lead to nest abandonment.

Despite the many threats maangwag face, the Great Lakes region supports approximately half of Turtle Island's maang population. Due to tribal conservation codes, protection under Minnesota state law as a threatened species, and citizen science organizations (LoonWatch), maang populations are currently thriving in the Ceded Territories.

Are you observing changes in the Ceded Territories? Share your observations at *climate@glifwc.org*.

Ceded Territory News Briefs

Mille Lacs Lake 2024 harvest quota

In January 2024, representatives from the Bands and the Minnesota Department of Natural Resources met to discuss the current status of fish populations in Mille Lacs Lake. Interagency staff determined that the 2024 harvestable surplus of walleye would be set at 157,500 pounds, marking a decrease from the previous year due to a decline in spawning stock biomass. This allocation will be divided with 91,550 pounds allocated to the State quota and 65,950 pounds to the Bands' quota.

The northern pike harvestable surplus will remain consistent with recent years, set at 100,000 pounds, and will be divided equally between the State and the Bands, each receiving 50,000 pounds. The harvestable surplus for yellow perch was set at 73,000 pounds. This allocation will also be evenly divided between the State and the Bands, with 36,500 pounds allocated to each party.

The Bands and the State agree that proper management of fish populations contributes to the long-term sustainability of the Mille Lacs Lake ecosystem.

—B. Michaels

Wildlife authorities investigate wintertime ma'iingan poaching cases

Even as the US Fish & Wildlife Service announced that protections for gray wolves would remain in place in the Great Lakes region in a February 2 announcement, some area residents made illegal kills from wolfpacks located near Ojibwe reservations. Ma'iinganag were poached near the Mille Lacs Band reservation in east-central Minnesota and in far northern Wisconsin near the Red Cliff Band reservation. One Red Cliff-area ma'iingan, a 13-year-old female, served as a key figure in long term research conducted by tribal wildlife staff. "She taught me so many things throughout the years from tracking, handling, and just observing her on camera and in person," said Ron Nordin, Red Cliff Band wildlife technician. "She was a great matriarch to her pack in Echo Valley and she provided for it so well."

The US Fish & Wildlife Service, tribal law enforcement, and other authorities continue to investigate the killings. **—CO Rasmussen**

Funding launches intergovernmental collaboration for manoomin stewardship

GLIFWC in partnership with the Wisconsin Department of Natural Resources (WDNR) and the Menominee and Lac Courte Oreilles Tribes secured nearly $2,000,000.00 in funding to support research and developing strategies to help conserve manoomin for future generations.

These funds were secured through a highly competitive grant as part of the America the Beautiful Challenge. GLIFWC looks forward to building relationships with these partners to further share caretaking responsibility for manoomin. Program partners will develop strategic outreach, engagement, and implementation approaches via tribal and state intergovernmental collaboration to provide a firm foundation for effective manoomin management responsibilities between the state and tribes.

The funding will provide increased manoomin staff capacity at GLIFWC, WDNR, and the Menominee Nation and provide over $800,000 dedicated to tribally led collaborative research efforts throughout the Ceded Territories. Research will be guided through extensive collaboration with tribal knowledge holders and University researchers under data sovereignty agreements. Collective knowledge learned will guide development of implementation actions for state, tribal, private, and other land managers to follow, aiming to support manoomin resiliency to climate and non-climate stressors. **—J. Rasmussen**

Bad River film coming to select theaters March 15-20

Beginning March 15, many theaters across the United States will screen the groundbreaking film, "Bad River." Produced by Grant Hill, Allison Abner, and award-winning filmmaker, Mary Mazzio; and narrated by Quannah Chasing-Horse and Edward Norton, this film carries the ongoing story of the Bad River Band's fight for sovereignty to the big screen, inserting the historical context of the tribe's ongoing resiliency to the current struggle over a 70-year-old oil pipeline. Being described as a "David and Goliath" battle, this film presents a stunning look into the Bad River Band's effort and dedication to protecting the waters of Lake Superior. **—B. Paulsen**

Minnesota v. Mille Lacs case

(continued from page 1)

consulted expert witnesses, and filed briefs. In fact, legal briefs submitted to the court were smudged with sage at GLIFWC's central office in Odanah, Wisconsin.

Guided by spiritual advisors from Canada's Ojibways of Onigaming community—including brothers Fred Kelly and Tobasonakwut Kinew—GLIFWC helped organize ceremonial events tied to the Mille Lacs case through summer 1998. And with only weeks remaining before nine justices would consider whether Ojibwe treaty rights remained valid, a group set out from Lac du Flambeau, Wisconsin on a thousand-mile overland journey to hand deliver the Treaty Staff, wakanmani, directly to the halls of the Supreme Court in support of Ojibwe people and the rights tribal headmen negotiated long ago. Known as the Waabanong Run, it is one of many elements that makes the Mille Lacs case so compelling as we look back after 25 years.

Learn more with GLIFWC educational resources at *glifwc.org/publications*. In the meantime, get your permits and head out on the water. It's a great time to fish on Lake Mille Lacs and other Ceded Territory waters.

Plan now for healthy meals

What you need to know about GLIFWC and state fish consumption guidance

By Caren Ackley, GLIFWC Environmental Biologist

As preparations for the spring fishing season get underway, GLIFWC reminds you to be attentive of which lakes you select to harvest from and check on the lake-specific consumption advice. Some fish are healthier to serve to your family than others.

Fish from certain waterbodies can have elevated levels of environmental toxins (in inland lakes primarily mercury, and in some locations, PFAS) that accumulate in fish and carry the potential to negatively impact your health. Scientists and public health officials produce fish consumption guidance that conveys how much fish is safe to consume over a person's lifetime.

GLIFWC has been monitoring mercury levels in fish from lakes across the Ceded Territories of Minnesota, Wisconsin and Michigan since 1989 and exchanges contaminant results with these states each year. With this data, GLIFWC produces mercury maps every two years with lake-specific consumption advice for ogaa (walleye) based on mercury levels found in their fillets.

The goal of GLIFWC's mercury maps is to protect you and your family by guiding you to harvest walleye from lakes where mercury concentrations in fish tissue are lower to promote mino-bimaadiziwin (a good life). New maps are available in spring 2024 at tribal offices, registration stations, and posted online at *glifwc.org/Environmental*.

Get the most from mercury maps

When using mercury advisory maps, there are two distinct populations: the Sensitive Population and the General Population. The maps provide information about how many meals per month can safely be consumed from each lake by the Sensitive Population (anyone who is or could become pregnant and children under 15) and the General Population (anyone who CANNOT become pregnant AND is over the age of 15).

Guidance for the Sensitive Population incorporates extra levels of protection because the rapidly developing brains and nervous systems of children, infants and fetuses are particularly susceptible to permanent, negative impacts associated with mercury exposure.

Guidance for the General Population allows for greater fish consumption because they are beyond the major developmental stages, and the person's body burden (amount of mercury accumulated in the body) is not a risk for passing on to developing fetuses in the womb or transferring to infants through breastmilk.

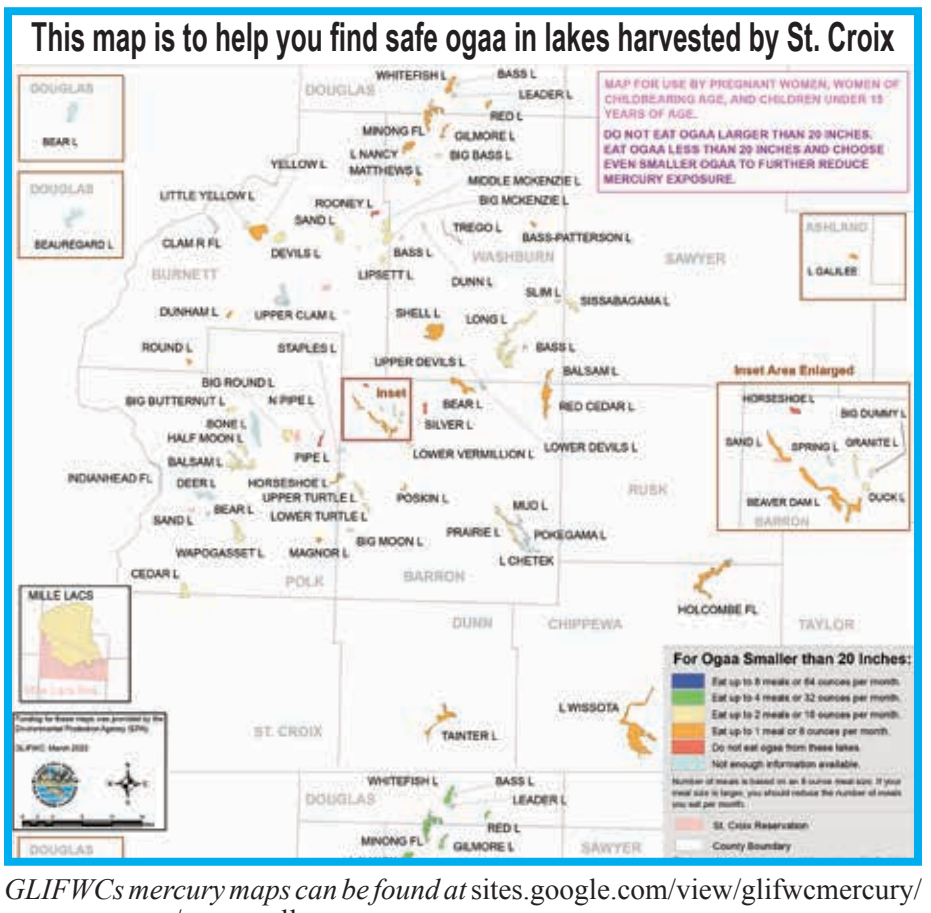
In addition to mercury-based consumption advisories, a number of PFAS-based fish consumption notices have been issued by the states that include fish consumption guidance for a few waterbodies within the Ceded Territories.

