Mazina'igan
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USDA official: LVD manoomin project a national model

By Charlie Otto Rasmussen
Staff Writer

Rhinelander, Wis.—In the throws of an historic windstorm, Jay Jensen journeyed to northern Wisconsin to appraise projects taken on by the United States Forest Service (USFS) and its partners. Upon review of the Lac Vieux Desert Wild Rice Restoration Project with tribal representatives, he discovered something special.

"The success that's happening with the wild rice restoration project is a model for the whole country," said Jensen, Deputy Under Secretary for Natural Resources and Environment. during an October 27 visit.

The USFS teamed with state resources agencies, the Lac View Desert (LVD) Ojibwe Band, and Great Lakes Indian Fish & Wildlife Commission (GLIFWC) to revive the once renowned manoomin, or wild rice, beds at Lac Vieux Desert, a Wisconsin-Michigan border lake.

Wild rice provides critical habitat and food for wildlife and is central to the Ojibwe diet and culture. Under the multi-pronged work of agency partners, LVD manoomin distribution has quadrupled since the project began.

A rare, powerful weather event known as an extratropical cyclone downed trees throughout the area and limited travel to scheduled project sites. Nevertheless, Jensen met with key personnel including GLIFWC Board of Commissioners Chairman Mic Isham, LVD Tribal Planner George Beck and GLIFWC Wildlife Biologist Peter David.

Jensen's ceded territory visit comes in the midst of preparations for a new Forest Service Planning Rule—a guidepost for managing each one of America's 155 National Forests and 20 National Grasslands.

"We need to redouble our efforts elsewhere in the nation to pursue more activities based on government-to-government relations," Jensen said.

In order to meet that end, USFS officials are contacting American Indian nations individually, seeking formal consultation on the new planning rule and how it may impact tribal communities. Regional meetings with tribal leaders are also scheduled into early December.

"As the planning process gets underway, we have a very specific interest in engaging tribes prior to the public comment period," said Jensen, who expects the new Forest Service rule to be published in the Federal Register by early January 2011.

Jensen said the last National Forest rule was completed around 30 years ago. Plans for individual national forests and grasslands are generally revised every 15 years.

"With different federal officials rotating in and out of the region, it's been an ongoing and sometimes frustrating process for tribes to get the message across—that forest management has a major impact on Ojibwe people who rely on these lands for healthy food and medicines," said Isham, a Lac Courte

(See LVD manoomin, page 2)

The successful restoration of manoomin (wild rice) beds in Lac Vieux Desert, which lies on the Michigan-Wisconsin border, is the result of long-term reseeding efforts and a multi-agency commitment to revive the historic beds. Ron Parisien, GLIFWC wildlife technician, was one of many involved in the labor-intensive process of reseeding manoomin. (Photo by Amoose)

USGS/GLIFWC focus on integrating services

By Sue Erickson
Staff Writer

Odanah, Wis.—"In some ways the missions of GLIFWC and the Coast Guard mirror each other—to provide protection, both environmental protection to the Great Lakes and provide safety to the people that use it. Bringing the two agencies closer together seemed a natural fit," says Lt. Dave French, Ninth Coast Guard District, External Affairs Officer headquartered in Cleveland.

French, along with three other officials from the USCG, spent a day last October at GLIFWC's offices exploring avenues for cooperation and integration of services. To date GLIFWC's cooperative involvement with the USCG has largely dealt with reporting and retrieving lost nets, or at times, the USCG has reported commercial fishing violations for GLIFWC to investigate. However, the recent discussions revealed greater opportunities and opened up communication channels.

During a first-ever consultation, United States Coast Guard and GLIFWC officials shared information on field assets and technical capabilities. Agency officials said the meeting lays a foundation for future cooperative work in areas like law enforcement and public safety in the ceded territory. From left: Coast Guard Lt. Aaron Gross, Kekek Stark (GLIFWC), Thomas Erickson (CG), GLIFWC Chief Warden Fred Maulson, Lt. Kenneth Griffith, Lt. David French (CG Tribal Liason), and GLIFWC's Jim St. Arnold. (Photo by Charlie Otto Rasmussen)

"Although we've definitely utilized the Coast Guard's services in the past," says GLIFWC Enforcement Chief Fred Maulson, "this opportunity opened their eyes as to GLIFWC's multi-faceted programs and also opened new doors for GLIFWC to have an improved relationship with the Coast Guard."

One of the areas under discussion involved training opportunities. According to Maulson, this could include training in cold-water rescue, captain's training, and water-related enforcement training. French points out that the USCG runs a top-notch ice rescue course at its Ice Capabilities Center of Excellence (ICCE), Saginaw, Michigan. USCG personnel trained at the ICCE could bring that training back to GLIFWC's enforcement staff, promoting both safety and standardized rescue practices.

Another area of cooperation being explored regards tribal vessel registration. Currently, the USCG recognizes state vessel registration but has no protocol regarding a similar tribal registration for tribal vessels. French says that GLIFWC will be submitting a proposal for tribal vessel registration for USCG consideration.

Possible shared use of resources, such as the USCG's ice-rescue airboats and skiff, was another topic during the day. The high-powered airboat can transverse land, water and ice. Used in rescue situations, the airboat could possibly help retrieve identified ghost nets if conditions are difficult. Also discussed were joint USCG/GLIFWC flight patrols, using USCG helicopters.

The USCG is very interested in getting more information into tribal communities, says French. For instance, the USCG produced free identification decals for use on boats that do not require registration, such as canoes, kayaks and rowboats.

GLIFWC will now help make those decals available to the tribal public. If an unregistered craft were found adrift, it typically leads the Coast Guard to launch an extensive search and rescue effort. The stickers make it easier to restore the vessel to the owner if the identification decal is attached. It also saves the Coast Guard lost resources expended in unnecessary rescue efforts. The ID decals are part of the broader "Operation Paddle

(See USGS strengthens, page 15)

Manoomin: Feast then near-famine

By Peter David, GLIFWC Wildlife Biologist

Odanah, Wis.—What a difference a year makes.

A year ago, I described the recently completed manoomin (wild rice) season as the "perfect non-storm." Many rice waters had strong stands of this annual plant in 2009: the area of beds were above average, and stand densities were near that ideal level that maximizes seed production—not too thin, not too thick.

The summer growing season was relatively mild, and the harvest season coincided with the most ideal weather pattern many ricers had ever witnessed: 2-3 weeks of sunny, calm, and storm-free days. Word got around that it was a great year to harvest, and people did just that: the combined state/tribal off-reservation rice harvest in Wisconsin was estimated to be nearly 115,000 pounds of green rice—the highest harvest estimate since annual surveys began over 20 years ago, and about 75% above an average year.

In 2010, the pendulum swung hard in the opposite direction, towards what might appropriately be called the perfect storm year.

Although the season began with some optimism, nearly every factor affecting rice production seemed to go down hill as the summer and fall unfolded. After years with below-average precipitation in many parts of rice range, the rain came in droves in 2010. At some sites, the rice drowned as water levels jumped. At others, large numbers of plants were uprooted and left wind-rowed on the shore. Where stands were able to avoid these losses, the beds were sometimes very thick—perhaps in part at least as a result of the heavy crop seeded the previous fall. However, this very density, coupled with a warm, wet summer, produced ideal conditions for the outbreak and transmission of brown-spot disease. This caused significant losses at many major beds, turning the plants brown, minimizing seed production, and leading some ricers to believe they had missed the harvest of a crop that, in fact, had never materialized to harvest. The final straw was the weather during the harvest season—when wind, hail and rain laid claim to most of the meager production that the plants managed to pull off.

A healthy crop of manoomin growing in Minnesota's Dean Lake in 2009. (Photo by Peter David)

Brown-spot disease caused significant damage to many major wild rice beds. (Photo by Peter David)

This year's crop of manoomin in Dean Lake, Minnesota ravaged by brown-spot disease. (Photo by Peter David)

While 2010 harvest surveys are still underway, the initial returns coming in from state-licensed ricers are fairly shocking, especially on the heels of the extraordinary 2009 season. First, some ricers clearly saw what was coming, because license sales for state-licensed ricers fell by a third. Next, it appears that over a quarter of the folks who bought a state license ultimately never used it—about 2.5 times as many as in a typical year. Finally, those that did go, found the going tough. Over a third came home with a pound or less of green rice—compared to less than 2% in 2009, and so far the average harvest for the season per active license is running around 20 pounds—about one-fifth of the long-term average. It turns out my pre-season estimate that the 2010 harvest might only be a quarter of the year before was overly optimistic; while state data is still coming in, and tribal harvest surveys are yet to begin, it looks like total off-reservation harvest will be closer to 10% of the 2009 totals. That will make it, by quite a wide margin, the poorest harvest season since we began doing surveys.

So does this make 2010 the year that belies my frequent description of manoomin as the giving plant?

It certainly is that kind of year that can make you pause and imagine what a fall like this must have meant to the Anishinabeg living on this landscape 200 years ago. Those that did not have a substantial reserve of rice from previous years must have felt a trepidation about surviving the upcoming winter that most of us living today have never experienced—or can scarcely imagine.

At the same time, it has long been understood by ricers that much of the nourishment that manoomin provides is spiritual. I am reminded of that simple fact each year as I review the responses from the harvest surveys we conduct.

With the busy lives we all seem to live these day, GLIFWC tries to keep our harvest surveys as short and non-demanding as possible. Yet ricers are always reluctant to reduce their experience to the number of trips they made and the pounds they harvested. I have received surveys that had letters attached, included photos of canoes, even had sample grains carefully taped in place. I have read hand-written paragraphs and had long phone conversations with first-time ricers who wanted to share what the experience meant to them, even while the "hard data" showed that they hadn't picked enough green rice to fill a mason jar. I can only say miigwech to these ricers for sharing their stories with me, and for reminding me how fortunate I am to be able to spend some of my life working with this medicine. And each of these stories is a miigwech to the spirit of the manoomin as well, the plant that gives so much.

LVD manoomin project

(Continued from page 1)

Oreilles member. "We need to have all these management discussions during planning stages, not as an afterthought. This is an important step in the right direction."

Jensen has worked for the US Department of Agriculture since April 2009 when Ag Secretary Tom Vilsack named him to his current position, which oversees the Forest Service and Natural Resources Conservation Service.

US Forest Service officials invite tribal representatives to a consultation meeting in association with the new National Forest Planning Rule.
December 7, 2010 @ 9:30-11:30 a.m.
Lake Superior Lodge, Ashland, Wis.
For more information contact US Forest Service Tribal Liaison Mary Rasmussen @ 715.362.1354.

A top US Department of Agriculture official, Jay Jensen, met with GLIFWC and Lac Vieux Desert (LVD) representatives October 27 to review progress on the cooperative LVD Wild Rice Restoration Project. Pictured from left: GLIFWC Biologist Peter David, LVD Tribal Planner George Beck, GLIFWC Board of Commissioners Chairman Mic Isham, Deputy Under Secretary for Natural Resources and Environment Jay Jensen, and Chequamegon-Nicolet Forest Deputy Supervisor Tony Erba. (Photo by Charlie Otto Rasmussen)

On the cover

A proud hunter, Desmond Graveen, Lac du Flambeau, brought home a pheasant following a two-day bird hunt workshop sponsored by GLIFWC's Enforcement Division. The successful, first-time workshop was designed to introduce participants to the basics of bird hunting. (See story on page 8) (Photo by Fred Maulson)

CWD response plan includes tribal consultation

By Jon Gilbert, Ph.D.
Wildlife Section Leader

Odanah, Wis.—The Wisconsin Department of Natural Resources (WDNR) has completed a Chronic Wasting Disease (CWD) Response plan for the years 2010—2025. This plan outlines the WDNR proposed responses to the continued presence of CWD in Wisconsin.

Three of the goals of this new response plan are: prevent any new infestations of CWD in Wisconsin, monitor and respond to any expansion of the disease, and to minimize the geographic distribution and intensity of the disease.

This plan has been in the process of being reviewed and modified for more than a year. Versions of this plan have been reviewed by GLIFWC staff and have been the subject of WDNR visits to Voigt Intertribal Task Force meetings. The delay and subsequent input has allowed GLIFWC to improve the plan so that it addresses tribes, tribal governments and sovereignty, and tribal culture in a more complete manner.

The initial draft of the CWD plan that was reviewed had no mention of tribes or treaty rights. The current draft is different. Tribes are referred to in several places throughout the plan, starting with the Executive Summary on page four where the importance of deer to Ojibwe culture is referenced.

Tribes are referred to in the specific management goal section on page six where the plan calls for cooperation with tribes to formulate action plans if CWD is found in the ceded territory. This section recognizes a role for the tribes in disease management when found off reservation and acknowledges that the DNR's role is 'significantly narrowed' by treaty rights. The paragraph also references Governor Doyle's policy on Indian relations.

On page ten there is a discussion that relates the importance of waawaashkeshi to the Ojibwe. It is a small story and does not by any means fully describe how and why waawaashkeshi are important, but it is a start.