Currently, GLIFWC does not issue lake-specific PFAS-based consumption advisories. Tribal harvesters should follow state consumption advisories at this time.

Minnesota: *health.state.mn.us/communities/environment/fish/index.html*
Wisconsin: *dnr.wisconsin.gov/topic/Fishing/consumption*
Michigan: *michigan.gov/mdhhs/safety-injury-prev/environmental-health/topics/eatsafefish/guides*

Remember, fish high in omega-3 fatty acids, are an important nutrient that provides many health benefits. Omega-3 helps maintain a healthy heart and brain, and aid in the neurodevelopment of fetuses, infants and children. Find the right balance for healthy meals in 2024 for you and your family.

Please follow current guidance issued by both GLIFWC and the states to eat fish safely.



GLIFWCs mercury maps can be found at sites.google.com/view/glifwcmercury/mercury-maps/ogaa-walleye-maps

Protecting and restoring Buffalo Reef *Final Alternatives Analysis released*

By Esteban Chiriboga & Jennifer Vanator
GLIFWC Staff

Gay, Mich.—The almost two-decade long effort to address contamination from mine tailings along the eastern shore of the Keweenaw Peninsula takes a major step forward with the release of the Final Alternatives Analysis report.

This past January the Buffalo Reef Task Force (BRTF) released the Final report, which outlines all alternatives that were proposed and analyzed for addressing the encroachment of mine tailings, or stamp sands, onto Buffalo Reef and its associated whitefish and lake trout spawning areas.

GLIFWC staff have been providing technical and scientific support to the Task Force, made up of the Keweenaw Bay Indian Community; the Army Corps of Engineers; The Michigan Department of Environment, Great Lakes, and Energy; and the U.S. Environmental Protection Agency to identify a preferred alternative.

The upland placement alternative has emerged as the preferred option. This alternative would construct a new landfill in an upland location close to the shoreline that would store dredged stamp sands from the impacted shoreline and underwater locations.

A major component of this alternative is the construction of a jetty at the location of an old coal dock. This jetty would be used as a collection point to load dredged stamp sands on trucks for transport to the landfill. The jetty would also act as a sand trap that would prevent stamp sands located to the north from re-contaminating the areas restored by dredging to the south.

Under this alternative, stamp sands would be dredged from impacted areas on Buffalo Reef and from shoreline areas north of the Traverse River Harbor for many years. The areas labeled "S shoreline" and "Trough" in Figure 1 would be dredged first. This will ensure protection of Buffalo Reef and continued safe navigation at the harbor. Areas labeled "Dune," "M Shoreline," and "N Shoreline" would be restored towards the end of the project.

The final alternatives report also includes detailed biology and fishery data and analyses conducted over the many years of project development, details on cost and economics of the project, and engineering designs. It is important to note that the project is designed to be completed in phases to allow considerable flexibility in project implementation given the challenges of finding funding to complete the entire project all at once.

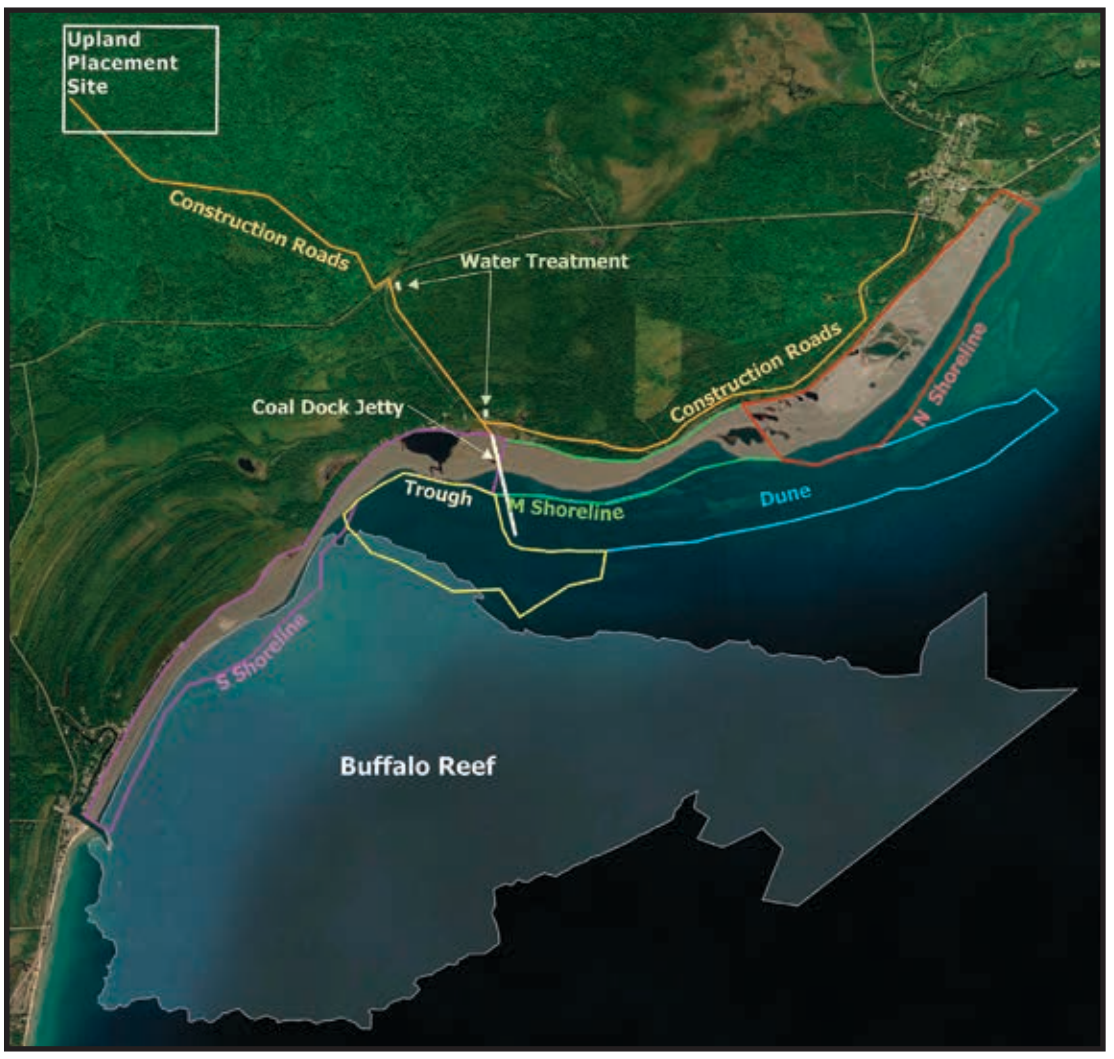


Figure 1. Components of the stamp sands upland placement alternative at Buffalo Reef, Mich.

The next major step is to locate funding. GLIFWC staff continues to work with congressional and agency staff to allocate resources to this important restoration project. The BRTF is currently reviewing public comments on the final alternatives report. The comment period wrapped up March 1. Learn more at: *michigan.gov/dnr/managing-resources/fisheries/units/buffalo-reef*.

—Esteban Chiriboga, GLIFWC Environmental Specialist &
Jennifer Vanator, GLIFWC Great Lakes Program Coordinator

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(Pronounced Muh zin ah' ĭgun)

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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 *glifwc.org,* our *Facebook* page, or *Instagram*.

On the cover

The cover of this edition features artwork by Emily Kewageshig. Emily is an Anishinaabe artist and visual storyteller from Saugeen First Nation No. 29, Ontario, Canada. Her work captures the interconnection of life forms using both traditional and contemporary materials. The artist named this print "Free Flowing." Maang (loon) is the most vulnerable flier in the publication *Aanji-bimaadizimagak o'ow aki* (GLIFWC Climate Change Vulnerability Assessment, Version 2). More information can be found on page two.

Charting a path to better food options in Indian Country

By Laurie White, GLIFWC Traditional Food Grant Project Manager

Keshena, Wis.—The Wisconsin Tribal Conservation Advisory Council (WTCAC) received a grant from the US Dept. of Agriculture to initiate the Intertribal Produce Safety Training for Farm-Grown and Traditionally Harvested Foods.

This training series aims to provide essential knowledge and skills to tribal growers, producers, and traditional harvesters, ensuring the safe handling of produce and preventing foodborne contamination.

The Menominee Indian Tribe of Wisconsin hosted the third Tribal Produce Safety Training Series (TPSTS) on November 7-9. With 28 attendees, the event was met with enthusiasm and proved a valuable opportunity for all who participated.

GLIFWC staff began the TPSTS by presenting the Commission's Traditional Harvester Model Food Code. Participants learned model regulations for tribal communities regarding the processing, distribution, labeling, and sale of treaty-harvested products. Federal courts have confirmed that tribes can regulate their members' off-reservation and treaty-reserved activities if their protocols safeguard conservation and public health.

Tribal food codes must be scientifically sound to protect human health, and food safety regulations should address biological, chemical, and physical risks that are reasonably likely to occur.

Up next, the Tribal Food Safety Alliance and Wisconsin Farmers Union provided a Produce Safety Alliance (PSA) training. This training session aimed to educate producers on the critical aspects covered under the produce safety rule.

Shawn Bartholomew from the Wisconsin Farmers Union then led a training session specifically focused on types of produce packaging. Packaging plays a crucial role in maintaining the quality and safety of produce and Bartholomew's expertise offered valuable insights to producers on this critical aspect of their operations. The practical knowledge gained from this session ***(see Traditional foods, page 15)***

Waawaashkeshi harvest backslides by a quarter in 2023

By Travis Bartnick, GLIFWC Wildlife Biologist

During the 2023 off-reservation deer hunt, Ojibwe hunters registered 616 deer in the 1836, 1837, and 1842 Ceded Territories, down about 27% compared to the 844 waawaashkeshi harvested in 2022.

The decrease in deer registrations was similar to the reported decrease in deer registrations for state (non-tribal) hunters in the northern forest regions of Minnesota, Michigan, and Wisconsin.

Over the 2023 season, about 25% of deer were registered by the end of October, compared to about 28% in 2022, 19% in 2021 and 36% in 2020. As in past years, most of the deer registered over the waawaashkeshi off-reservation hunting season were registered during the month of November, accounting for 60% of all deer registered. Antlerless deer accounted for 48% and antlered deer accounted for 52% of the deer registered over the 2023 season.

Tribal hunters took deer from 37 counties within the 1836, 1837, and 1842 Ceded Territories (Figure 1). This included 21 counties in Wisconsin, 11 counties in Michigan, and 5 counties in Minnesota.

Six counties in Wisconsin accounted for over half (54%) of the total off-reservation deer harvest. Those counties included Bayfield Co. (14%), Burnett Co. (13%), Douglas Co. (8%), Forest Co. (7%), Vilas Co., (6%) and Sawyer Co. accounting for 6% of the total harvest. Most of the deer were registered using remote registration methods, either by phone or online.

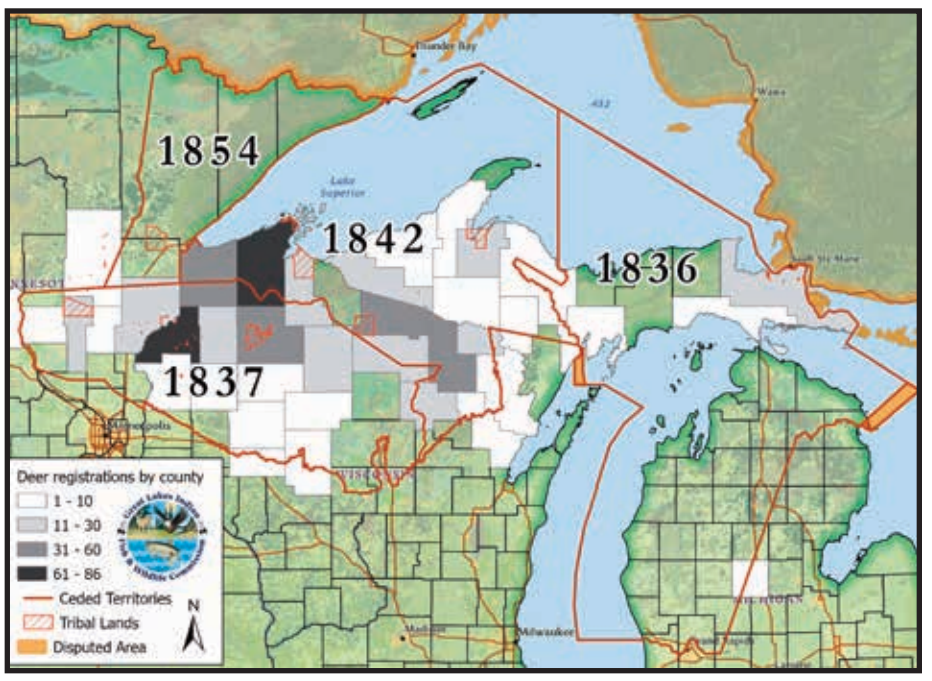


*Figure 1. Distribution of waawaashkeshi (deer) registered by GLIFWC-member tribes in the 1836, 1837, and 1842 Ceded Territories during the 2023 off-reservation tribal hunting season, summarized by deer registrations in each county. *The boundaries are representations and may not be the legally binding boundary.*

Gidagaa-bizhiw harvest climbs in trapping season update

The trapping season for most furbearer species will soon end on March 31 in the 1837 and 1842 Ceded Territory. The two exceptions are nigig (otter) and amik (beaver) in northern Wisconsin which close April 30.

Throughout the trapping season, GLIFWC keeps track of the Ceded Territory harvest for gidagaa-bizhiw (bobcat), ojiig (fisher), and nigig (otter). Since the start of the 2023-2024 trapping season 21 gidagaa-bizhiwag, 10 ojiigag, and two nigigwag have been registered by member tribes. These numbers do not include furbearers registered at Keweenaw Bay Indian Community in Michigan or Fond du Lac in the state of Minnesota.

While furbearer harvest has been on the decline in recent years, compared to this time last year there has been a general increase in participation and harvest of these three species, especially gidagaa-bizhiwag. While the drivers behind the increase in harvest is difficult to pinpoint, differences in weather between this trapping season and the 2022-23 season stands out.

This year, the Ceded Territory has experienced mild winter conditions with above average temperatures and below normal snowfall. In contrast, last winter there was so much snow that some areas in Ojibwe County hit record levels receiving more than 14 feet of snow. Nevertheless, we're excited to see increased participation and success so far this year and look forward to what the last stretch of the season brings. **—A. Carl**

	2023-2024	2022-2023	2021-2022	2020-2021
gidagaa-bizhiwag (bobcats)	21	8	15	14
ojiigag (fishers)	10	4	17	29
nigigwag (otters)	2	3	13	10

Makwa (bear) harvest

Tribal hunters registered a total of 36 bears from the portions of the 1836, 1837, and 1842 Ceded Territories in Michigan, Minnesota, and Wisconsin during the 2023 season.

A total of 29 bears were registered in Wisconsin from nine different counties, six bears were registered in Michigan from three different counties, and one bear was registered in Minnesota. Nearly half of all registered bears (44%) were harvested in Bayfield County, Wis. Of the 36 registered bears, 19 (53%) were male and 17 (47%) were female.

*Figure 2. Distribution of makwa (bear) registered by GLIFWC-member tribes in the 1836, 1837, and 1842 Ceded Territories during the 2023 off-reservation tribal hunting season, summarized by bear registrations in each county. *The boundaries are representations and may not be the legally binding boundary.*

Ojibwe hunters deliver in patchy omashkooz season

By CO Rasmussen Editor

Keith Wiggins and Carla BigBear from Mille Lacs Band of Ojibwe with their omashkooz bull harvested in the final hours of elk season in the Wisconsin Ceded Territory. (J. Stone photo)

The warm, often snowless elk season in the Ojbwe Ceded Territory challenged hunters from Wisconsin to Michigan in 2023 and resulted in a few unfilled tags—a rare turn in the modern era.

But for all of those on the hunt this past year, connections to the land, to family, and Anishinaabe traditions were strengthened during meaningful days afield. And every GLIFWC-member band shared in the bounty of omashkooz wiiyaas (elk meat) delivered to community homes and food pantries following the successful season.

In the Michigan 1836 Ceded Territory's Pigeon River Country State Forest—the largest block of contiguous wildland in the Lower Peninsula—Bay Mills Indian Community entered the season with five tags parsed out between two bull elk tags and three cow elk tags.

Tribal members filled two of the five available tags on opposite ends of season, which is broken down into time periods. One cow elk was harvested in September and one bull elk was harvested in December.

Similarly, omashkooz hunters in the Chequamegon-National Forest found success on the calendar ends of the treaty season in northern Wisconsin.

From the four bull-only tags available, GLIFWC distributed permits to **(see Omashkooz season, page 14)**

Molinia moves in

Non-local being could mean trouble for peatlands, fens and other natural habitats

By Steve Garske, GLIFWC Invasive Species Coordinator

At least 232 species of grasses occur outside cultivation in Wisconsin. About 60% of these are native to the state, with the other 40% arriving since European settlement.

One of the more recent arrivals is purple moorgrass. It probably was brought over as an ornamental grass, due to it's clumping ("cespitose") habit and attractive purplish seed stalks in late summer.

Purple moorgrass (*Molinia caerulea*) is a perennial grass native to Europe, North Africa, the Caucasus region and Siberia. It was first documented in North America in Philadelphia, Pennsylvania in 1878.

It is now established in the provinces of Nova Scotia, Quebec and Ontario, the northeastern United States, and in Wisconsin, Upper Michigan, and western Oregon. The populations in the Lake Superior region are of the taller subspecies arundinacea.

Across much of its native range, Purple moorgrass is a common and sometimes dominant grass where it is even considered "invasive" in some habitats.

In recent decades it has increasingly dominated the much-loved "blanket bogs" of the UK and heathlands of western Europe, decreasing diversity and reducing carbon storage. (Interestingly, peatlands store the most carbon of any terrestrial ecosystem on the globe.) Molina's increasing tendency to move into and dominate these nutrient-poor, boggy wetlands appears to be linked to increased nitrogen deposition from agricultural activities and the burning of fossil fuels.

In Europe typical purple moorgrass habitats include intermittently waterlogged oak and pine forests, calcium rich fens, heathlands, seasonally wet grasslands, dry grasslands, and disturbed sites including roadside ditches and cut-over forests. Given the chance, it will likely colonize similar habits here.

So far, two large populations of purple moorgrass are known from within the Ceded Territory. One is in Ashland County, Wisconsin, where it dominates an old field and has spread to area roadsides and fields. It was apparently planted around a building there several decades ago.

The other concentration is in Houghton County in the west central Upper Peninsula of Michigan, where it has transformed a large, peaty wetland (probably originally a "poor fen") into a moorgrass monoculture.

This former wetland has been buried under a monoculture of purple moorgrass. (S Garske photo)

Purple moorgrass along Highway 13 in Ashland County. Moorgrass plants can grow to 6 feet tall, though 4-5 ft tall is more typical. (S Garske photo)

As a "warm season" grass, Molina grows best during the sunny, warm months of summer. It is reasonable to assume that the warming climate will favor warm season grasses like purple moorgrass, to the detriment of cool-season grasses like the native common bluejoint, which grow best in spring and fall.