It is by gradually introducing these concepts to our WDNR colleagues that we can educate others about Ojibwe culture.

Finally the new plan commits to consultation with tribes if CWD is found in the ceded territories and requires consensus with tribes if CWD is found on or near a reservation. This is a large step forward and is an important acknowledgement that tribes play a critical role in deer management.

The changes that the WDNR has made in this plan, especially as it relates to consultation with the tribes, have improved it enormously. The changes acknowledge the critical role that tribes play in deer and deer disease management. The WDNR has been willing to incorporate changes suggested by GLIFWC and have acknowledged the tribes' legitimate role.

CWD: Upper Michigan tribes launch testing programs

Treaty hunters in Upper Michigan are encouraged to participate in chronic wasting disease (CWD) surveillance programs sponsored by Bay Mills and Keweenaw Bay Indian Communities.

Wildlife technicians remove specific lymph nodes from the heads of harvested whitetail deer—along with a portion of the brain stem—to test for the contagious, fatal disease. CWD has not been shown to cause illness in humans, but is harmful to deer, elk and moose populations. The disease exists in some areas of Wisconsin, but has not been discovered in the Upper Peninsula wild deer herd.

Both tribes are offering lottery prizes to hunters that submit deer heads for CWD testing. To learn more about drop-off sites or to make pick-up arrangements call:

Bay Mills: 906.248.8595
Keweenaw Bay: 906.524.5757 x19

waawaashkeshiwag (Photo by COR)

Wildlife legal expert: bears at crossroads in Japan

Consults GLIFWC staff

By Charlie Otto Rasmussen
Staff Writer

Odanah, Wis.—When it comes to managing and conserving wild bears, Japan is likely far removed from the minds of upper Great Lakes residents. But within the Montana-sized archipelago, black and brown Asian bears live on mountainous, rural lands, and conflict is brewing between traditional peoples, sport hunters and local authorities over harvest protocols.

Law Professor Mitsuhiko Takahashi—a specialist in Japanese wildlife management dynamics—traveled to GLIFWC's central offices last August to better understand black bear stewardship in the ceded territory.

Japanese Law Professor Mitsuhiko Takahashi from the University of Toyama met with GLIFWC staff in August to learn about native approaches to bear management. Both black and brown bears inhabit portions of the Japanese islands. Takahashi said conflicts arise between local, traditional bear managers and outside interests that are sometimes motivated to kill bears to acquire profitable organs like gallbladders. (Photo by Charlie Otto Rasmussen)

"Traditional hunters have a strong conservation interest toward bears in Japan," said Takahashi, University of Toyoma. "There's a growing concern that harvest permits issued under the wildlife damage control code is just a disguise to kill bears for gallbladders."

Prescribed to treat everything from liver disease to hangovers, bear gallbladders drive a highly lucrative trade in Japan and Asia. Seeking to capitalize on market demand, China has created controversial bear farms where gallbladder bile is milked daily. Treaty and state-licensed hunters in the upper Great Lakes are prohibited from selling bear organs or claws on the international market.

While community-based resource users have historically administered wildlife management in Japan, their ranks are dwindling, and many of those that remain in isolated villages are elders. Authorities with little experience are filling the void with an apparent inclination to issue harvest permits without good evidence of bear-caused damage.

According to Takahashi overall harvest numbers from damage control permits comes in around 1,500 on an average year. But in 2006 that number spiked to 4,679 bears.

"To some extent nuisance control is necessary," said Takahashi. "But new harvest methods like the box trap are extremely efficient and may threaten bear populations in some areas."

Longtime Bad River hunter Joe Rose Sr. joined GLIFWC staff in detailing historic and modern bear management trends in the Lake Superior region. Those insights, Takahashi said, were important considerations as he works on recommendations for a new bear management model in Japan. "We need to have some sort of restructuring," he said.

Traditional bear hunting

On Japan's largest islands, Honshu and Hokkaido, bear hunting is steeped in ritual including some practices familiar to Ojibwe people. Prayers are offered prior to hunting; ceremonies are performed following a kill to thank the bear and send its soul to the mountain gods, said researcher Mitsuhiko Takahashi. To show gratitude and celebrate the large mammals, communities host a bear festival each May. Takahashi also noted there are specific restrictions in place for a traditional Japanese bear hunting party: only men are allowed to participate and they must abstain from sex the previous night. COR

Tribal hatchery managers hook into best aquaculture techniques

Saugeye program: **big** & **FAST**

By Charlie Otto Rasmussen, Staff Writer

Bayfield, Wis.—When it comes to farming fish, no secret is safe. And that's exactly the way it should be said Greg Fischer, University of Wisconsin-Stevens Point Northern Aquaculture Demonstration Facility (UWSP-NADF) manager.

"Getting everyone together, sharing tricks of the trade, is the best way to learn and improve your own operations," Fischer said.

Regional hatchery officials from 13 tribes did just that August 10-11 at the Midwest Tribal Aquaculture Workshop. Fifty participants from White Earth, Minnesota to Sault Ste. Marie, Michigan soaked in aquaculture slideshow seminars and toured a pair of local hatcheries including the University of Wisconsin-Stevens Point's NADF located at Red Cliff.

Tribal programs churn out tens-of-millions of fish annually, bolstering wild populations of walleye, trout, muskellunge, and other species. Call it aquaculture, fish farming or hatchery production; the end result is an enhanced fishery for tribal and state-licensed fishermen.

"American Indian fish hatcheries help pick up the slack when wild populations are down," Fischer said. "There are a lot of different people that benefit from tribal aquaculture programs including Lake Superior commercial fishermen."

Workshop participants got a taste of an intriguing NADF study that has the potential to develop into a popular homegrown product, replacing imported walleye fillets. By all accounts, the project is cooking up nicely.

During a late afternoon fish fry, Fischer served fast-growing saugeye, a hybrid achieved by coupling female walleye with male sauger. While saugeye occur naturally in some large river systems like the Mississippi, NADF scientists have made in-hatchery refinements to produce table ready fish in only one year.

"It just amazes me," said Fischer. "We've raised yellow perch as a food fish and have run into some difficulties with the early lifestages. But saugeyes grow about four times faster and produce a similar, high value product without the same issues that we have seen with yellow perch."

Red Cliff Vice-Chairman Marvin DeFoe welcomes participants to the Midwest Aquaculture Workshop. (Photo by Charlie Otto Rasmussen)

Working with a host of partners including the Lac Courte Oreilles Tribe, NADF staff is exploring large-scale, commercial prospects of producing walleyes and saugeyes within enclosed recirculating aquaculture systems, which require much less water than conventional fish farm operations. With Canadian walleye imports totaling over six million pounds annually, the NADF research may one day help take a healthy bite out of the foreign fish trade. Fischer said results from the expanded walleye/saugeye program should be available in Summer 2011.

A stone's throw from the NADF complex, Red Cliff Biologist Matt Symbal guided the school of fish farmers through the tribal hatchery grounds. While the facility has produced a range of fish species over the past two decades, Red Cliff's specialty is culturing coaster brook trout. Long rectangular raceways hold Gichigami-bound fingerlings along with large, in-house Nipigon Lake strain brood stock used to propagate new classes of trout each year.

University of Wisconsin-Extension Outreach Specialist Sarah Kaatz said fish farming has plenty of room to grow in the near future as public demand for locally produced food increases. "People want to buy local. They want to know where their food comes from and that it was done in a sustainable way."

Kaatz said Wisconsin has strict regulations that ensure water is utilized efficiently and flows back into the environment effluent-free. "Aquaculture operations are very good stewards of water. They depend on clean water—we all do."

For more information online see: *http://aquaculture.uwsp.edu*.

Lake trout fingerlings at the Les Voigt Hatchery near Bayfield. Through the efforts of state, tribal and federal hatcheries, laker populations have made a dramatic rebound in Gichigami. (Photo by Charlie Otto Rasmussen)

Swimming upstream

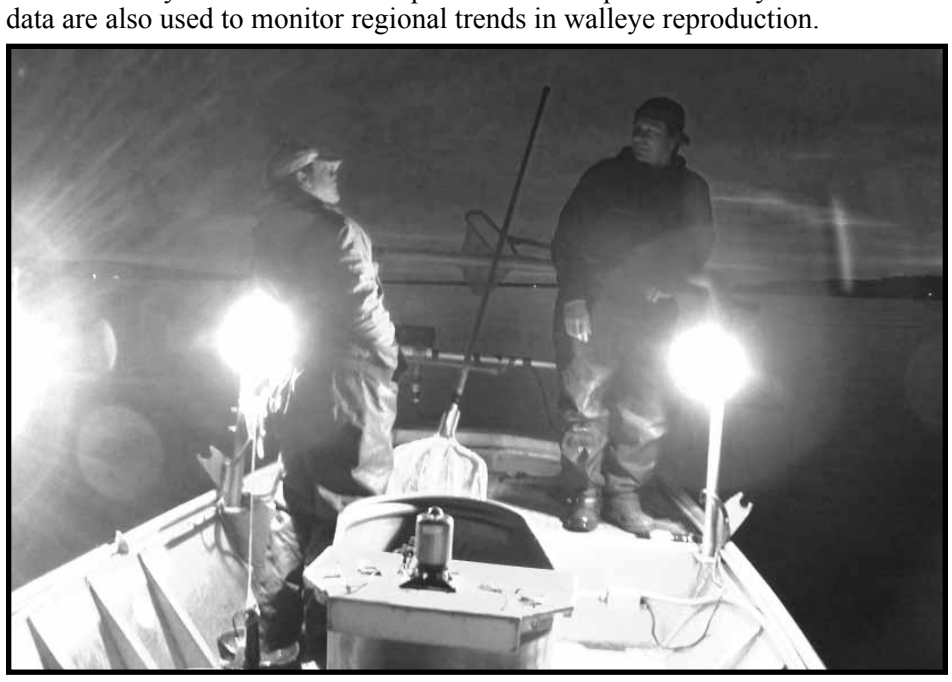
Although fewer sources are available to fund aquaculture operations, grant monies are still available for tribal programs. Workshop presenter and GLIFWC Planning & Development Director Jim Thannum identified a list of agencies and initiatives that support fish farming.

—Bureau of Indian Affairs Hatchery Maintenance
—USDA Natural Resources Conservation Service (EQUIP)
—Economic Development Administration
—Administration for Native Americans
—HUD Community Development

For more information, contact Thannum at 715.682.6619.

GLIFWC conducts fall walleye recruitment surveys on 113 lakes

GLIFWC crews in conjunction with U.S. Fish and Wildlife Service, Bad River, Mole Lake, and St. Croix Bands conducted fall surveys on 103 lakes in Wisconsin, nine lakes in Michigan, and Mille Lacs Lake in Minnesota. Cooperative surveys with the Wisconsin Department of Natural Resources were conducted on eight of the 103 lakes surveyed in Wisconsin. Survey crews typically electrofish the entire shoreline (or an index station on larger lakes) to measure year-class strength of young-of-year and yearling walleyes. GLIFWC biologists use the data collected in these surveys to assess natural reproduction in important walleye waters. These data are also used to monitor regional trends in walleye reproduction.



Tom Houle and Dave Parisien set up for a night of electrofishing as the sun sets on the Willow Flowage. (Photo by Sam Quagon)

Taking care of name' (lake sturgeon)

Inter-agency effort aims to enhance this old giant's numbers

By Henry Quinlan, USFWS
Ashland Fish & Wildlife Conservation Office

GLIFWC Inland Fisheries Biologist Mark Luehring (left) and USFWS Biologist Josh Scholesser, pose with a 74 pound adult lake sturgeon captured in the Bad River. During spawning, eggs can make up to 25% of a female's body weight. (Photo submitted by USFWS)

Spawning population assessment in White and Bad Rivers, Wisconsin

Ashland, Wis.—Regions three and five of the US Fish and Wildlife Service identified restoration of lake sturgeon populations as one of the high priority activities to be addressed throughout the Great Lakes with funds provided through the Great Lakes Restoration Initiative (GLRI).

In April the Ashland Fish and Wildlife Conservation Office (FWCO), located on the south shore of Lake Superior in Wisconsin, implemented this priority working with the Bad River Band of Lake Superior Chippewa Natural Resources Department to gather information on the 2010 lake sturgeon spawning population in the Bad and White Rivers.

In their native range, lake sturgeons are identified as endangered, threatened or a species of special concern by 19 of 20 states, the Province of Ontario and the Department of Fisheries and Oceans Canada. They are also a State of the Lakes Ecosystem Conference (SOLEC) environmental indicator species (*http://binational.net/solec/sogl2009_e.html)*.

SOLEC indicator species are selected by the U.S. Environmental Protection Agency and Environment Canada because they provide a measure of the health of the Great Lakes ecosystem, an environment on which millions of U.S. and Canadian citizens depend.

Lake sturgeon require healthy tributary and nearshore habitat to carry out their life cycle, and their longevity (lake sturgeon can live to be more than 100 years old) provides a long-term measure of ecosystem health and human influence. Lake sturgeons are the largest fish in the Great Lakes basin and historically were a prominent component of the nearshore and tributary fish community.