Purple moorgrass will undoubtedly continue to spread in the Ceded Territory. The question now is what if anything should be done about it. It's not really a problem for heavily disturbed areas like road corridors, which are mostly inhabited by common, weedy native and introduced species.

But for purple moorgrass these corridors are highways to better habitats including natural peatlands and prairies, which support some unique elements of the region's biological diversity.

If action is to be taken to slow the spread of this plant, the best time is now. GLIFWC staff are reviewing potential management strategies.

Ojibwemotaadiwag Anishinaabewakiing

They speak Ojibwe to each other in Indian Country

This past January the GLIFWC Climate Team met a class from Bayfield Middle School at Long Lake Recreation Area on the Chequamegon-Nicolet National Forest to monitor ice thickness. The students, many of whom are Ojibwe from Red Cliff, Bad River, Mille Lacs, and White Earth, are working on a long-term project designed to reimagine their relationship with the Moquah Barrens.

Cate Williams—teacher and intrepid leader of the cohort—and her students brought this project to a Tribal Forest Protection Act workshop in June 2023 and were able to bring their idea to life. Some of the kids have been working on it for their whole middle school career!

After a short safety briefing—everyone had ice picks and GLIFWC staff had additional rescue equipment—participants were ready to get out on the ice. Students started with drilling a test hole near shore to ensure the ice was thick enough to walk on. With almost ten inches, the class was able to move out farther on the lake and drill where the water was deeper. There was a layer of slush underneath the fluffy snow, but a little standing water didn't deter any of these students!

The kids embraced the hands-on experience using all the ice monitoring tools—and what middle schooler doesn't want to wield an ice saw! In addition to learning how to safely use both the auger and ice saw, students also learned more about the data GLIFWC collects and why it's important information for monitoring local climate changes. They were able to examine the ice blocks and identify what was clear ice and what was grey ice and connect the layers of ice to recent warmer and cooler weather patterns.

This was their first trip out on Long Lake while it was frozen over, but certainly won't be their last. As part of getting to know the land better, they will soon be regularly helping with ice monitoring, as well as other phenology data gathering. GLIFWC is proud to support the next generation of climate advocates.

—Illeana Alexander

Bayfield Middle School students use an ice saw to cut a block from the frozen surface of Long Lake in the Chequamegon-Nicolet National Forest. (I. Alexander photo)

Loaded semi-trailers routinely haul birch lodge poles from the upper Great Lakes region to distribution centers that supply the home furnishing industry. This tractor-trailer in Carlton, Minn. headed south from the 1854 Ceded Territory in mid-winter 2024. (CO Rasmussen photo)

Tribal off-reservation birch lodgepole Commission Order FAQs

Overview

The increasing demand for woods-inspired home/business décor, containing birch saplings, has led to the overharvesting of young birch in certain parts of the ceded territories. The Tribes have been working with their technical staff and public land managers within the ceded territories to better understand the activity and potential consequences.

Paper birch (wiigwasi-mitig/*Betula papyrifera*) and yellow birch tree (wiinzik/*Betula alleghaniensis*) are culturally-significant species and used by the Ojibwe as medicine, building material and for the creation of countless forms of craft and art.

The Tribes are concerned that the overharvest of young birch for the décor industry may have lasting impacts on birch populations throughout the Ceded Territories as well as the availability of birch for future generations.

In response to these concerns, the Voigt Intertribal Task Force authorized the issuance of a Commission Order to limit the harvest of young birch in an effort to reduce harvest pressures on this culturally valuable resource.

The Commission Order makes the following changes

- Adds a definition of birch lodgepole ("Birch Lodgepole" means a lodgepole (tree that is that is less than five inches DBH (diameter at breast height)) of a paper birch tree (wiigwasi-mitig/*Betula papyrifera*) or yellow birch tree (wiinzik/*Betula alleghaniensis*).
- Tribal members may harvest up to five birch lodgepoles with a valid "general gathering" permit.

Frequently asked questions

Does this Commission Order affect my ability to gather birch bark, firewood or lodgepoles of non-birch trees?

No. The Commission Order only applies to the gathering of birch lodgepoles, which are defined as birch trees, less than five inches diameter at breast height (DBH). It does not apply to other gathering activities, such as the gathering of birch bark, firewood or lodgepoles that aren't birch.

What if I already have a permit to gather up to 75 lodgepoles?

The Tribes have determined that there is an immediate need to limit the harvest of young birch (birch poles). Even if you have an off-reservation general gathering permit earlier to gather up to 75 lodgepoles, your harvest is limited to no more than five birch lodgepoles, per year.

Does the Commission Order apply to all GLIFWC member tribes?

Yes. The Commission Order amends the gathering codes for National Forest Service lands enacted by all GLIFWC-member tribes. It also amends the conservation codes applicable to the Apostle Islands National Lakeshore (applicable to some GLIFWC-member tribes) and the off-reservation conservation codes for the 1837 and 1842 off-reservation ceded territory (applicable to all GLIFWC-member tribes except Bay Mills).

A tribe may rescind the Commission Order, but if it does, that would only affect its members. Contact GLIFWC Division of Intergovernmental Affairs if you have questions about the applicability of this Commission Order.

What if I want to gather more than five birch lodgepoles?

If you are interested in large-scale birch lodgepole gathering off-reservation, GLIFWC Biological Services can work with the U.S. Forest Service and/or the Wisconsin DNR to identify an off-reservation site on public lands that is available for the harvesting of more than five birch lodgepoles. If an appropriate site is located, you will be provided a large-scale gathering permit to gather birch lodgepoles in that area, under certain conditions.

(see Tribal off-reservation birch lodgepoles, page 14)

Remembering the Crandon Mine victory

On November 29th, 2023, the Mole Lake Band of Lake Superior Chippewa and Forest County Potawatomi hosted their 20th Anniversary Celebration for the purchase of the Crandon Mine.

Chairman Van Zile speaks to the crowd at the 20th Anniversary celebration (T. VanZile photo)

This gathering was held in remembrance of the decades-long battle against a proposed mine just over a mile upstream of the Mole Lake reservation in Forest County. That battle concluded in 2003 with the purchase of the mining company, the mine site, and the mineral rights by the Mole Lake Band and Forest County Potawatomi Community.

The day of celebration was filled with many talks and presentations by those who played pivotal roles in halting the Crandon Mine project. Chairman Van Zile described the history of the 28-year battle, and Frances Van Zile remembered offering tobacco as well as the many meetings and gatherings she attended with Fred Ackley, Jr. to represent the Sokaogon People. GLIFWC's Environmental Section Leader John Coleman and the former Sokaogon Tribal Hydrogeologist Roman Ferdinand spoke about pouring over mountains of technical data, and Al Gedicks reminded everyone that no mining company can operate if the community rises in opposition.

Many more people spoke about their involvement in shutting the mining proposal down those 20 years ago, and the sentiment hanging in the air was one of joy, thankfulness, and remembrance for this important victory for the tribes.

—B. Paulsen

After the hunt: food prep lays foundation for year ahead

Mino miijim photo essay

From knuckle-skinning to grinding to mixing and packaging, GLIFWC Biological Services hosted a ReCharge skills event in Odanah over the first week of December 2023. GLIFWC staff and tribal guests shared their favorite food prep techniques for deer meat and garden vegetables. —CO Rasmussen photos

Looking back at deer camp

A savory skills event at Keweenaw Bay

By Laurie White, GLIFWC Traditional Food Grant Project Manager

The Keweenaw Bay Indian Community celebrated their third annual Waawaaskeshii (Deer) Camp, organized by the tribal natural resources department November 4, 2023 at the community garden. The event proved even more successful than previous years, highlighting the community's commitment to preserving traditional practices.

The camp offered hands-on experiences in various aspects of deer processing and showcased the importance of sustainable hunting practices. With over 70 attendees, including adults and children, the event was a testament to the deep connection between people and their natural surroundings.

In the early hours of that crisp and sunny fall day, Blake Chosa and Lynden Ekdahl harvested two Michigan waawaashkeshiwag. Chosa participates in the camp each year and noted the enthusiasm shown in this year's younger group who were outfitted with new hunting gear: a hunter-orange hat and vest, field dressing knife kit, cutting board, and a venison cookbook—all supplied by the Keweenaws Bay Indian community (KBIC) Natural Resources Department.

GLIFWC Warden Steven Amsler shared off-reservation treaty hunting regulations and distributed publications to fortify participant's hunter safety knowledge.

Together these resources helped empower folks to continue exploring and expanding their insight into Anishinaabe waawaashkeshi hunting and processing.

KBIC's annual deer camp brought together multiple generations for a day of skill-building experience and feasting with foods from Ojibwe Country. (L. White photo)

The path to eating well

Children at the camp eagerly absorbed guidance on the process of skinning and gutting deer right after a successful hunt. Expert instructors including Chosa, Ekdahl, and KBIC Warden Everette Ekdahl walked attendees through the meticulous steps, emphasizing the importance of precision, hygiene, and respecting the animal throughout the process.

The skilled butchers shared their expertise and showcased efficient techniques for breaking down the deer carcass into cuts of meat, ensuring that no part was wasted. Participants were encouraged to use their new equipment to help skin and butcher the deer, and the teachers ensured everyone who wanted to try did. Most of the kids took advantage of the hands-on experience, making it a truly immersive and educational experience.

Erin Johnston, KBIC Wildlife Biologist Section Leader, expressed her delight in witnessing the growing popularity of the camp this year. She praised Kyle Seppanen for his exceptional organization and Serene Gauthier for operating the grill, ensuring everyone shared an enjoyable taste of moose meat and potatoes. Later, Ava Brogan treated attendees to a mouth-watering feast with her culinary expertise. Borgan prepared a delicious menu beginning with a venison stew, for which she used red potatoes and carrots harvested from the KBIC garden.

Additionally, guests enjoyed a savory moose roast infused with mushrooms, onions, and dijon mustard. Alongside these tasty dishes, Brogan served roasted potatoes, toasted bread, and homemade cranberry sauce. The feast food received high praise, with event organizer Johnston acknowledging how far they had come since their humble beginnings, which included serving basic hot dogs.

Waawaaskeshii Camp offered attendees a range of enriching experiences amidst a warm and inviting atmosphere, including a campfire that provided a cozy break from the crisp fall air, encouraging people to gather and bond over shared experiences. The numerous day-glow orange hats—often on the move—across the landscape showcased the vibrant and inclusive nature of the event.

mino-wiiji'idiwin

(being together, or coexisting, peacefully)

Color the picture of things found naawij (out in the lake). Full size mino-wiiji-idiwin posters measuring 24½" x 19" are available by emailing pio@glifwc.org.

Mino-wiiji'idiwin means living or being together in a good way. Ojibwe artist Jessica Leigh Gokey was inspired by the many kinds of animals at her home in Lac Courte Oreilles.

The Ojibwe Ceded Territory has many big and small lakes, and these lakes have lots of different aquatic animals, or animals that live in the water.

Gokey's drawing has animals that are both mysterious and familiar. It has members of the common panfish family, like bluegill and sunfish. Bluegill and sunfish are both called agwadaashi in the Ojibwe language. Other finned swimmers are ogaa (walleye) and asaawe (yellow perch). Busy wazhashk (muskrat), diving mangwag (loons) and jumping frogs (omakakiig) live in the water with aquatic plants, biimiskodisiig (snails), and bugs (manidoonsag).

All of these animals count on each other and the clean water they live in to stay healthy. Together, they all make up a successful food web.

What other living beings can you find?

Draw a line from the animal or insect to it's matching name in Ojibwemowin (Ojibwe language).

Zaasijiwan
•It Ripples•

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

Nashke! Ashkibagaa. Zaagibagaa miinawaa. Ozhaawashkonaagoziwag.
Megwekob, gibizindawaawaag naagamowaad ongow bineshiiyag. A'aw baapaase iwidi ombiigizi.
Obiijimaamaan ina manidoonsan? Manidoonikaa, oo! Onandotawaan na? Amang iidog.
Gaawiin nindinendanziin noongom. Wayiiba na ninga-giigooyikemin? Eya'. Gaye, ninga-gitige.
Niwii-ditibiwebishkawaa endaso-giizhig. Niminwendam ziigwang omaa Akiing. Mii'iw, miigwech.

(Look! There are young green leaves. The leaves are budding also/again. They appear green.
In the bush/brush, you all listen to them when they sing those birds. That red-headed woodpecker over there is loud/noisy. Does she smell h/her, a bug/worm? There are a lot of bugs. Oh! Does s/he listen for them? I am not certain.
I do not know what to do or think now. Will we go fishing soon? Yes. Also, I want to plant a garden.
I want to ride a bike every day. I am happy when it is spring here on Earth. That's all, thanks.)

Bezhig—1

OJIBWEMOWIN (Ojibwe Language)

Double vowel system of writing Ojibwemowin.
—Long vowels: AA, E, II, OO
W<u>aa</u>booz—as in f<u>a</u>ther
Miigw<u>e</u>ch—as in j<u>ay</u>
Aan<u>ii</u>n—as in s<u>ee</u>n
M<u>oo</u>z—as in m<u>oo</u>n

—Short Vowels: A, I, O
D<u>a</u>sh—as in <u>a</u>bout
B<u>i</u>ne—as in t<u>i</u>n
Niizh<u>o</u>—as in <u>o</u>nly

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

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

Numbers

Midaaswaak ashi nishwaaswaak miinawaa naanimidana ashi niiwin
=1000 + 800 & 50 + 4 = 1854

Midaaswaak ashi nishwaaswaak miinawaa niimidana ashi niizh
= 1000 + 800 & 40 + 2 = 1842

Midaaswaak ashi nishwaaswaak miinawaa nisimidana ashi niizhwaaswi
= 1000 + 800 & 30 + 7 = 1837

Midaaswaak ashi nishwaaswaak miinawaa nisimidana ashi ningodwaaswi
= 1000 + 800 & 30 + 6 = 1836

Niizhosagoons miinawaa niizhtana ashi niiwin
= 2000 & 20 + 4 = 2024

(Rand Valentine's Nishnaabemwin dictionary, 2001)

Niizh—2

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

A. <u>Zoogipon</u> agwajiing! Zhooshkobidewan <u>nimakizinan</u>.

B. <u>Gego</u> bookojaaneshiniken! Gego <u>baapiken</u> noongom!

C. <u>Bimosedaa</u>! Naanaagadawaabandan bimoseyan omaa.

D. Gii-piimiskonikeshin <u>nindede</u>. Gii-pimose jiigi-bizhikiiwigamigong.

E. Gi-nitaa-zhooshkwaada'e na? <u>Eya'</u>! Ninzhooshkwaada'e.

F. Ningide <u>noongom</u>!

G. <u>Waa</u>! Nindozhaashise.

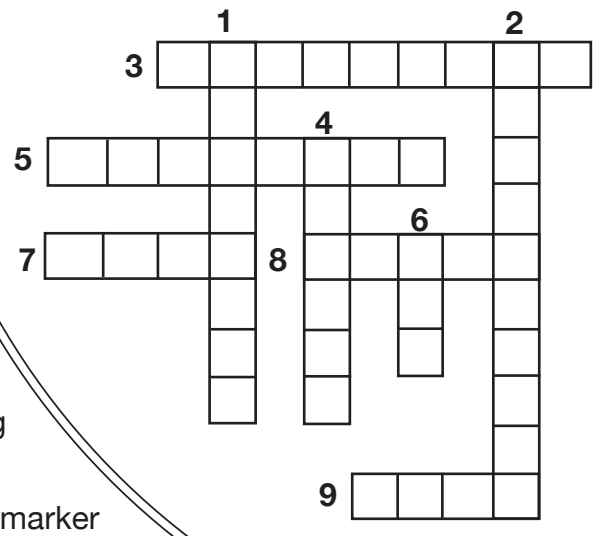
H. <u>Gisinaa</u> na?

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

migizi(wag)
eagle(s)

Niswi—3

IKIDOWIN ODAMINOWIN (word play)



Down:
1. in the bush/brush
2. leaves are budding
4. on the earth
6. "yes/no" question marker

Across:
3. s/he is loud
5. when/if it is spring
7. also
8. over there
9. here

Online Resources
ojibwe.lib.umn.edu
ojibwe.net
glifwc.org
glifwc-inwe.com

Niiwin—4

Eya'! Agwajiing Izhaadaa!—Yes! Outside Let's All Go!

Endaso-giizhik: Nimbimose agwajiing.
—Everyday: I walk outside. Eya'!—Yes!

Gibimose na agwajiing?—You walk?

Giwii-bimosemin ina?—We all will walk?

Gii-pimosewag ina zaaga'iganing?
—Did they walk to the lake? Gaa!—No!

Gaawiin bimibaatoosii miikanaang.
—No s/he does not run on the road.

Bima'adoo.—S/he follows a trail.

Nimbima'adoo omaa gaye.
—I follow a trail here also.

Endaso-giizhik—Daily

Ojibwemodaa!
—Let's all speak Ojibwe!

Migizi(wag)

Maang(wag)

Giigoon(yag)

Ajijaak(wag)

Makwa(g)

1. Bakadewag noongom ingiw_____.
2. _____ ina? Aaniin minik noongom?
3. Inashke! _____, ginwaabiigigwewag.
4. Waabamag _____, nimbiindaakoonaa.
5. Niminotawaa _____ noondaagoziwaad.
6. Ani-ziigwang, apegish ji-menoseyeg megwaayaak.

Translations:

<u>Niizh—2</u> **A.** It is snowing outside. My shoes slipped. **B.** Don't fall down and break your nose! Don't laugh now. **C.** Let's all walk! Watch it carefully when you walk here! **D.** My Dad fell and twisted his arm. He was walking by the cattle barn. **E.** Do you know how to skate? Yes! I skate. **F.** It is melting now! **G.** Wow! I am slipping. **H.** Is it cold?

<u>Niswi—3</u> ***Down:*** **1.** Megwekob **2.** Zaagibagaa **4.** Akiing **6.** Ina ***Across:*** **3.** Ombiigizi **5.** Ziigwang **7.** Gaye **8.** Iwidi **9.** Omaa

<u>Niiwin-4</u> **1.** Those **bears** are hungry now. (Makwag) **2. Fish?** How many today/now? (Giigoonyag). **3.** Look! **Cranes**, they have thin long necks. (Ajijaakwag) **4.** When I see him/her, **eagle**, I make a tobacco offering to him/her. (Migizi) **5.** I like hearing them **loons** when they call out. (Maangwag). **6.** As spring approaches, I hope you all have good luck in the woods.

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 <u>The Concise Dictionary of Minnesota Ojibwe</u> by John D. Nichols and Earl Nyholm. All inquiries can be made to ***MAZINA'IGAN***, P.O. Box 9, Odanah, WI 54861 *pio@glifwc.org*.

Edited by Michael Waasegiizhig Price

River netting targets Great Lakes-bound sea lampreys

By Bill Mattes, GLIFWC Great Lakes Section Leader

Since 2020 GLIFWC Great Lakes Section staff have set nets in tributaries to Lake Superior to capture out-migrating juvenile sea lampreys. To date 754 juvenile sea lampreys have been removed from streams during downstream trapping.

Each juvenile sea lamprey that makes it to adulthood kills up to forty pounds of fish; through this removal, up to 30,000 pounds of fish were spared from sea lamprey predation.