Hundreds of thousands of lake sturgeon, some weighing more than 200 pounds and six feet in length, would ascend Great Lakes tributaries to spawn. However, from the mid 1800s through the early part of the 1900s, lake sturgeon populations were decimated by overharvest, poor water quality, and loss or alteration of habitat, primarily due to construction of dams on rivers used by lake sturgeon for spawning.

Today, lake sturgeons persist as minor components of the fish community; many populations reduced to fewer than a hundred individuals and some gone completely from their former tributary and nearshore habitats. In U.S. waters of Lake Superior, lake sturgeons spawn in only three of eight tributaries where they thrived historically.

Under the guidance of the Great Lakes Fishery Commission *(www.glfc.org/)*, Lake Superior fishery agencies developed a lake sturgeon rehabilitation plan *(www.glfc.org/pubs/pub.htm#misc)* and Fish Community Objectives for Lake Superior *(www.glfc.org/pubs/pub.htm#pubs)* to guide restoration efforts.

The management goal for lake sturgeon in Lake Superior is to maintain, enhance, and rehabilitate self-sustaining lake sturgeon populations where they historically occurred. To achieve this goal, agencies recognized that strategies such as habitat restoration, harvest controls, assessment and monitoring, better understanding of population biology and genetic structure, and greater public involvement were critical.

And that brings us back to the Bad River Indian Reservation where biologists from the Ashland FWCO and the Tribe spent three weeks this spring capturing adult lake sturgeon as they ascended the Bad and White Rivers to spawn. The objective was to estimate the number of fish in the spawning run and to gather information on population demographics, such as age and size of fish cruising upstream and the ratio of males to females.

Henry Quinlan, USFWS, poses with an adult lake sturgeon captured during the 2010 spawning run. This female sturgeon was estimated to be 39 years old. (Photo submitted by USFWS)

Field crews utilized two methods to capture adult lake sturgeon making their spawning run, large mesh gill nets which allow non-target species to swim through, and wading with dip nets. The gill nets were set in the lower river to capture fish as they began their ascent to the Bad and White River spawning grounds located 36 and 46 kilometers, respectively, from Lake Superior. Dip net efforts occurred in shallow water at the spawning grounds, where crews scan the river for glimpses of the shark-like tails protruding from the water.

Upon a sighting, crews wade into the thigh deep water as the sturgeon calmly swims upstream through the turbulent water. When the opportunity arises, the huge dip net is slowly lowered into the water next to the fish in an attempt to get the head into the net. If successful, you'd better hang on, because some of these fish weigh up to 100 pounds and can take you for a ride. Wading through rushing, thigh deep water to capture a fish that weighs half as much as an adult person certainly provides an adrenaline rush, but it also requires balance, stealth, strength, patience and ultimately respect for this fascinating fish.

Fish captured this spring have been preparing for the 2010 spawning event for 2-5 years by feeding on insects, crustaceans and fish to gather the energy reserves necessary to spawn. In the Bad and White Rivers, male lake sturgeons mature at 15 years of age and females around 23 with males typically spawning every 2-3 years while females require at least four years between spawning events.

This year, biologists captured over 400 lake sturgeon. Each fish was checked for tags, and if no tag was found it was tagged with an internal Passive Integrated Transponder (PIT) tag and an external Floy T-bar anchor tag and released. Fish are double tagged since retention and detection of tags are critical as they allow biologists to track data on particular fish over time and estimate population size using mark-recapture models. Model estimates of the number of lake sturgeon in the 2010 spawning run was 850 (+180) individuals. This is the largest estimate yet from a Lake Superior population.

This spring, 82 fish were captured that had been tagged in prior years by personnel from Ashland FWCO, Wisconsin DNR, Great Lakes Indian Fish and Wildlife Commission (GLIFWC), or Bad River Natural Resources Department. One of these fish was originally tagged 16 years earlier by GLIFWC in Lake Superior near the mouth of the Bad River. During the 16 years between capture and recapture, this fish grew from a 28-inch juvenile into a 52-inch mature adult, a growth rate of about 1.5 inches and 1.5 pounds per year.

By collecting data such as length, weight, gender, stage of maturity and age from each fish captured, biologists can determine information on individual fish as well as the population as a whole. For individual fish we can determine growth rate (the increase in length or weight over time), sex of the fish, spawning periodicity (number of years between spawning runs), and movement and habitat use around Lake Superior.

Population parameters such as estimates of relative abundance, population size, sex ratio of males to females, minimum, average and maximum age of fish in the spawning run for both male and female fish, and the length—weight relationship of the population. This information provides biologists with a better understanding of the current status of the population and allows examination of changes and trends over time.

Armed with such information, Ashland FWCO biologists work with the Bad River Natural Resources Department biologists to develop management actions to further rehabilitation efforts for lake sturgeon populations in the Bad and White Rivers and throughout Lake Superior.

(See Taking care of name', page 6)

Keweenaw area surveys include search for historic spawning beds

By Bill Mattes, GLIFWC Great Lakes Biologist

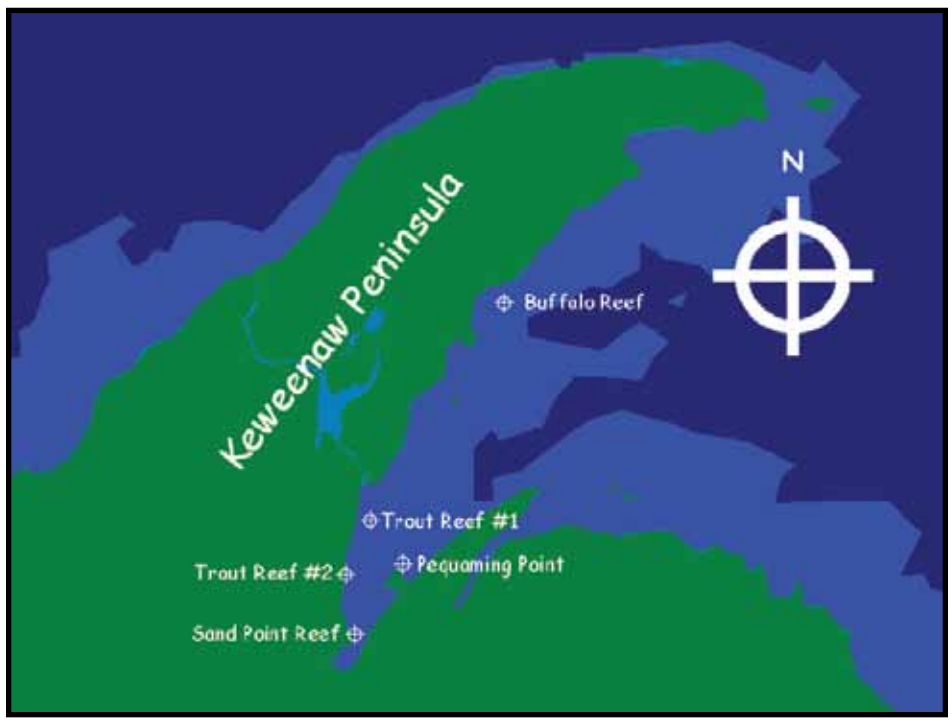
Traverse Bay, Michigan—Although a stiff 20-30 knot west-northwest wind was blowing, the crew of Mizhakwad found their way onto Gichigami (Lake Superior) by staying on the lee side of the Keweenaw Peninsula. The crew spent two weeks looking at Buffalo Reef, a long term study reef on the outskirts of Keweenaw Bay, and also exploring 'historic' namaycush (lake trout) spawning reefs in lower Keweenaw Bay (see map).

Mizhakwad (clear sky), captained by Great Lakes Fisheries Technician Mike Plucinski, starts her day at sunrise. As the crew heads for the first buoy, which marks an assessment gill net, daily bets are placed on how many fish will be caught.

Once at the buoy, Bad River Fisheries Technician Ed Leoso grabs the gear and hooks it up to a net lifter which pulls gill net across a 'picking table' on the boat where it is then 'boxed' by a seasonal fisheries aide. When captured fish arrive on deck, they are 'picked'—removed from the gill net. Live namaycush, adikameg (lake whitefish), and ogaa (walleye) are returned to the water after being measured, checked for lamprey marks, and receiving a numbered tag from Fisheries Biologist Ben Michaels. When fish are recaptured in later assessments or by recreational or commercial fishers, this tag is used to determine how far the fish moved from the spawning reef and how much it grew since first being tagged.

Recaptured fish tagged earlier on a spawning reef provide an estimate of the overall spawning population through a 'mark-recapture population estimate.' Also, information collected on age, size and lamprey wounding tracks the health of 'discreet spawning stocks'—groups of fish that spawn together in a given location. Lake trout are known to return time after time to the same location to spawn. However, during other times of the year, they have been recaptured after traveling over 100 miles from their spawning locations.

The objectives for the fall assessment are simple. Set a reef, measure, tag, release, recapture fish. However, finding the 'historic' spawning reefs and sampling at the optimal time is harder—especially when the gales for which Gichigami is so well known begin to blow. So beginning the second week of October and continuing into November the Mizhakwad crew was out on the lake looking for spawning reefs in lower Keweenaw Bay which haven't seen an assessment gill net in recent memory—hoping to find that lake trout have returned to their historic spawning grounds.



GLIFWC fisheries assessment crews are looking for historic spawning reefs in lower Keweenaw Bay. GLIFWC crews are hoping to find that lake trout have returned to their historic spawning grounds. (Map by Bill Mattes)

A dam debate:

About lampreys, walleyes and lake sturgeon

By Bill Mattes, GLIFWC Great Lakes Biologist

Sault Ste. Marie, Ontario—Like many dams in the Great Lakes Basin, the Camp 43 dam on the Black Sturgeon River, Ontario is nearing the end of its life. Dams built to help move logs down streams and generate a little power are undergoing the effects of time and neglect.

Logging practices have become more environmentally friendly; therefore, rivers are no longer used to move timber. And terms like 'connectedness' and 'free flowing' are used in relation to rivers that have migratory fish using them.

The Camp 43 dam is also a de facto sea lamprey barrier, which has blocked the upstream migration of the invasive sea lamprey for the past 50 years, but it has also blocked walleye and lake sturgeon from spawning grounds.

Prior to construction, sea lamprey, walleye and lake sturgeon traveled up the river to spawn, and it is presumed that they would again use the spawning grounds if the dam were to be removed. Hence, the dam debate—how can the dam be removed and still discourage the up river migration of the sea lamprey while encouraging the return of lake sturgeon and walleye?

Currently, a complex process is underway which involves consultation within the Ontario Ministry of Natural Resources and with the public. This process has settled on two options: one, shore up the current dam and include a trap-and-sort fish way; or two, remove the dam and place a low-head sea lamprey barrier upstream of the currently cut-off spawning grounds.

Option one would mean no increase in sea lamprey and is the most favorable option in the eyes of the larger Lake Superior community. But, the chance of successful walleye and lake sturgeon restoration under this option may not be as good as under option two. However, option two has the down side of increasing the number of sea lampreys.

For now the debate as to which option on the Black Sturgeon River is the best for the overall fish community of Lake Superior will continue. In the future, expect more dam debates over whether to fix or remove dams reaching the end of their life span throughout the Great Lakes Basin.

Taking care of name'

(Continued from page 5)

Michigan juvenile lake sturgeon survey

Tribes work with state & feds on project

The Ontonagon River, Michigan, once supported a large reproducing lake sturgeon population. That population was eliminated (extirpated) during the 1900s. In 1998, Michigan DNR (MIDNR) began an effort to restore lake sturgeon to the Ontonagon River through stocking. Since 1998, stocking and has occurred in 10 of 13 years and ranged in number from 6–7,518. The total number stocked from 1998-2010 is 33, 659. The fish originated as eggs from the Sturgeon River, Michigan, Lake Superior. All fish stocked were marked with a microscopic coded wire tag inserted in the snout.

To evaluate the stocking and describe the status of lake sturgeon in the Ontonagon River area, the U.S. Fish and Wildlife Service, Keweenaw Bay Indian Community, GLIFWC, MIDNR and Forest Service are cooperating to survey waters of Lake Superior near the Ontonagon River. The main objectives of this work are to: 1) assess the relative abundance of lake sturgeon in Lake Superior in the Ontonagon River region; 2) obtain other biological measures and indicators of the target population status, and 3) gather data on movement of fish into and out of the area of interest.

The survey work began in 2005 and has continued annually. A total of 118 juvenile lake sturgeon have been captured, tagged with a spaghetti streamer tag, and released. To date, fish captured and tagged appear to remain in the general areas as no tag returns have been received from other locations like the Bad River, Wisconsin, or the Sturgeon River where eggs were collected.

In addition to length and weight of each fish, biologists collect a fingernail size piece of tissue from each fish for genetic analysis. Because some of the stocked fish lose the tag inserted into the snout, the genetic analysis will allow us to learn if the fish is from the Sturgeon River or if it is from a different source population.

Great Lakes Law Enforcement Committee

Traverse City, Mich.—GLIFWC and the Michigan Department of Natural Resources and Environment jointly hosted the Great Lakes Law Enforcement Committee (GLEC) meeting this fall in Traverse City at the Grand Traverse Bay Resort. The Grand Traverse Band of Ottawa and Chippewa Indians opened the two-day meeting with a traditional pipe ceremony, a first for this committee. Topics discussed were Asian carp, live fish markets, fish disease, and the creation of a "White List." The White List is a proactive proposal that would help protect against future invasive species being imported and exported.

GLIFWC Eastern District Warden Heather Naigus was nominated and accepted the position of co-chairperson for the Great Lakes Law Enforcement Committee. She will serve for two years in this position, representing the eleven member tribes of GLIFWC and will then move up to become committee chairperson.

The mission of the Law Enforcement Committee is to protect, enhance and promote the safe and wise use of the natural resources in the Great Lakes for present and future generations. GLEC works towards this mission through a cooperative effort between several Great Lakes law enforcement jurisdictions. This fall, four of five Chippewa Ottawa Resource Authority tribes were present along with various state and Ontario law enforcement agencies.

If there are any law enforcement agencies interested in attending future GLEC meetings, or would like more information on GLEC, contact Officer Heather Naigus at 906-458-3778 or email *hnaigus@glifwc.org*.

—GLIFWC Enforcement Staff

Base metal mine development activity in the ceded territories

By John Coleman and Esteban Chiriboga, GLIFWC staff

Madison, Wis.—Mineral exploration and mining activity for base metals continues to expand in the western Lake Superior region. Most of the development has focused on sulfide mineral deposits that would yield copper, zinc, nickel, and precious metals. Kennecott's underground Eagle Project on Michigan's Yellow Dog Plains is the furthest along in development, but exploration and environmental review is in full swing in Minnesota for several potential mines. In Wisconsin there is renewed interest by mining companies in two potential mine areas in the north and north-central portion of the state.

Michigan

In Michigan, the Kennecott Minerals mine proposal on the Yellow Dog Plains has moved forward despite concerns over water quality impacts at the mine site, at the milling site in Humboldt Michigan, and along the haul road connecting the mill and the mine. Kennecott recently developed an agreement with Marquette County to build the haul road as a public road between the town of Humboldt and the mine site.

In the spring of 2010 Kennecott fenced the project site and began construction of their surface facilities at the Eagle Mine site. Access to Eagle Rock is blocked and large berms have been bulldozed around the site to block the view. Based on overflights by local residents, it appears that Kennecott is constructing the foundations for several facility buildings and laying the liner for a large waste rock storage area. The waste rock is expected to generate acid runoff when exposed to air and rain. Finally, Kennecott is in the process of installing a high capacity powerline from Big Bay up the Triple A Road to the project site.

The Humboldt site for Kennecott's ore milling facilities has been mined for over 100 years and existing contamination is extensive. At this site there are old mine shafts and drifts left over from underground mining that was conducted at the site decades ago. The exact location of these old mine features is not known. Review of existing data indicates that contaminants are leaving the project site by way of surface water discharge into the Black and the Escanaba River watersheds.

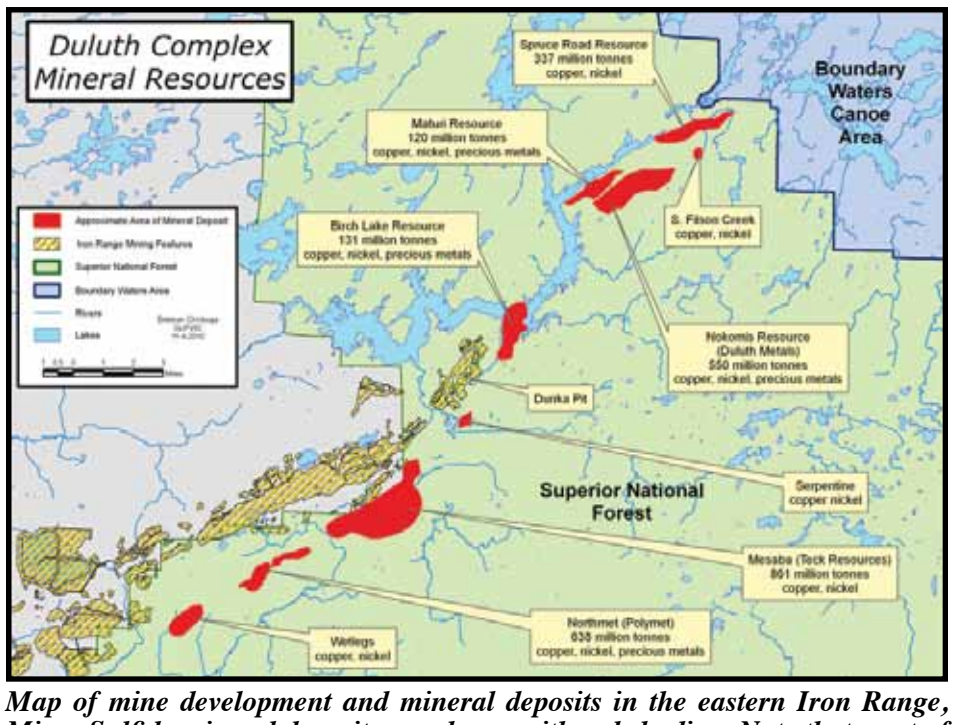
Orvana Minerals Corporation is based in Toronto and has holdings in Spain and Bolivia. The company continues to explore the copper ore deposit near the Presque Isle River and Porcupine Wilderness Area. Orvana plans to submit a mine permit application in the spring of 2011 and hopes to start production in three years. It anticipates a ten-year initial operation. The environmental department of the Lac Vieux Desert band continues to monitor exploration and development of sites in the western Upper Peninsula.

Wisconsin

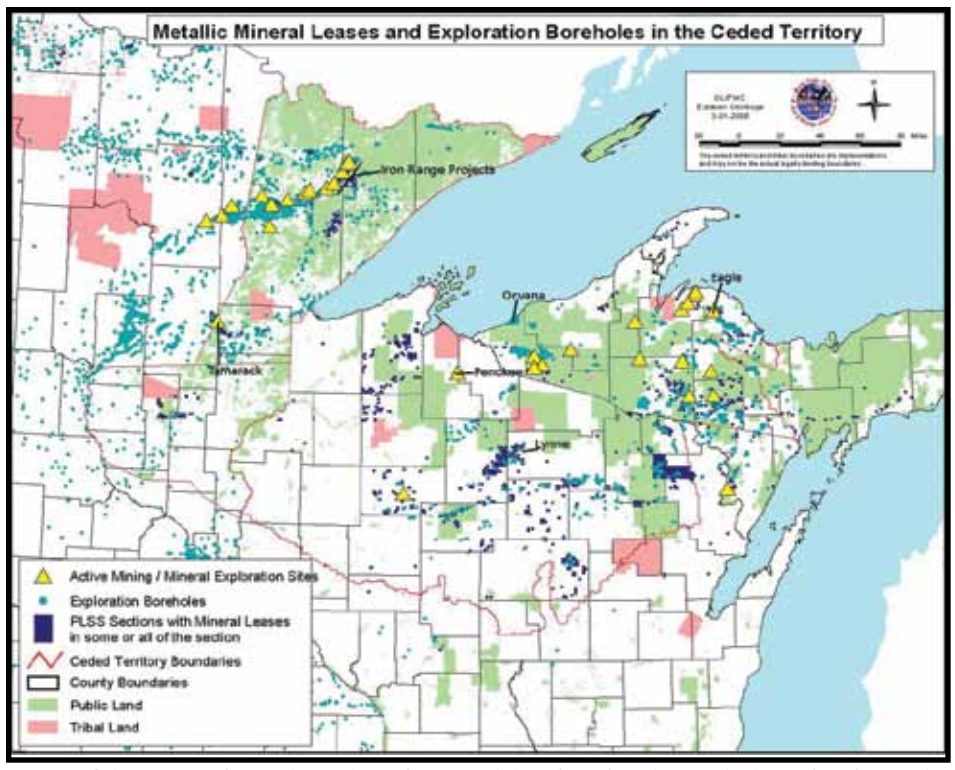
There is currently no on-the-ground exploration or metal mining activity in Wisconsin. However, two sites in northern Wisconsin have attracted renewed interest by mining companies. They are in Oneida, Iron and Ashland Counties.

The mining committee of the Oneida County Board continues to consider the proposal by Tamerlane Ventures from the state of Washington for exploration at the Lynne site in Oneida County. The potential mine site is on the south bank of the Willow River near Willow Falls and primarily on county land. In the 1990s Noranda mining company drilled over 100 bore holes to characterize the sulfide mineral deposit, and Tamerlane would like to do additional drilling to confirm and further characterize the deposit. The county mining committee has directed the county attorney to draft a lease for the county minerals at Lynne, but issues related to state ownership of a portion of the site's surface and minerals are still unresolved. The mining committee intends to put the lease up for bid and see if mining companies, other than Tamerlane, are interested in the site. Tom Evans of the Wisconsin Geologic and Natural History Survey continues to advise the county committee on mineral and mining issues.

Also in Wisconsin, the La Pointe Iron Company has spent the last several years touting the benefits of developing the Penokee Range into a mining district.



Map of mine development and mineral deposits in the eastern Iron Range, Minn. Sulfide mineral deposits are shown with red shading. Note that most of the sulfide deposits are within the National Forest. It is expected that several of these projects will begin the permitting process in the near future. (EC)



Map of known mineral exploration and leasing in the ceded territories. The yellow triangles show the approximate position of active mines and identified mineral deposits. (Map by Esteban Chiriboga)

They propose to mine iron ore in open pits along 22 miles of the Penokee Range running from just west of Mellen to near Hurley. Recently they have found a potential partner in Cline Resource and Development from Illinois, where they mine high sulfur coal. Cline has established a subsidiary named Gogebic Taconite and is conducting a study of the feasibility of mining the minerals in the Penokee Range. The feasibility study is expected to be completed this fall or early winter. In addition to iron deposits in the Penokee Range, previous exploration has found sulfide deposits near the iron formation. It is unclear whether La Pointe and Cline are considering the feasibility of mining those sulfide deposits.

Minnesota

Minnesota is the most active area for sulfide mineral development. This has been facilitated by an aggressive state policy for leasing of state lands and promotion of mine development.

The EPA and other reviewers rejected the Draft Environmental Impact Statement (DEIS) for the Polymet mine in early 2010. The lead agencies have reorganized their effort to write an EIS for this sulfide mineral project proposed near the Iron Range. The lead agencies (U.S. Army Corps and the Minnesota DNR) have recently added the U.S. Forest Service as a co-lead agency on writing the EIS. The Forest Service will be leading the effort to characterize the impacts of a land exchange with Polymet Mining Corporation. A block of approximately 6,000 acres of National Forest are proposed to be exchanged for parcels scattered across northern Minnesota so that Polymet can take possession of the surface rights at the proposed Polymet mine site. However, there are concerns that at least one of the parcels proposed by Polymet for exchange with the Forest Service may contain existing contamination from adjacent mining activity. It also appears that the Forest Service would not be acquiring the mineral rights to the parcels acquired in the land exchange and, therefore, could be subject to petition by mineral rights owners for exploration and mining on the newly acquired properties.

GLIFWC and other tribal staff will participate in technical workgroups to examine potential impacts of the proposed project and to develop recommendations for further evaluation of the potential impacts of the mine. Three tribes are cooperating agencies in the EIS process. They are Fond du Lac, Grand Portage, and Bois Forte. During the last three years GLIFWC staff have worked closely with those tribes to focus attention on unresolved environmental issues related to the proposed project.

Franconia Minerals Corporation has been exploring a large copper—nickel deposit under Birch Lake near Babbitt, Minn. Characterization of the deposit is nearing completion and the company anticipates approaching state and federal agencies concerning environmental review and permitting. The company anticipates an initial underground mine of an approximate 20 year duration.

Duluth Metals is exploring a large copper and nickel sulfide deposit that they have called the Nokomis project. Duluth Metals recently formed a partnership with London-based Antofagasta mining company. The partnership is conducting final feasibility studies and anticipates applying to state and federal agencies for environmental review and permitting in the near future. Duluth Metals owns 3,000 acres of surface and mineral rights, but a portion of the proposed site is owned by the U.S. Forest Service.

Kennecott's Tamarack Project is a relatively small, but rich, nickel and copper mine project west of Duluth near Tamarack, Minn. It is approximately mid-way between the Fond du Lac and Mille Lacs reservations. The project is in an area of wetlands and streams that drain toward Big Sandy Lake and Lake Minnewawa. Extensive drilling to characterize the deposit has been conducted by Kennecott over the last four years.

GLIFWC staff continue to track sulfide mineral development in the ceded territories with an eye on how such developments may affect natural resources of interest to the tribes.