Sea lampreys are a parasitic fish—one that feeds on the blood of other fish. In their native range they out-migrate to the ocean where fish are bigger and more plentiful. In the Great Lakes, sea lampreys are non-native and out-migrate to lakes with fewer and smaller fish. Fish that, once they are fed upon by a sea lamprey, often die.

Removing out-migrating sea lampreys is not a new concept. Shortly after sea lampreys became established in Lake Superior, physically removing juveniles from the tributaries was considered for controlling sea lamprey populations. However, it was soon determined that the numbers removed were too low for effective overall control. But physical removal can be used as a supplement to other, more effective controls like barriers and lampricides.

GLIFWC lamprey control staff netted the Marengo River last winter to sample for out-migrating sea lampreys. The Great Lakes fishery has experienced negative impacts since sea lampreys entered the freshwater system from the Atlantic Ocean. (B Mattes photo)

Downstream trapping can be used to capture and remove at least a portion of the juvenile sea lamprey population before they inflict damage on fish, especially in systems where barriers are breached (due to damage or decay) or when lampricide treatments are deferred (usually due to high or low water in the stream).

Setting the right net

GLIFWC staff have experimented with different net types to determine the most effective net type that is also easy to deploy and retrieve. Small fyke nets captured juvenile sea lamprey but often filled with sediment from the stream bottom. Hoop nets captured few juvenile sea lampreys and filled with sediment.

A modified elver net was developed and used which captures juvenile sea lamprey and does not fill with sediment as easily as the fyke and hoop nets. Also, the elver nets are lighter than the fyke nets and thereby less cumbersome to retrieve. Elvers are the juvenile stage of the American eel for which there is a commercial fishery along the East Coast of the United States.

Downstream nets are set in the spring and fall of the year. In the spring, juvenile sea lampreys tend to ride the snowmelt out to the lake. With the abnormally warm February weather, an experimental net was set in the Marengo River. However, the warmth did not last, and no lampreys were captured in the two-day set. In the fall, nets are set as the water begins to cool down. The juvenile sea lampreys tend to out-migrate once the water gets to below 43 degrees, and it rains.

To date, the effort has been experimental, with only a few nets and limited effort being put toward downstream netting. However, with continued success there may be more interest in expanding the work.

For an in-depth review of this topic see *A renewed philosophy about supplemental sea lamprey controls (https://tinyurl.com/eaftyp7x)*, in the Journal of Great Lakes Research.

Apostle Islands waabizheshi

(continued from page 1)

Several years after the last Chequamegon National Forest reintroduction in 2014, an Apostle Islands National Lake Shore visitor snapped a photo of a marten on Manitou Island. That same year, another visitor discovered a photo they had taken of a marten on the islands in 2010.

These images confirmed first time marten sightings on the islands for the first time in over 40 years, raising a flurry of questions: Where did the martens come from? Had they been on the islands the whole time? If not, how did they get there? How many of the islands have martens on them? A large team of expert researchers from University of Wisconsin-Madison, Northland College, the National Park Service, Red Cliff Band of Lake Superior Chippewa, and GLIFWC's own resident marten expert, Jonathan Gilbert, set out to answer these questions using remote trail cameras and DNA extracted from scat and hair samples.

Where did the island martens come from?

In talking with Gilbert, the wildlife management PhD suggests that there were three different possibilities for how martens came to the Apostle Islands: they were always there, the 1950's translocation effort was actually successful, or they trekked in from the mainland.

Researchers collected genetic samples from martens located on the islands and from martens at each regional reintroduction site. Through looking at the genetics, Gilbert said the waabizheshiwag aren't from the original population, and they aren't from the animals reintroduced in the 1950's. They came from the more recent reintroductions or augmentations.

More specifically, it turns out that the martens on the islands came from those that were introduced to the upper peninsula of Michigan—most likely sometime within the last 25 years.

How did martens get there?

Like any of the other mammals that inhabit the islands, martens had to swim from mainland, cross over on the ice, or both. While martens are capable swimmers, Gilbert suggests that it's likely that they didn't swim. They're pretty small critters, it's really cold water, and that's a long way to swim.

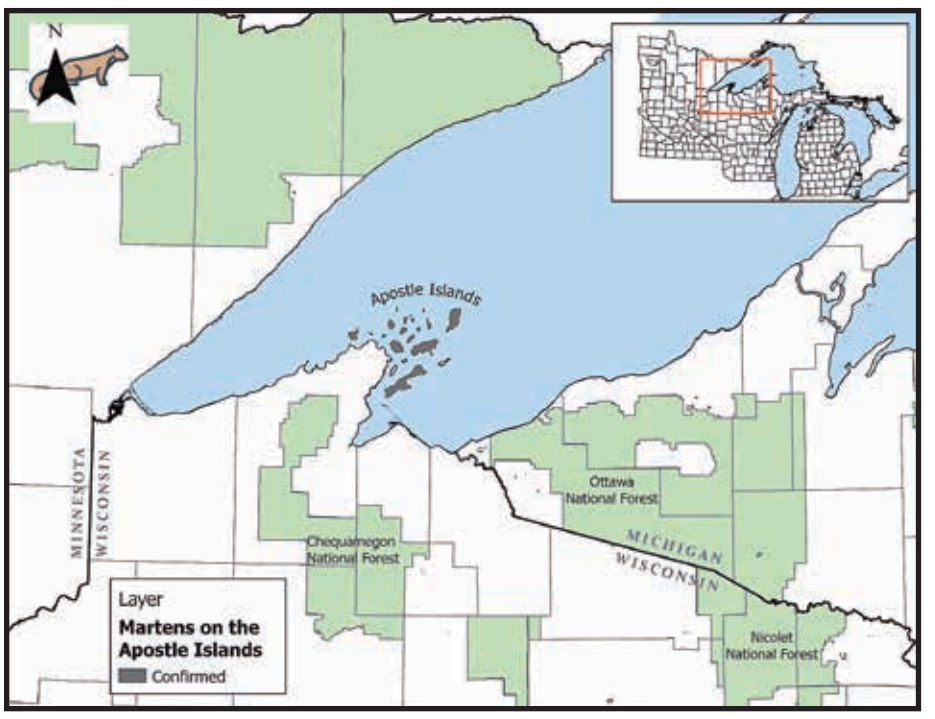
That leaves crossing the ice as the most probable route. But, those who know a little bit about martens know they prefer old forests with a lot of structure—think messy forests that are difficult to walk through—and a closed canopy. So, why would martens cross the open ice and leave themselves vulnerable to predation, especially from birds of prey?

Gilbert provides some insight: "Lake Superior ice is not flat. It's got ridges and upwellings. The ice has structure to it. The animals are almost certainly following structure and not cruising across sheer ice."

For anyone who has spent time out on the ice on Lake Superior, you know how much that rings true. Pressure ridges, pack ice, and wind-blown ice "heaves" leave few opportunities to ice skate out on the big lake. But all that ice-crusted relief over the frozen lake creates cover and corridors for small mammals to avoid predators in between wooded land masses.

How many of the islands currently have martens?

"The more [researchers] look, the more [martens] they find," says Gilbert. "That means they're moving among islands." He says that through genetics work, researchers have identified different family members (direct siblings or parents and their offspring) that occupy different islands. "They're colonizing islands as they find them." Including the most recent discovery of martens on Madeline Island, they have now been detected on 12 of the 22 Apostle Islands.



Are martens here to stay?

Gilbert says that there is some good news. He says that the habitat on the islands is really quite exceptional. The islands provide closed canopy forests with a lot of structure and strong numbers of red backed voles, which are martens' preferred source of food. He also points out that marten densities on the islands are reaching really high levels for Wisconsin and are more similar to areas that are considered secure marten range. That points back to great habitatquality.

However, Gilbert also warns that this could be a cautionary tale. Martens colonized an area where almost perfect conditions exist. They have great habitat, few predators, and a preferred food source. Gilbert says that we would expect martens to do well at first. The Apostle Island marten population will continue to grow until it hits its carry capacity, the point at which the population can no longer sustain itself with the resources available on the islands.

"I think we're still on the upside of the growth curve" Gilbert says. "But it will surely come back down again. The questions is will they be persistent over long periods of time?" Gibert isn't going to guess what the answer will be. "It looks good, but who knows what could happen out there." He also brings up the issue of climate change. Scientists predict there will be less ice cover on Lake Superior in the future. Gilbert asks, "If there's no more ice, can they move around? This ice-free year was extreme, but those [extreme years] are going to come more and more often."

While the long-term future of the island martens may be uncertain, they appear to be thriving for now. Not only do they continue to find new islands to colonize, they've also been found moving back to the mainland. As it turns out, some researchers even think that the island martens may help replenish the mainland populations.

First manoomin harvest survey raffle a success!

Raffle winner Paul Cadotte stopped by GLIFWC's office to pick up his birch basket. (B. Paulsen photo)

Each dagwaagin, GLIFWC distributes surveys to manoomin harvesters as part of its longstanding manoomin stewardship program. We use this survey to document inter-annual trends in wild rice abundance, estimate annual harvest effort and yield, and track the presence of pests and disease in manoomin beds across the Ceded Territory.

New for the 2023 season, GLIFWC offered the first manoomin harvest survey raffle. All tribal harvesters that returned a survey were entered into a drawing for a chance to win one of several prizes, including birch bark baskets, hand-carved wooden ice fishing decoys, and finished manoomin.

Survey responses contribute to the understanding and stewardship of the gift of manoomin. Winners of our first raffle were comprised of Bad River, Fond du Lac, Lac Courte Oreilles, Mille Lacs, Red Cliff, and St. Croix community members. Congratulations to the inaugural winners, which included: Paul Cadotte, Michael Fox, Lee Harden, Clifton Korn, Ga-be-giizhig Todd Moilanen, Dana Phelps, David Punches, Ward Staples, and Albert Thayer!

Tribal wild rice harvesters play a crucial role in preserving this valuable resource. These dedicated individuals, often deeply connected to their cultural heritage, contribute significantly to wild rice conservation. Their traditional knowledge and sustainable practices are essential for maintaining healthy ecosystems and ensuring the continued availability of wild rice.

If you obtained a manoomin harvest permit in 2023 and didn't receive a survey, please be sure to update your mailing address before next season! Current mailing addresses ensure successful communication and distribution of prizes.

Chi-miigwech to all that took the time to complete and return the manoomin harvest survey. Please know that your contribution helps to protect the future of wild rice. Much gratitude from the manoomin team.

—Kathleen Smith, GLIFWC ganawandang manoomin &
Brandon Byrne, GLIFWC wetland ecologist

Ishpaagoonika Deep Snow Camp

Crandon, Wis.—In late January, campers, elders, and mentors gathered over three days to enjoy some traditional winter activities together. Cassandra Graikowski, Sokaogon Cultural Activities Coordinator is proud to be home from college serving her community, "The kids get to know each other better at camp, and with kids from other tribes, its important bonding time," said Graikowski.

Zachary McGeshick, 9, looks on as LaBine explains the mechanics of a Menomonee style jig at Deep Snow Winter Camp, Mole Lake. (JVS photo)

Camp activities included ice fishing, a trapping demo, and a jig project. Thanks to an earlier deep freeze, campers and elders were able to get on the ice and spear a musky despite the several inches of slush collecting on Pelican Lake. Back on shore, helping hands held down spearing camp by preparing warm goulash for lunch.

Mole Lake is organizing 5-6 camps a year. "We don't even have planning meetings anymore, we just know who is gonna do what," said Leland Van Zile. Van Zile wants kids to see the bounty of the Mole Lake area. Van Zile motioned to the frozen lake and said, "Everything our families need, is all right here at home."

When evening set in, the campers made their way back to the Sokaogon Rec Center. Graikowski got right to work setting up stations to clean their catch, which gave Elders from Bad River, Lac du Flambeau, Mole Lake, and Lac Vieux Desert a moment to rest, tease, and tell stories after a long day of fishing with the kids.

Roger LaBine, Lac Vieux Desert was ready when the kids came pouring in. Campers picked up their jig project and got right to work with their sandpaper. Labine traced a fish shape into cedar planks and set each free with a rough cut. He talked with the kids about the jigs his dad used and how to find the jig's balancing point.

In addition to the hands on activities campers also worked on their Anishinaabemowin with Makoons Geniusz, had clan time, and evening stories.

—JVS

Heavy boat wakes that crash up onto the shore can wash out nests and discourage maangwag from living on lakes. (S. Jessmore photo)

Wake boats can threaten lake ecosystems

(continued from page 2)

them began to move. Particles of sediment, settled for many years, began to spin through the water column. On the edge of the depths, the weed bed began to sway. Some of the weed tops that were straining so hard for the sun earlier were chopped and spun and tossed about to float around. Silt swirled around the smallmouth nest, and the male bass ducked under a nearby log. The water in the shallows began to churn.

Three big waves crashed through and up onto the shore. They washed over the loon nest, unsettling the pair and the young. As the first wave slammed the shore, it knocked loose some of the dirt around the roots of a willow shrub. The second and third waves followed and knocked loose some more. The waves crashed into the bay, shaking and uprooting the wild rice. The kayaker looked alarmed at the height of the waves and turned the bow of his vessel perpendicular to them just in time to avoid capsizing. The crappies shimmied deeper into the weeds for cover. But the rumble and the waves continued. They ran around the lakeshore all afternoon in the brilliant sunshine. Another set of three big waves crashed through the shallows onto the shore and then another and another. The deep-water mixer continued to spin and toss the walleye fry and the plankton. The shallows splashed and shuddered. Until finally, the sun arched ever so slowly back below the pines.

The water calmed and the lake settled. The loons surveyed the damage to the nest they had used since they first paired years ago, hoping the young had survived. The crappies reemerged from deep in the weeds, tentatively glancing around to see if any minnows had come back out. Another kayaker slipped her vessel into the water, seeing the newly glassy surface as an invitation to adventure. The dirt torn from the shore settled on the nearby rocks, the formerly clean cobble where the walleye fry had hatched just one month ago. The lake floor sediment began to resettle. Some coated the weeds, blocking their ability to soak up sunlight. Some coated the smallmouth bass nest, suffocating some of the eggs. The lake rested for a night, but the forecast predicted another bright and sunny day to come.

Big impacts, by the numbers

How could a bright, calm sunny day lead to so much turmoil on the lake? A new phenomenon is spreading to inland waters: wake surfing. Wake surfing is just what it sounds like: a person surfing on a wake behind a boat. It can be viewed as similar to water skiing, but with much bigger waves. Specialized wake boats are weighted in the back, causing the prop to point at a much more downward angle than an average motorized boat creating large, surfable waves. While undoubtedly fun for participants on a summer day, wake surfing has the potential to damage lake habitat, and negatively affect fish, wildlife, and others who are using the lake.

Recently, researchers have found that wake surfing can be especially damaging on inland lakes like the ones across vast areas of northern Wisconsin, Minnesota, and Michigan because they are often not particularly big or deep. Consider this:

- Most wake boats range from 19-26 ft with engines producing up to 450 hp.
- Waves from wake boats reach up to 4 feet, meaning that they must be operated between 400 and 600 feet from shore for the waves to reach shore with the impact of a standard waterski boat wave.
- The wave energy from wake boats is 6-12 times that of a ski boat, and they have been documented to cause severe shoreline erosion in some situations.
- Subsurface energy from the waves causes resuspension of sediments to depths of 5 ft.
- These sediments can be deposited on aquatic plants, which can smother them.
- Because the boats are angled upward, the prop wash is directed more steeply towards the bottom, which stirs up deeper sediments and can affect the whole water column down to 20 ft.
- These boats also fill up a ballast tank with up to 5,000 lbs of water. These ballast tanks cannot be fully emptied, creating a risk of spreading non-local beings when the boats are used in different lakes.

(see Wake boats, page 14)

Manoomin steward LaBine honored

Anyone attending an eastern Ceded Territory wild rice workshop or manoomin camp in recent decades has likely crossed paths with Roger LaBine.

From moccasin jigging in a traditional rice-pit to sharing Anishinaabe teachings over a woodfire, the ever-present educator has made an outsized impact on conserving, enhancing, and promoting manoomin in Great Lakes Ojibwe Country.

Roger LaBine (l) accepted the Lifetime Achievement Award from Lac Vieux Desert Band Chairman Jim Williams in Watersmeet, Michigan. (CO Rasmussen photo)

On the heels of Michigan HB4852—a state law that designates wild rice as the official native grain of Michigan—LaBine received the Lifetime Achievement Award from the Lac View Desert Band of Lake Superior Chippewa. Citing LaBine's influence on Michigan HB4852, plus decades of hands-on educational work on wild rice restoration, stewardship, and harvesting know-how across Ojibwe Country, LVD Tribal Chairman Jim Williams presented the award to LaBine January 23 in Watersmeet, Michigan.

"In the long years Roger has served with LVD focusing on our manoomin, our wild rice, to where Michigan now has put place that wild rice is our state grain, I can proudly present this award," Williams said.

Once widespread across the Michigan Ceded Territory, manoomin is making a gradual comeback through restoration programs spearheaded by tribes. On the LVD Band home waters of Vieux Desert Lake, manoomin has experienced a yo-yo recovery hampered by influences ranging from adverse water levels to damage from fishing boats.

Recent discussions among interagency resource managers are considering potential impacts from beaver activity on tributary streams above wild rice beds. Statewide, manoomin still needs legal safeguards from policymakers, LaBine said. In neighboring Wisconsin, manoomin protections and harvest regulations are outlined under state Code NR19.09 Wild Rice Conservation.

"The highest status that manoomin [can have] is that the Creator put it here for us," said LaBine, an LVD band citizen. "A lot of times in wild rice restoration, you have a lot of hurdles—even in your homeland, on your home lake—but you work to overcome those."

—CO Rasmussen

Omashkooz season

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tribal wildlife authorities located across the 1837 and 1842 Ceded Territory, and a host of Ojibwe treaty hunters participated in the season.

Hunting as a family group, Keweenaw Bay Indian Community members collected the first Wisconsin elk of the season in late September a few days after opening ceremonies at Chippewa Lake with a well-placed shot by a 14-year-old tribal youth.

Months later, on the last day of the season in January, Mille Lacs Band citizens utilized fresh snowfall to locate a group of omashkoozog near Clam Lake. After full days scouting and as many hunting forays throughout autumn, they connected with a spike bull as the final hours ticked away on the season.

Over the course of the season, intertribal hunters harvested an additional two bulls in the Clam Lake region where elk densities in the Wisconsin Ceded Territory are the highest.The four-bull harvest this past year matches recent omashkooz season totals in Wisconsin where state-licensed hunters also took four bull elk.

Wake boats

(continued from page 13)

- Because the ballast cannot be fully drained, these boats are unable to comply with Wisconsin state law which requires all water to be drained from boats before leaving the landing.
- Loon nests at the edge of the water can be washed out by wake boat waves.
- Large waves can uproot wild rice, especially during its sensitive floating leaf stage between late May and early July.

Because of the potential for wake boats to cause negative impacts on our lake ecosystems, along with public lake users, concerned citizens are looking for ways to regulate these boats. At the 2023 Wisconsin Conservation Congress spring hearings, there were six advisory questions that asked for restrictions or prohibitions on wake boats. All of these were supported by large majorities. Additional discussion, education, and action will be needed on this issue to protect the beautiful northwoods lake ecosystems that so many people love and enjoy.