Youth hunters bag birds for the table

By Sue Erickson, Staff Writer

Lac du Flambeau, Wis.—Novice Lac du Flambeau (LdF) bird hunters bagged twelve pheasants during a "Learn to Pheasant Hunt" program sponsored by GLIFWC and coordinated by GLIFWC Warden Riley Brooks. This first-time event attracted ten participants, mostly youth from the Lac du Flambeau band, although it was open to all GLIFWC member tribes.

On October 1 an evening session at the LdF school focused on preparation for the hunt. "We went over topics such as hunter safety, gun handling, pheasant ID, habitat, and a brief history of the pheasant," Brooks says. Later, participants were taken to the LdF shooting range to gain experience with their firearms, firing at both stationary targets and moving clay pigeons.

On day two, participants and mentors convened at the Mead Wildlife Area, Marathon County, ready for action. They were joined by volunteer dog handlers from the North Central Wisconsin North American Versatile Hunting Dog Association who introduced the youth to the bird dogs that would assist them in their hunt and also provided some tips on dog handling.

Students were separated into three groups, each with a dog, dog handler, and mentor and assigned to separate fields. With an opportunity to bag 24 pheasants, courtesy of the Wisconsin Department of Natural Resources, students tested their new skills as pheasants were released into the field. They succeeded in returning with 12 of the 24 released birds.

Following a lunch of grilled brats, burgers and hot dogs, the students were given a demonstration on how to clean their pheasants prior to leaving for home with their pheasants in hand, ready for the pot.

Pictured above are: Front row kneeling: Scott Schaefer, Neil Roberts, Logan Allen, Eli Smith, Desmond Graveen, Scott Poupart, Jeffery Wildcat, Jared Young, Leo Peterson, William Poupart, Emily Poupart, and Jim Bradfish. Back row, standing: Stan Haling, Fred Maulson, Mike Mckenzie, Tom Kroplin, Amy Poupart, Jan Beeler, Julie Brooks, Courtney Schaefer, and Riley Brooks. The dogs participating in the hunt are from the North Central Wisconsin North American Versatile Hunting Dog Association. (Photo by Enforcement Staff)

Assisting Officer Brooks with the "Learn to Hunt Pheasant" program were: GLIFWC Enforcement Chief Fred Maulson, GLIFWC Warden Tom Kroplin, Mike McKenzie, WDNR; Julie Brooks, state forest ranger; Stan Haling, mentor, and four dog handlers—Scott Schaefer, Courtney Schaefer, Neil Roberts, and Jim Bradfish.

Brooks attributes the successful program to the generosity of all the volunteers who shared their time and knowledge and also to Hunter's Headquarters, Woodruff for donating the blaze orange hats which students were allowed to keep. Brooks hopes to offer a similar program in 2011.

Wild rice workshop: More than a harvest of manoomin

By Heather Naigus, GLIFWC Eastern District Warden

Watersmeet, Mich.—From babies to elders, all generations came out to Lac Vieux Desert (LVD) on Sept 17 for a weekend-long wild rice camp. People from various communities came from places as far as Lower Michigan to participate in the tradition of harvesting the food that grows on the water. But it turned out to be so much more than just the taking of wild rice.

Unlike its name implies, wild rice (manoomin) is actually a cereal grain rather than a rice and is harvested and enjoyed throughout the Upper Great Lakes Region by people of varied cultural backgrounds. However, it has been a central component of the Anishinaabe culture and diet for thousands of years and continues to be of great importance in many regional Anishinaabe communities.

Among those coming to learn about the harvest of manoomin were Northern Michigan University students, LVD and Keewenaw Bay Indian Community members and families, non-tribal community members, and Native Wild Rice Coalition partners. They all converged from distant points at the LVD pow-wow grounds for the wild rice workshop.

LVD members Roger LaBine and Charlie Fox led the camp and guided participants in making push poles and knockers. Participants each made their own knockers out of cedar and a push pole out of tamarack to be shared with their ricing partner. At dusk, everyone gathered around the campfire to share stories and songs.

Roger LaBine, Lac Vieux Desert (LVD), demonstrates winnowing manoomin (wild rice) during a wild rice workshop at LVD pow-wow grounds this fall. LaBine along with Charlie Fox led the camp and took participants step-by-step through the process of gathering and processing manoomin. (Photo by Heather Naigus)

On Saturday, Roger instructed harvesters on proper techniques of knocking rice and standing in a canoe, an important skill if you want to stay dry! Participants then canoed out to the rice beds and were treated to a beautiful and healthy harvest experience, including the companionship of two migiziwag (eagles) who circled playfully above the ricers as they wended their way through the rice beds.

All the rice harvested was laid out to dry while participants learned the traditional ways of thrashing and parching, utilizing wild rice donated by the Great Lakes Indian Fish & Wildlife Commission. Moccasins were supplied to anyone who wanted to learn to dance on the rice, and parching was done over a campfire.

Grandmothers, mothers, students, and children sat at a table cleaning the rice while sharing conversation and laughter. A feast was served on Saturday night, and everyone came together as family.

On Sunday, a talking circle was held and everyone expressed gratitude and happiness for the experience of wild ricing and the traditions of the Anishinaabe people. Throughout the weekend, talks were held on the protection and the importance of the wild rice beds. Everyone left with a bag of the wild rice they harvested and promised to bring more of their friends and family to the camp in 2011.

Through this gathering, connections with the land, each other, the Creator, and the ones who came before them were strengthened. It was more than just harvesting food grown on the water; it was also about respect for those who sacrificed so much to protect tribal treaty rights and the land they loved.

Big kettle for a little girl. A youthful participant in the LVD wild rice workshop practices how to keep the rice from burning in a parching kettle—a delicate part of wild rice processing that gently dries the outer husks of the rice so the kernel can be easily released. (Photo by Heather Naigus)

Next year, mini-camps have been proposed to take place before the rice harvest, during which participants will gather birch bark and tamarack to make knockers and push poles, make moccasins for parching, and birch bark baskets for winnowing.

For more information, please contact Youth Outreach Coordinator Officer Heather Naigus at *hnaigus@glifwc.org*.

GLIFWC assists in Oneida County marijuana bust

By Sue Erickson, Staff Writer

Minocqua, Wis.—GLIFWC conservation officers, Jonas Moermond and Riley Brooks, participated in a marijuana growing bust in the town of Minocqua, Oneida County last September. The two officers initially reported seeing the crop on State Forest land to the North Central Drug Enforcement Group (NORDEG), and a multi-agency investigation and bust followed on September 8.

Arrested at the time was Randall S. Handeland, 48, of Minocqua who was tending the plants at the time. About 150 marijuana plants were seized. Handeland has since been charged with manufacture/deliver THC (>2,500-10,000g), a Class F felony with the possibility of more than 16 years in prison if convicted. Handeland has previous drug-related convictions; therefore he could serve extended prison time beyond the maximum 12 years and 6 months for a Class F felony.

Other agencies participating in the bust included the Oneida County Sheriff's Department, Minocqua Police Department, Vilas County Sheriff's Office, Wisconsin Department of Natural Resources, and NORDEG.

(Information for this article was taken from an Oneida County Sheriff's Office press release on Sept. 9 and a Sept. 14, 2010 article from ***The Daily News****, Web Edition, Rhinelander, Wisconsin.)*

Tribal court levy penalties on commercial fishermen

By Jenny Lancour, Escanaba Daily Press

Manistique, Mich.—The tribal judge who sentenced three members of the Sault Ste. Marie Chippewa Tribe of Indians for violating their fishing rights, described the hearing as a "sad day" for the tribe.

Andrew, Kevin and John Schwartz, all brothers from Rapid River, were found in violation of the majority of 105 citations issued against them in connection with an illegal commercial fishing operation in early 2009. The Department of Natural Resources investigated the illegal dealings.

In August, the Honorable Chief Judge Jocelyn K. Fabry revoked each of the three defendants' fishing privileges and ordered each pay thousands of dollars in fines, costs, and restitution. In her concluding statements, the judge commented on the damage done to the environment as well as the tribe's reputation.

"The effect on the natural resources of the area may not ever be determined," Fabry said, describing where the violations occurred as one of the best walleye fishing areas in the state. "This is a sad day for the tribe," she added. "It gives tribal members a black eye in the community."

Following the sentencing at the tribal center in Manistique, Special Prosecutor Monica Lubiarz-Quigley, representing the tribe, agreed with the judge. "I think the judge's comments were very, very appropriate," Lubiarz-Quigley said outside the court. "Her comments reflect the majority of the feelings of the tribe and the board. I think she was absolutely right."

On Sept. 16, the Schwartz's filed an appeal to the tribal judge's order.

(Reprinted from the August 2 and November 10 editions of the ***Daily Press****, Escanaba, Michigan.)*

Wardens bring treaty rights and survival skills to BOW

By Sue Erickson, Staff Writer

Lanesboro, Minn.—You never know where there might be an opportunity for public education on treaty rights. Wardens Robin Arunagiri and Jim Mattson found a great audience during a Becoming Outdoors Women (BOW) camp Sept. 10-12. Invited to be instructors in the fall camp at Lanesboro, Minnesota to teach about survival skills, native plants, and drum-making, the two also included "Treaty Rights 101" in their sessions.

Their first session of the weekend dealt with drum making, which included information behind the drum and the importance of the drum to Ojibwe culture, according to Arunagiri. They had prepared "drum kits" prior to the course, soaking the hide and the laces ahead of time, so were able to assemble drums step-by-step during the class. Nine BOW campers participated, each with a drum kit. As the session progressed, the wardens fielded numerous questions regarding treaty rights as well as about their activities as GLIFWC wardens.

In the next session, Mattson talked to 16 campers about native use of plants, relating the story about asemaa (tobacco). Once again, the wardens fielded more questions about treaty rights. "They were surprised to hear about the Model Code, GLIFWC creel teams and all the data collection that GLIFWC does," says Arunagiri. "We gave them a lot of background information about how the treaty rights were ignored and then affirmed after court battles. They really had very little information at all on treaty rights."

Their last session, also with 16 participants, dealt with survival skills, reviewing the fundamental items necessary to have in backpacks and teaching the participants how to build a shelter and a fire. They reviewed the use of a compass and finding directions, how to deal with hypothermia, how to send smoke signals, and talked about the plants they could use for shelter as well as how to stay calm.

The two instructors received an excellent evaluation from the BOW camp with an invitation to return and talk more about treaty rights and the Native culture.

Denzer Foster, a Washburn High School freshman, lowers a shotgun from a ladder treestand. Red Cliff-based GLIFWC wardens conducted hunter education classes for treaty and state-licensed youngsters in early October. (Photo by Mike Soulier)

Making hand drums was part of a workshop presented by GLIFWC Wardens Robin Arunagiri and Jim Mattson at a Becoming Outdoor Women camp this fall. The wardens combined treaty rights education with cultural information during their presentations. (Photo by Jim Mattson)

Students from Red Cliff and local communities, participated in a GLIFWC-sponsored ATV/snowmobile safety course last October. (Photo by Mike Soulier)

GLIFWC develops multimedia package on treaty rights

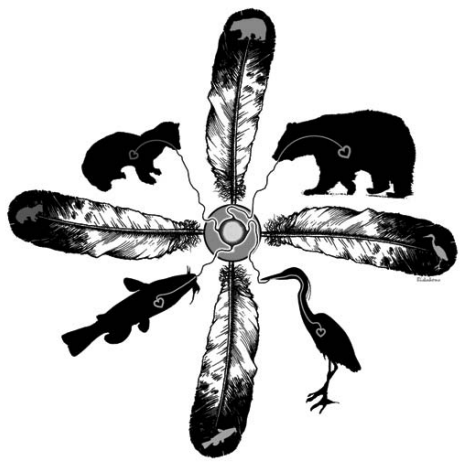
By LaTisha McRoy, ANA SEDS Project Coordinator

Odanah, Wis.—"There is a virtual history book of resources in this room. And this meeting is intended to be a conversation, a two-way conversation, a three-way, and a four-way conversation. Let's get underway and let's talk about some of the things that need to be done." These were the opening words of Rick St. Germaine, moderator of the "Minwaajimo—Telling a Good Story: Preserving 25 years of Treaty Rights" Symposium, last summer.

The conversations from the "Minwaajimo: Telling a Good Story" treaty symposium will be preserved in a multimedia publication package that will be developed through a project funded by the Administration for Native Americans (ANA), Administration for Children and Families and U.S. Department of Health and Human Services.

This project will give an Ojibwe perspective for future generations and will provide an informational foundation for community understanding and cooperation from the symposium at the Bad River Casino Convention Center on July 28-30, 2009.

Included in the multimedia package there will be two DVD's of "Basic Treaty Rights," and audio/video clips of the symposium and three books with symposium transcriptions and treaty rights information. The packages, which will be available summer 2011, will be distributed to GLIFWC's 11 member tribes and their historical preservation offices for archiving as well as to regional schools, tribal community colleges, universities and historical societies.



Also, there will be inter-generational workshops given at each of the 11 member reservations where elders and youth will come together to talk about treaty rights, and the finished project will be handed out to the participants.