Communications specialist joins PIO

Bay Paulsen joins GLIFWC's Public Information Office as a Communications Specialist. Paulsen, originally from southern Missouri, is now calling the Northwoods home after attending college in Ashland, Wis. "Lake Superior stole my heart," said Paulsen.

Paulsen grew up near the spring-fed rivers of the Ozark highlands. Paulsen discovered their passion for the water while canoeing through Missouri's abundant rivers and learning more about the relationships between the water and the beings who depend on them.

Paulsen's professional journey is driven by the personal need to seek connection and ancestral healing. Paulsen is motivated to learn more about the Anishinaabe lifeway and extending their writing skills to protect retained treaty rights of Ojibwe people.

Paulsen graduated from Northland College after studying biology and earning their bachelor's degree in science with a minor in writing in 2023.

Paulsen joins GLIFWC after working at Mooningwanekaaning-minis (Madeline Island) at Big Bay State Park, where they helped with park maintenance, the front office, and most importantly, helping guests understand more about the park, the island, and the beings who call it home.

Recently, Paulsen traveled back to Missouri to help teach all ages about the Ozark streams and rocks, their relationships, and how they affect all other life around them.

"I'm looking forward to the field work that comes with covering stories for the Mazina'igan and getting to express my love for the Northwoods through writing and building long lasting relationships with the people who know it best," said Paulsen.

—J. Van Sickle

Tribal off-reservation birch lodgepoles

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What if I need more than five birch lodgepoles for a ceremony or spiritual purpose?

Ceremonial permits are still available for GLIFWC-member band tribal members to harvest birch lodgepoles beyond the limit imposed for general gathering, as long as the harvest does not impact the conservation of the species, within a particular location.

If you are in need of a ceremonial permit, please contact your tribal conservation department. Although a permit will be issued directly by your tribe, GLIFWC will work with your tribal conservation department to locate a site with a sufficient number of young birch trees.

I just want to harvest birch poles on reservation. Does this Commission Order affect me?

No. This Commission Order only applies to off-reservation gathering. Some tribes, however, have imposed on-reservation closures on birch lodgepole harvesting. Please check with your tribal conservation department prior to cutting.

2024 Board & VITF officers elected

GLIFWC's Board of Commissioners recently selected its officers for 2024. Comprised of tribal chairpersons, or their designees, the Board establishes policy and sets priorities for GLIFWC staff across the Ojibwe Ceded Territory of Minnesota, Wisconsin, and Michigan. From left, Board Vice-Chairman Kelly Applegate (Mille Lacs Band), Board Chairman Jim Williams (Lac Vieux Desert Band), and Board Secretary Rodney Loonsfoot (Keweenaw Bay Indian Community). (CO Rasmussen photo)

St. Croix Band's Conrad St. John (left) and Chris Swartz, Keweenaw Bay Indian Community, were selected to lead GLIFWC'S Voigt Intertribal Task Force. As respective task force chairman and vice-chairman, St. John and Swartz head a policy-focused committee comprised of 10 Ojibwe bands with off-reservation treaty rights in Upper Michigan, Wisconsin, and Minnesota. (CO Rasmussen photo)

Upcoming events

Healing Circle Run/Walk—July 13-19, 2024

Mikwendaagoziwag Ceremony—July 24, 2024

More information will be available soon on GLIFWCs Website and Facebook.

GLIFWC All Staff Day 2024

Staff were recognized for their many years of service to GLIFWC and its member tribes. Seated from the left: Missy Berlin (30 yr), Annette Crowe-Bigboy (35 yr), Jonathan Gilbert (40 yr). Standing: Mike Soulier (25 yr). Adam Oja (10 yr), Jose Estrada (5 yr), Roger Weber (5 yr), Henry "Butch" Mieloszyk (40 yr), and John Coleman (35 yr). Missing from the photo are Stephen Ante (10 yr) and Melissa Maund Rasmussen (10 yr). (JVS photo)

Traditional foods

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will undoubtedly improve producers' produce packaging practices.

Finally, Feeding America has committed to an ongoing grant for the next two years, providing locally sourced traditional foods for elder food boxes. This leading nonprofit organization joined the training to recruit new producers who could contribute to filling the elder food box for native communities in Wisconsin.

This collaborative effort ensures that quality and safe produce reaches those who most need it. Highlighting their dedication to alleviating food insecurity, the Great Lakes Intertribal Food Coalition was also invited to participate in the TPSTS as a partner in the elder food box initiative.

The Tribal Produce Safety Training Series is a significant step forward in implementing food safety practices within Tribal communities. By recognizing the unique needs and cultural practices of tribal growers, producers, and traditional harvesters, food safety is accessible to all.

Contact Laurie White at *lwhite@glifwc.org* or 715-292-8726 to learn more.

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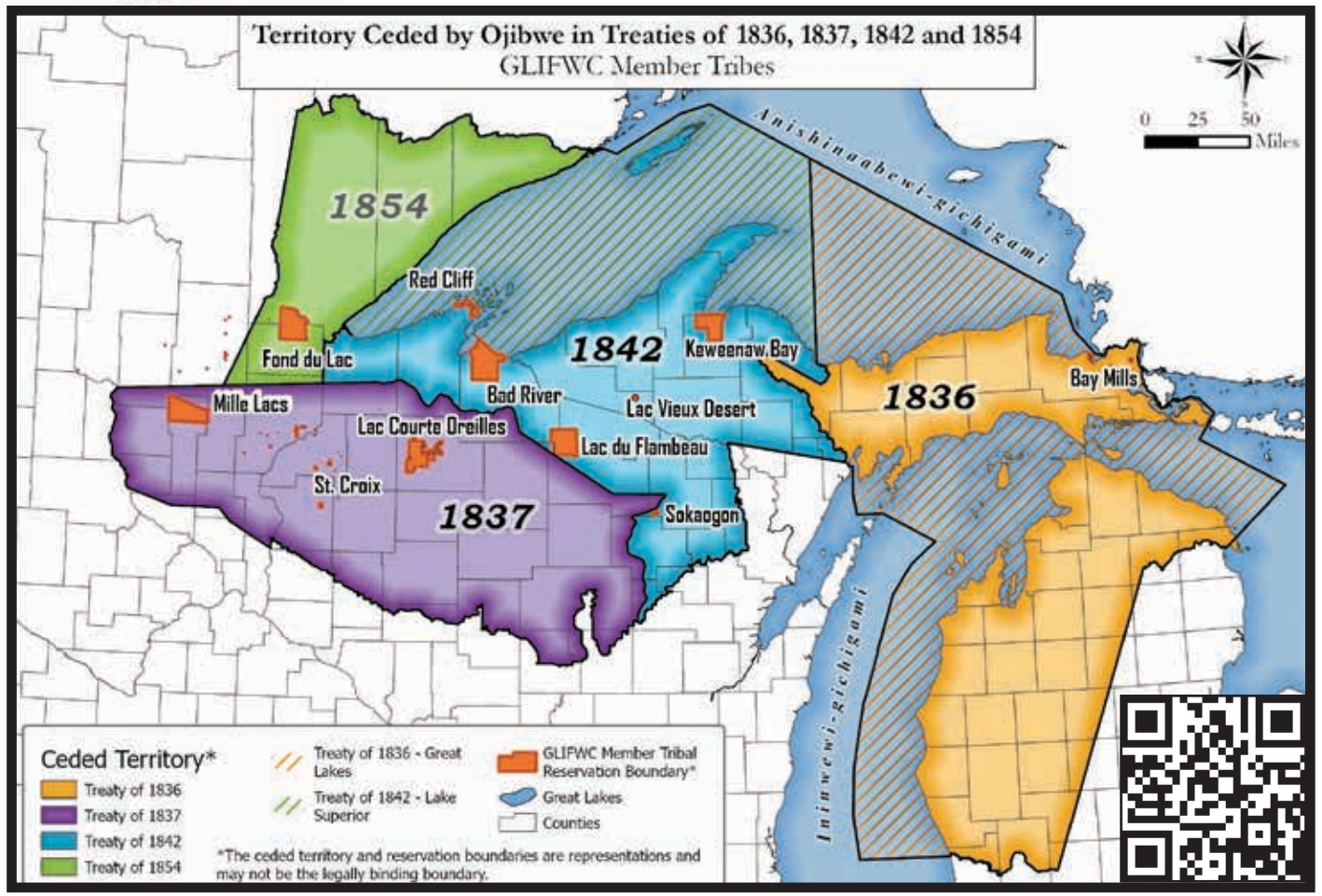

GLIFWC hosts inaugural Walleye Symposium at St. Croix

Fish stocking and habitat rehabilitation panel with GLIFWC Inland Fisheries Section Leader Joe Dan Rose and Mark Luehring, inland fisheries biologist; Wayne Labine, Mole Lake; Lyle Chapman, Lac du Flambeau; and Holly Embke, USGS. (JVS photo)

GLIFWC inland fisheries biologists organized their first annual Walleye Symposium on February 29, 2024. Participants reflected on the projects, initiatives, and efforts of the past in order to build a shared vision with solutions for the future of inland harvests.

Tribal leaders, scientists, and fisheries professionals gathered to analyze data, examine specific lakes, and learn more about what has worked to restore walleye populations and adult density. Dr. Holly Embke, USGS research fish biologist, gave a presentation on recent research. "We studied 49 lakes and evaluated the approaches used to restore walleye populations." Embke's team organized their results into dominant techniques and found that over time, efforts that used to encourage population growth aren't as effective as they once were.

The group met over the course of two days. "We needed this. It's hard to stay on track, we could talk about each topic all day," said Lyle Chapman, of Lac du Flambeau Fisheries.

—JVS