"In this project, staff will try to show the flow of the treaty rights conversation, starting with the conversation at the 'Minwaajimo' symposium with elders and continuing on with the view of treaty rights from tribal youth. One way that tribal youth will be involved is through an art contest.

This contest will be held among Native American high school students early next spring to collect artwork for the project. The artwork will be judged on the representation of the theme of treaty rights. The top five pieces of artwork will be featured in the project and win a monetary prize. First place will be $600.00.

The goal of this project is to create an understanding of treaty rights. The final result will be one of the very few teaching resources that contain the Ojibwe struggle from the Ojibwe perspective; a perspective that has been long overdue in many classrooms across the ceded territory.

Continue to read *Mazina'igan* for updates on this project and future announcements about the art contest and upcoming inter-generational workshops.

Members of GLIFWC's Anishinaabe language committee met in Odanah to review progress on an interactive DVD that details traditional harvesting activities in Ojibwe Anishinaabemowin. The group of elders—who hail from around the ceded territory—also joined GLIFWC staff in an autumn equinox feast. Pictured from back row left: Joe Chosa, Diane DeFoe, Veronica Smith, Larry Amik Smallwood, Joe Rose & Dana Jackson. Front left: Phyllis Lowe, Mary Moose, Leonard Moose, Doug Sam & Marjorie Greene. Program elders not in attendance include Dennis White, Cleorah White, giiwegizhigookway Martin, Rose Martin & Leon Valliere. (Photo by Charlie Otto Rasmussen)

Inaadiziwin DVD available soon

Inaadiziwin (Way of Life) Anishinaabe Language DVD utilizes the harvesting seasons of the Ojibwe to teach the language. Developed as a language resource, the DVD identifies words and phrases that relate to the differing seasons of the Anishinaabe. The inter-active DVD also includes 12 short video clips for most of the seasons including spearing a fish through the ice and tanning a deer hide.

Working with speakers and tribal harvesters, the DVD includes language lessons for spearing through the ice, sugar bush, wild rice harvesting/processing, trapping, snaring, hunting, spring spearing, gill net fishing, and hide tanning. 500 copies of the DVD will be given to each of the 11 GLIFWC member tribes.

Funded by a grant from the Administration for Native Americans, ACF, HHS, the Inaadiziwin Anishinaabe Language DVD will be available to the general public early December, 2010. DVD's can be purchased for $12.00 each through GLIFWC's website at *www.glifwc.org,* by phone 715-685-2108, or email *pio@glifwc.org*.

More Ojibwemowin resources:

ANA project to record traditional stories

By GLIFWC Staff

Odanah, Wis—"The stories are important because they are our history and culture. They tell us who we are and what we need to know as Anishinaabe," says Bob Powless, first speaker and tribal elder, Bad River, Wisconsin.

GLIFWC was recently awarded a grant from the Administration for Native Americans (ANA), Administration for Children and Families, U.S. Department of Health and Human Services, to record and archive traditional stories that relate to the original teachings of the Anishinaabe people and their relationship to the natural world.

"Stories have always been an important part of our culture and help us to understand the why of things," said Jim St. Arnold, Project Director. "For example, many elders tell us that when we trap a beaver or muskrat, we should return their bones to the water. There's a story that explains that and why we are to do it."

The Anishinaabe culture is rich in stories. True to an oral culture, stories were passed from generation to generation as teachings.

Often told in winter, these stories included teachings about cultural practices, why things looked the way they looked, why things sounded the way they sounded, and why things were done the way they were done. Stories not only helped Anishinaabeg to learn about the world around them, but the stories also taught what Anishinaabeg needed to know as human beings.

The project, Gidaadizookaaninaanig—Our stories, features audio and video taping Anishinaabe first language speakers sharing traditional stories. The project goal is to collect at least 23 stories. Working with storytellers, project staff will transcribe and translate the stories which will be developed into an Anishinaabe mono-lingual CD and a bi-lingual book at the end of the three year project.

GLIFWC has developed partnerships through the project with the Native American Programs at the University of Minnesota-Twin Cities and Northern Michigan University in Marquette, Michigan to assist in collection of the stories and provide a peer review of the transcribed and translated materials. The Northern Great Lakes Visitor Center in Ashland, Wisconsin has also partnered with GLIFWC on this project and will provide space to record the stories.

Project staff include Jim St. Arnold, project director; Wesley Ballinger, project language specialist; four intern assistants, and Anishinaabe language instructors Dennis Jones and Kenn Pitawanakwat providing peer review and language oversight.

Thoughts about biomass, forests, and our energy future

By Steve Garske,
GLIFWC Invasive Plant Specialist

We shall require a substantially new manner of thinking if mankind is to survive.
—*Albert Einstein*

Odanah, Wis.—Humans have been using biomass ever since they figured out how to make a fire. And for most of human history this strategy worked quite nicely. But the landscape is changing fast. The rush for new sources of energy is on, driven by declining oil and gas reserves, increasing reliance on imported fossil fuels, rising energy prices, and the risks of global climate change. In an attempt to address these serious issues (or cynically capitalize on them, as the case may be), some politicians and corporate "leaders" have been touting "biomass" and "biofuels" as solutions.

The 50 MW McNeil wood gasification plant in Vermont. Note pile of whole logs, which are chipped for fuel. (Photo by Chris Matera, Massachusetts Forest Watch)

The drawing board

"Biomass" is simply a fancy term for organic matter, derived from once-living things. The organic matter usually targeted for energy ranges from agricultural waste to dry grass to corn to sawdust. (Even old houses, railroad ties and tires are now being used in northern Michigan, though—see Gibbs 2008, cited under "References" below.) Liquid fuels derived from biomass are called "biofuels" and intended to replace oil and gasoline. Common biofuels include ethanol and "biodiesel."

Biofuels are supposedly "renewable" because they are ultimately derived from plants, which get their energy from the sun. Plants use sunshine to convert CO2 from the air into carbohydrates (carbon-based compounds including sugars, starch, cellulose, and lignins), which they use to grow and store energy. When plants are harvested and burned for energy, this carbon is returned to the atmosphere as CO2. So on paper, biomass looks like a sustainable solution to our energy and climate woes. Unfortunately getting this simplified carbon cycle to work in practice is far more complicated that it seems.

Biomass schemes that cause more harm than good

The effectiveness of various biomass-to-energy schemes depends greatly on how they are implemented. For example, growing corn for ethanol has been shown to result in little or no net energy gain, after the energy used in planting, harvesting, shipping and processing are figured in. The wisdom and morality of using corn or other food crops for fuel has also come under scrutiny. That's because a lot of grain is needed to get a significant amount of fuel—the amount needed to fill an SUV tank with ethanol could feed a person for a year! Using grain for fuel raises food prices, causing hardship for many and putting them out of reach of the world's poor.

Another way NOT to initiate a biomass program is by destroying existing forests, wetlands and prairies. Researchers from the University of Minnesota and the Nature Conservancy recently published a study in the influential, peer-reviewed scientific journal *Science* (Fargione et al. 2008), showing that conversion of various types of natural ecosystems (tropical rainforests, peatlands, savannas, and grasslands) to biofuel crops releases 17 to 420 times the amount of carbon than the crops planted for biofuels can replace. They estimate that it would take up to 423 years to regain the carbon lost by replacing tropical forest with biofuel crops. Already 17% of the world's carbon emissions are caused by land use changes, mostly cutting of tropical forests (Goers et al. 2009, Lee 2008). In a global chain reaction, rising corn and soybean prices caused by the rush for biofuels has now become the driving force behind the destruction of the Amazon and other tropical rainforests around the world (Grunwald 2008).

Proponents of cutting forests for biomass often argue that because younger, rapidly growing trees absorb more CO2 from the air than mature trees, logging mature forests will result in net carbon absorption from the air. But this is only a small part of the picture.

To start with, one-half to two-thirds of the carbon contained in our temperate forests is stored in the soil in the form of complex carbohydrates (Tyrrell and Ross 2009). The vast boreal forests stretching across northern Europe, Siberia and Canada store even more of their carbon in the soil (Milakovsky 2009). When these forests are clearcut, much of these carbon-containing materials are broken down by bacteria and the carbon is returned to the atmosphere. Furthermore, large trees obviously store much more carbon than small trees do. The bottom line is that immature forests store far less carbon than mature forests.

Burning trees for fuel is problematic in other ways as well. The bark, small branches, twigs and leaves left on the ground during " traditional" logging operations contain most of the mineral nutrients in the tree. Much of the carbon from dead trees is eventually incorporated into the soil by water and insects as well. Hauling this material away for biomass depletes the soil, resulting in "rotational decline" after only a few harvests.

Also, woody biomass is heavy, containing as much as 50% water by weight (UCS 2010). This means that unprocessed woody biomass typically can't be shipped more than about 50-100 miles by truck before it is converted into fuel or energy, or the amount of fuel used in shipping the wood exceeds the amount of energy that can be extracted from it. Large-scale cutting of forests for biomass also threatens wildlife habitat, biodiversity and water quality (UCS 2010).

Another problem is the large amount of wood needed to produce electricity on an industrial scale. Michigan film maker and environmental activist Jeff Gibbs points out that even according to proponents, one 30 megawatt biomass plant needs a woodshed of about 8,000 square miles, and there are only 23,000 sq miles of forest in Michigan (Gibbs 2009)! Harper's List (January 2006) has estimated that if the United States tried to meet all its energy needs by burning trees, they'd all be gone in a year.

Governments here and around the world have a long and checkered history of providing massive subsidies for big oil, gas, coal and nuclear. This pattern shows signs of being repeated for the biomass industry, most recently in the form of the US Department of Agriculture's new Biomass Crop Assistance Program. Part of the 2008 farm bill, this program provides incentives of up to $45 per ton for deliveries of biomass, including wood, to "approved" energy-generating or manufacturing facilities (Melzer 2010b, Eilperen 2010). Already more than half-a-billion in taxpayer dollars is slated to be distributed to sawmills and lumber wholesalers, encouraging them to sell their waste for biofuels (Eilperen 2010).

The Biomass Crop Assistance Program is drawing criticism from just about everyone but the biofuels industry. The pulp, paper and chipboard industries (which already routinely use their wood waste for fuel) are worried that these subsidies will divert wood chips and sawdust to biofuels plants, raising the prices of these materials significantly. The subsidy doesn't distinguish between previously low-value materials such as corn cobs and high-value material such as sawdust, which already sells for $45 per dry ton (Eilperen 2010). Many are concerned that these subsidies will push our already-overworked forests over the edge.

While shipping raw lumber long distances for fuel is cost-prohibitive, new processing technologies such as pelletization, along with government subsidies, have led to tropical trees from every continent being sold on the international market for fuel (Gibbs 2009). A Swedish company is even grinding up and shipping 150 truckloads of trees per day from Florida to Europe (Gibbs 2009).

Biomass that may work if done correctly

One of the most economically and environmentally successful forms of biomass energy so far is passive biogas (pronounced bio-gas) production. Organic waste is fermented under low-oxygen conditions to produce methane (natural gas). Biogas can be produced on a local scale, and is already being used in agricultural communities, especially in developing countries.

Biofuels made from agricultural waste or from biomass grown on degraded and abandoned agricultural lands planted with perennials can provide net carbon benefits almost immediately (Fargione et al. 2008). Perennials have an advantage over annuals because they don't have to be planted every year, thus saving energy. They also use nutrients more efficiently, translocating minerals in their shoots belowground before dying back in the fall. The remaining dead biomass (which burns better than biomass cut and dried during the growing season) can then be harvested.

One of the more promising grasses for biomass turns out to be switchgrass. Switchgrass *(Panicum virgatum)*, is native to much of North America, from the East Coast to the Rocky Mountains. Along with grasses such as big bluestem, little bluestem, Indian grass, and prairie dropseed, switchgrass is (or at least was) a major prairie grass across the Great Plains. In the Lake Superior region it is most commonly seen spreading along roadsides and railroads.

(See Biomass, forests, and our energy future, page 22)

Passing the Torch:

An Ojibwe reflection on the importance, tradition, and future of walleye spearing

By Mitch Larson, for Mazina'igan

Editor's note: *Mitch Larson is currently a senior at the UW-Madison majoring in Life Science Communication. He wrote the following article for Dr. Patty Loew's Native American Environmental Issues in the Media class last year, and Dr. Loew called it to the attention of* Mazina'igan.

The throbbing cadence of tribal drums blaring over Justin Schlender's speakers drowned out the rest of rush hour's traffic. The rise and fall of the traditional native chants offered a stark contrast to the usual bass beats and techno that bump out of downtown subwoofers. At first, I couldn't help but to find it ironic. Here, in downtown Madison, who would imagine that Ojibwe music would be causing all this ruckus? After all, aren't the Native Americans supposed to be the quiet, reserved ones?

But after he parked and we sat down for a few hours I realized that those thumping drum beats weren't noise pollution, at all. They were a reminder. Now, even hundreds of years after European encroachment on Indian lands, Wisconsin's Native American tribes are still here—still going strong in their traditions—and won't easily be forgotten.

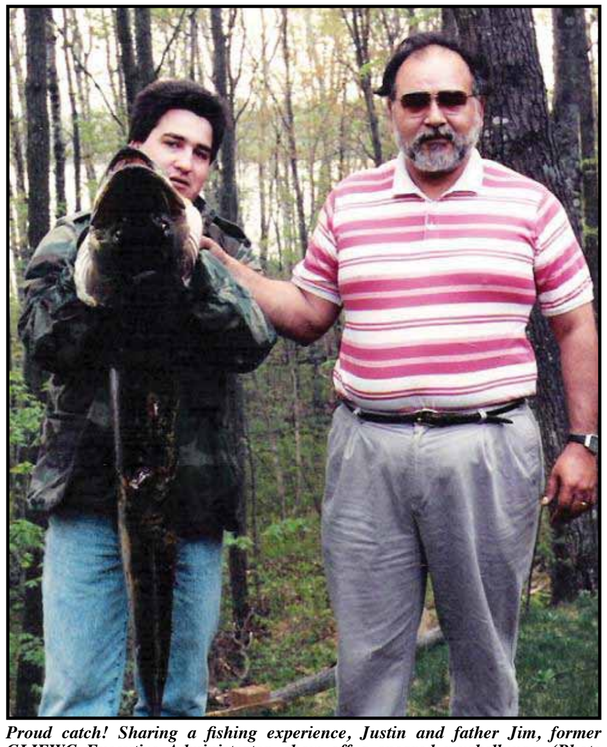
The struggle

The Ojibwe have always been spearers. It's a tradition that's nearly as deep-rooted as the wild rice that brought them to the land that would become Wisconsin.

Justin Schlender, a member of the Lac Courte Oreilles band of Ojibwe, has a long history with walleye spearing. It was, after all, his father, Jim Schlender, former head of GLIFWC (Great Lakes Indian Fish & Wildlife Commission), who locked horns in the '80s and 90's with the state and the DNR in order to ensure that treaty rights, including spearing, were recognized.

"Spearing has always been in our blood," Justin Schlender says. "When the Europeans first came over long ago, they saw us out on the waters in our canoes. It was night time and we had baskets of flame hanging out over the canoe bows. Burning bright, they lit the waters, guiding our spearing ancestors to the walleye. Thus, the French called it Lac du Flambeau—Lake of the Torches."

Since the time the first French traders met the Ojibwe people, much has changed. More and more Europeans settled the area; the United States won its independence from Britain, and the lands of the Ojibwe began looking more and more desirable to the fledgling country.



Proud catch! Sharing a fishing experience, Justin and father Jim, former GLIFWC Executive Administrator, show off a speared muskellunge. (Photo courtesy of Justin Schlender)

Under pressure from the United States, the Ojibwe signed the Treaties of 1837 1842 to cede large tracts of land to the United States government in order to bolster a growing American timber industry. With great foresight, though, the Ojibwe leaders who signed these treaties made sure to retain the right to hunt, fish, and gather in ceded territory. This, they hoped, would ensure the survival of their descendents.

But while the Treaties of 1837 and 1842 represented the supreme laws of the land—a binding promise between the federal government and the Ojibwe—state law and DNR officers began dismissing the importance of treaty rights. Ignoring the rights guaranteed by the federal government, authorities began restricting and prosecuting any Ojibwe who speared or violated state resident fishing regulations. When the state of Wisconsin was created, they claimed, the Ojibwe lost the right to spear in ceded territory.

In 1974, however, Fred and Mike Tribble, two members of the Lac Courte Oreilles Ojibwe, ignited a fire storm. After taking a law class highlighting treaty rights, the two decided exercise the spearing rights they hoped the state would have to honor. The two decided to exercise their off-reservation treaty rights. Their arrest jolted the sleepy Northwoods into a frenzy. The battle that ensued encompassed racism, treaty rights, and the importance of tribal sovereignty.

"We let the police know we would be spearing. We went out there expecting to get arrested," Mike Tribble says in a YouTube interview. "We wanted to get the case into court in order to get it resolved. We knew that none of the treaties we had signed over the years had taken our spearing rights."

After the Tribble arrest, the fate of Ojibwe spearfishing rested in the hands of the American judicial system. In 1983 the Voigt decision (which was later affirmed by the seventh circuit court of appeals) affirmed that the Ojibwe were, indeed, still able to hunt and fish in ceded territory.

Yet still, non-Indians and the State of Wisconsin fought back, protesting and appealing decisions that favored the Ojibwe. By the time spearing rights were exercised in 1985, northern Wisconsin was in chaos. With a declining fishery and changing tourism patterns, non-Indians were quick to blame spearing as the culprit for their economy's demise. With racism as the underlying theme, non-Indians began lashing out at Ojibwe walleye spearers.

Schlender, who was only 15 at the time, remembers the hostility and hatred well.

"I was young, barely 15 years old, and thought I was invincible. So when I say the situation was bad," he says, "it was really bad. There were times I was scared."

At times things got so bad, Schlender recalls, that he remembers feeling like his life was in danger.

"Back in the 80's when I started spearing, it was violent. We would try to be as secretive as possible while spearing because there were people who would shoot at you. I don't think they shot to kill us; they just shot to scare the shit out of us. They wanted us off those lakes."

"We'd be so scared that we'd take the lights off our heads and stick them in the water so that they couldn't see us across the water," Schlender continues, "That way, they wouldn't be able to shoot at us across the lake."

And the violence and hostility wasn't just limited to the water. The ugliest scenes happened at local boat landings. While Ojibwe spearers and family members tried to load boats into the water, angry protestors showed up in force to lash out against the Ojibwe and their spearing rights. The race-driven protests earned northern Wisconsin the nick-name of "the Mississippi of the North."

Groups of protestors banded together and formed anti-spearing groups like PARR (Protect Americans' Rights and Resources), STA (Stop Treaty Abuse), and WARR (Wisconsin Alliance for Rights and Resources). Under the guise of environmental concern and equality, the walleye spearing issue gave these groups a venue to spew their racism. Using threats, racial slurs, verbal harassment, sling shots, and even pipe bombs, these groups rallied against the Ojibwe and their right to spear.

Out of concern for his safety, Schlender recalls his dad forbidding him from going to some of these boat landings.

"Butternut Lake was the pinnacle of all violent lakes. My dad was going to take me with him. Then, at the last minute, he changed his mind and wouldn't let me go. I had friends who went though and I've seen some of the footage. It was ugly. The protesters came in force and we natives were not expecting it. I'm talking 1000 to 1500 people on a little boat landing trying to clog it. They tried pushing us out. The Indians pushed back. There was no actual violence, just an intense area of extremely hostile space."

And as the Ojibwe continued to spear, tensions continued to tighten.

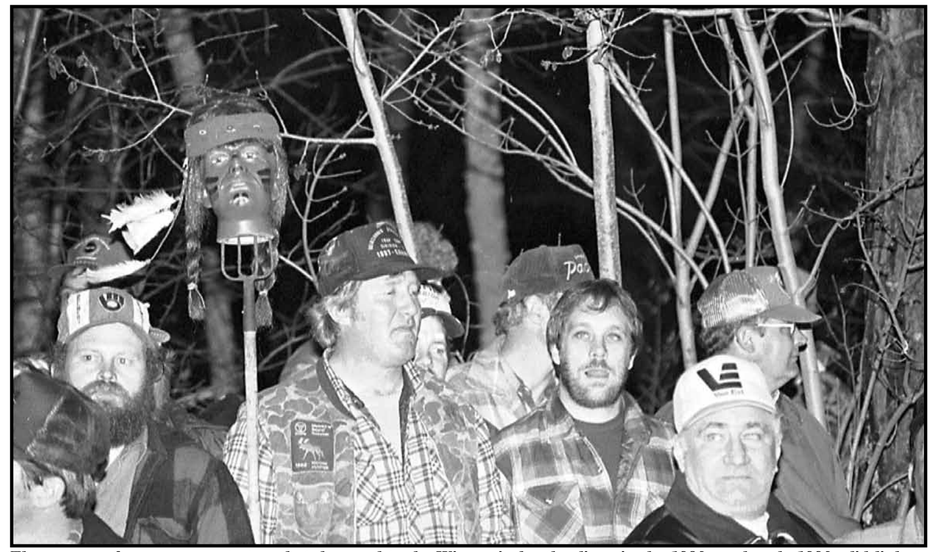
"At one landing I was at," Schlender says, "they started throwing rocks at us. They would do everything they could to prevent us from getting out on the water. They would shoot slingshots at us so hard that the BBs would dent our boats. They made concrete walleyes with marble eyes and planted them in the lake so that when we'd come across one, it would look like a real walleye and we'd try to spear it. Those concrete walleyes would mess your spear up so badly that you wouldn't be able to use it. On the bottom of some of these fake walleyes people would write things like, 'this is for that f***ing Jim Schlender or Tom Maulson.' I mean, that's my dad, they're talking about. Those sorts of things really hit home."

When a court order kept the leader of STA, Dean Crist, off the boat landings and ordered him to pay $182,000 in damages, tension began to subside. But while tensions have since eased, Schlender says it's still not a perfect. There are still, he says, some feelings of hatred.

"The ignorance is still there in Northwoods, but not to the point where they're going to try to mess us up anymore because of it. It might still be hatred, but it's more underlying hatred. It's sly remarks here and there or a demeaning glare. I think the racism is still there, it's just more subtle now."

And unfortunately, the struggles the Wisconsin Ojibwe tribes endured in the '80s and early '90s, the Minnesota Ojibwe tribes are going through now.

"Borders mean nothing to the Ojibwe. The Minnesota and Canadian Ojibwe are every bit as much Ojibwe as we are here in Wisconsin. Right now, the Mille Lacs tribe in Minnesota is going through what we went through in the late '80s. I sympathize with those guys. No matter how it's dealt with, it's always a battle."



The message from many protesters that thronged to the Wisconsin boatlandings in the 1980s and early 1990s did little to disguise a racial animus and a threat of violence. (Photo by GLIFWC staff)

And Schlender has recently dealt with the Mille Lacs unrest personally. On a walleye netting trip to Mille Lacs this spring, he was the recipient of anti-Indian retaliation.

"I just went netting in Mille Lacs and they got me good," Schlender says." They messed with my boat and poured sugar in my gas tank. My motor locked up, and I was stuck at the boat landing for five days. It's safe to say that Minnesota is further behind in Indian rights than Wisconsin."

But still, there's hope for resolution.

"While it's not perfect here in Wisconsin, I think we showed that we can persevere through hardships and continue to be strong with our heritage. I think that has to give other tribes a sense of hope. People should be able to battle all they want, but when the battle is over, you have to be able to respect each other and shake hands. That's what people should be like."

The Tradition, the Heritage, the Future

"The rights of Indian people to take fish and game and gather food are, and have historically been, an integral part of their subsistence as well as their cultural and religious heritage."
–Commission of the American Indian Policy Review, United States Congress, 1977

Long before the French arrived in Wisconsin and saw Ojibwe torches hover above the water, the Ojibwe relied on sacred foods: wild rice, venison, and walleyes to sustain them. Still today, these foods provide more than just physical sustenance; they nourish the spirit of the Ojibwe people, as well.

"For as much as we don't want to lose the treaty rights that we've fought so hard for, the Creator has more influence on us and how we do things than, say, the government," Schlender say. "The Creator has a way of letting us know if we've been doing things the right way."

For a long time, Schlender says, the Creator has provided for the Ojibwe.

"When the walleyes come in the spring, your food may be dwindling from the winter. But come walleye time, it's time to fatten up again. That's how the Creator takes care of us. But in order for him to continue to provide, we have to make sure we're doing the right things. "

According to Schlender, the best way to do this is to honor and respect, not just the walleye, but all the earth's natural resources. This includes being generous with what the Creator has provided. The best thing you can do, according to Schlender, is give to others.

"Never be greedy with anything that the Creator has provided you. I tell people not to be greedy with their walleyes," Schlender says. "You're going to get a few who just want to get the mother-load of walleyes and will be tight with them. Well, you know what? The next year, they'll go out and they won't get anything. Those are lessons that the Creator puts down for us to learn."

"There's no greater feeling than providing fish for your elders," Schlender continues. "They shouldn't have to worry about getting fish. They've earned that right, because they've taught me. I've had elders cry when I've given them fish because, by giving them walleye, I've given them respect. I could win a million dollars, but it will all be gone someday, but that memory of those elders shedding a tear for me, that will last forever. That's what spearing is all about."

Schlender says that if you're generous with the gifts you've been given, the Creator will continue to give you good fortune the next year.

"What you give, you will get back in return," Schlender says. "That's a tradition that was taught to me long ago. Never be greedy. That's why I don't angle fish with hook and line. I've gotten all the fish that I need; let someone else go out and get theirs."

Schlender practices what he preaches. Of the 160 lbs of walleye that he speared this spring, he kept only enough for three walleye diners.

"Our family is very traditional, and we have a lot of feasts. When we have a feast," Schlender continues, "there's always a spot for walleye. Walleye is one of those sacred food items that we always have to bring to a feast. We need these sacred foods. When I eat them, I feel rejuvenated. They help us survive. Those were the staples of our people way back in the day. Those were the things that got us through the winters and through tough times."

Before the Schlender family began to embrace spearing, Schlender says there was a disconnect between old traditions and present Ojibwe culture. But now, as spearing once again has become ingrained in Ojibwe culture, he's seeing a change in the way his people act. It, he says, is a return to traditional and family values.

"Before spearing, the only time my family would get together was at a funeral, and that's not right. Once we began spearing, though, we started gathering for the spearing season. After that, we started gathering for the ricing season. We all get together and enjoy each other's company. It really strengthens our bonds."

In Schlender's family, each person has an individual task in the spearing process. Coming from a family of nine, he's the only one that physically spears the walleyes.

"I spear the fish, my sister cleans the fish, another will package the fish, and someone else will clean the guts or clean out the boat, and so forth. We all have our own jobs. It's like a factory line. It's a total family task," he says.

Schlender still remembers when he first started spearing. Citing that he always enjoyed traditional activities with his father, it was only natural that, at age 12, he and his father went on their first spearing trip together.

"We took our little johnboat out on the Chippewa Flowage," Schlender reminisces. "I had always been taught to pray and to lay down my tobacco. And It's funny because I remember saying as I laid down my tobacco on the water, 'Creator, all I want is enough for dinner. I don't want anything more.' At first we didn't see anything, and then I saw a fish and thrust my spear down into him. I got him and it was a 48 inch musky! My dad said I looked like my eyes were popping out of my head. I tried lifting my spear up, and my dad ended up having to bring it in because I was so mesmerized. We ended up getting a few walleyes and, you know what? We got just enough walleye for dinner that next night."

Because spearing has played such a big role in his own life and outlook, Schlender has made a commitment to teaching youth about the cultural importance of spearing.

Schlender says his father contributed greatly to the growth of GLIFWC. "When he got there, it barely had any power; now it's a powerful organization. He was there at the forefront of the treaty wars." If you go on any reservation that deals with spear

(See Treaty harvests, page 15)

Fall fare from lakes, forests and gardens

By Sue Erickson, Staff Writer

Odanah, Wis.—Enjoy foods from the woods and lakes. Benefit from your gitiganing—the corn, beans, squash, pumpkins you have grown. Studies show traditional diets based on hunting, fishing and gathering beat "market-based" diets and produce a slimmer, trimmer, happier, healthier you.

A 1995 report entitled "Ojibwe Health and Traditional Food Use" prepared by Dr. Harriet Kuhnlein from the McGill's Centre for Nutrition and the Environment of Indigenous Peoples indicated traditional diets benefited study participants physically, mentally and culturally.

The study, prepared for use during the Mille Lacs litigation of the 1837 Treaty rights in Minnesota was based on interviews with tribal members from both the Lac Courte Oreilles Band in Wisconsin and the Mille Lacs Band in Minnesota.

As background to the report Kuhnlein summarizes the traditional diet of the bands prior to the introduction of "market-place" fare as follows:

"The traditional food system evolved to include deer, moose, water fowl, fish, small game, wild rice, nuts, a wide variety of berries, and other plant food. In summer indigenous varieties of maize, potatoes, beans, pumpkin and squash were cultivated. Beverages such as hot and cold teas and broths were prepared by boiling water with various parts of plants, animals, maple sugar and other plant-based seasonings. Traditional medicines were prepared from herbs, roots and bark of wild plants, shrubs and trees, as well as from parts of animals (Gaiashkibos, 1995; Buffalohead and Buffalohead, 1985; Vennum, 1988; Densmore, 1929; Densmore, 1928; Cleland, 1985).

By every indication, the traditional food system provided a culturally appreciated and nutritionally complete diet, when resources were sufficient. The historical record describes the evolution of interactions of the Ojibwe with other tribes and with French and English settlers. In time, the resource base for traditional food became eroded, and the amounts and kind of food available declined. The Ojibwe thus began including imported food, domesticated animals and other plant crops into the regular diet. The balance of traditional and market food gradually evolved so that today the majority of daily food for Band members is comprised of market food (Handrick, 1983; Handrick, 1984; Clifton, 1980; Cleland, 1985; Smith, 1991; Buffalohead and Buffalohead, 1985)."

Another section of Kuhnlein's report discusses traditional diets and holistic health, which encompasses mental, physical and social well-being. Importantly, Kuhnlein notes that a traditional diet benefits people suffering from chronic diseases such as diabetes and obesity:

Okanakosimaan (squash).

Traditional food use and holistic health

"Traditional food system use provides opportunities for cultural expression and transmission of cultural patterns from one generation to the next. As such, this results in promotion of cultural integrity that promotes many aspects of physical and mental health. The harvest and processing of traditional food, whether it is agricultural, fishing, hunting or gathering in origin, can be labor-intensive and give opportunity for physical activity and fitness. Food species from the natural environment are usually processed by Indigenous Peoples to retain nutritional value; often all parts of the animal or plant items are used for food or in other ways within the culture. This understanding of balance with nature also provides cultural integrity and mental health, as does utilization of sensory qualities and dietary structures developed within the culture (Messer, 1984; Bryant et al, 1985; Axelson, 1986; Johns and Kuhnlein, 1990).

Several examples are known of health promotion and improved health for Indigenous Peoples by return to traditional food system use. Shintani et al (1991) demonstrated reduction in obesity and reduced cardiovascular risk for Native Hawaiians by returning to a traditional diet. O'Dea and colleagues showed improved carbohydrate and lipid metabolism in diabetic Australian Aborigines by returning to a traditional diet and lifestyle (O'Dea, 1984; O'Dea et al, 1988). The Zuni have improved various aspects of health, in particular with respect to diabetes, with traditional diet and lifestyle interventions (Heath et al, 1991). Improved health status for vitamin A, iron, and folic acid resulted from a traditional food promotion program for the Nuxalk in British Columbia (Kuhnlein, 1987). Pima Indians who follow a more traditional lifestyle and diet are known to have significantly less obesity and diabetes (Ravussin et al, 1994). Thus it is clear that traditional food systems have health benefits to offer those suffering from chronic disease.

Cultural values of traditional food harvesting & use

In addition to the values for holistic health which traditional food system use provides to a population, there are many cultural values contributed. People identify with their culture by the food they use and the beliefs they ascribe to their food. Food flavor, color, texture, aroma, as well as dietary structure, all contribute to food selection and personal identity (Kuhnlein and Receveur, 1996). Interview studies conducted with First Nations Peoples in the Northwest Territories and Yukon gave insight that more than 85% of adults agreed that the harvest and use of traditional food provided them with the following cultural values: 1) it favors sharing within the community, 2) it is a way for adults to display responsibility for their children, 3) it is one way to practice spirituality, 4) a successful harvest builds one's pride and confidence, 5) it provides education for our children on the natural environment and contributes to their education, 6) it teaches our children skills in survival and food preparation, 7) it is an opportunity for our children to learn spirituality, patience, and other personal qualities (AES, 1995)."

Squash recipe

Mashed squash

www.kstrom.net/isk/food/r_squash.html

1½ lbs butternut squash
¼ tsp mace
¼ tsp allspice
1 tsp ground cardamom
1 tablespoon maple syrup
½ tsp salt
2 tsp melted butter

Cut squash in half, scrape out seeds and fiber. Chunk in 2" pieces. Boil or steam (steaming preserves its high amounts of vitamin C and A better) 20 minutes (boil) or 30 (steam) until tender. Cool slightly, and slip skin off pieces. Spoon flesh into blender, add remaining ingredients and process till smooth. (serves 4)

Squash is very low in Saturated Fat, Cholesterol and Sodium. It is a good source of Vitamin E, Thiamin, Niacin, Vitamin B6, Folate, Calcium and Magnesium, and a very good source of Vitamin A, Vitamin C, Potassium and Manganese.

Venison recipes

Venison Strips

www.dnr.state.oh.us/Home/WildOhioCookbook/huntingrecipesvrecipe/tabid/5679/Default.aspx#venison_roast

½ cup soy sauce
2 tablespoons minced onion
1 clove garlic, minced
1 tablespoon brown sugar
¼ teaspoon pepper
1/8 teaspoon ginger
1/8 teaspoon hot pepper flakes
¼ cup beer
2 pounds venison steak, thinly sliced
2 tablespoons peanut oil

Combine the first eight ingredients to make a marinade. Put the venison strips in a large ziplock bag and add marinade. Put the bag in refrigerator for several hours, turning occasionally. Heat the oil in a large deep skillet or wok. Drain the venison and fry until done.

Venison Sausage Stars

Adapted from a recipe by Barb Graves

Won Ton wrappers

½ pound venison
½ pound sausage, as spicy as you like
prepared ranch dressing from a dry ranch dressing mix
green olives, finely chopped
black olives, finely chopped
1/3 cup finely diced onion
1/3 cup finely diced red or green pepper
shredded Monterey Jack and cheddar cheese

Spray cupcake pans with a baking oil. Place a won ton wrapper in each, then lightly spray the tops of the won tons. Bake at 375° for about 5 minutes, until light brown. Mix the venison and sausage, then fry until browned. Drain the meat. Combine the prepared ranch dressing, green and black olives, onion and peppers, and shredded cheese with the browned meat and mix well. Put the mixture in the browned Won Ton wrappers and put back in oven at 375 until the cheese is melted. Serve hot for a fabulous appetizer.

Nutrition Facts

Serving Size 1 venison steak yield from 134.9 g raw meat 102g (102 g)
Servings per container 1

Amount Per Serving	
Calories 155	Calories from Fat 18
	% Daily Value*
Total Fat 2g	3%
Saturated Fat 1g	5%
Trans Fat	
Cholesterol 87mg	29%
Sodium 46mg	2%
Total Carbohydrate 0g	0%
Dietary Fiber 0g	0%
Sugars 0g	
Protein 32g	
Vitamin A 0% • Vitamin C	0%
Calcium 0% • Iron	24%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Treaty harvests well monitored

(Continued from page 13)
ing, they'll all know who my dad is. That's why I take such good care when it comes to spearing. I try to teach others about spearing because I know how much it meant to him. I know everything that he went through."

Schlender says that he takes someone new fishing every year so that they, in turn, can someday teach someone new. By teaching the younger generation, he says, he's doing his part to keep the Ojibwe traditions alive.

"Eventually there'll be a day when I can't go out spearing anymore. These youth—my nieces and nephews—they're going to have to bring me my walleyes. There will be a time when I'm an elder, and they're going to get walleyes for me," Schlender says. "They've made me that promise. The way I take care of the elders now, they'll take care of me tomorrow."

Waswaaganan and Ogaa: The Torch Lights and Walleye

As the ice begins to retreat from northern Wisconsin's lakes, walleyes begin to flock to shallow gravel bars, preparing themselves to spawn. As the walleyes gather in the shallows, Justin Schlender and the rest of his Ojibwe brothers, spears in hand, brave the waters to meet them.

While their modern methods are quite different from the flaming torches mounted to the front of canoes, their goal remains the same: provide food for the community and honor the gifts that the Creator has given.

"The way we spear has evolved since those past times," Schlender says. "We still go out as soon as it gets dark, but the way we spear, like so much other technology, has evolved over the years. Instead of canoes we use small johnboats with outboard motors. And now we wear helmets with car headlights attached to them instead of mounting torches to the front of our boats. We slowly motor our way around the shallows looking for the reflection given off by the eyes of the walleye."

But while Schlender talks about the advancements in technology, he's quick to point out the similarities in the way the Ojibwe spear now and the way their ancestors did.

"Like our forefathers, we always carry tobacco with us and offer it up before we spear. I never enter a boat without first laying down my tobacco. Tobacco is what carries your prayers up to the Creator. I don't ask for much. I just ask for safety and that we're well taken care of," he says.

Even with boats, lights, and prayers, though, the plight of the Ojibwe walleye spear fisherman is not an easy or safe one. Early spring conditions, freezing water, and less-than-stable boats can quickly turn a spearing outing into a failure.

"It's dangerous out there," Schlender tells. "Just this last year we witnessed one of my friends die while spearing. It's dark, and you can't see storms roll in. You're in a small johnboat and once those waves start crashing into you, it's downright dangerous. If water starts coming in or you capsize, you're screwed. I don't care if you have a life jacket on, that water is still cold. And you're bundled up—a lot of times in a snowmobile suit—so once you hit that water, that suit is like an anchor and a half; it'll drag you down in a hurry."

But even the risk of disaster isn't enough to keep many Ojibwe spearfishermen off the water. Usually working in teams of three to four people per boat, the Ojibwe work the shore lines of the Northwoods, sometimes not returning to the landings until 3 or 4 in the morning.

"It can be exhausting," Schlender says, "but it's definitely worth it. Usually we average about 45 walleyes a night, but sometimes, we'll have one of those special nights where we spear 75-100 of them."

Regulated harvests

But what many people don't realize is that there are strict regulations placed on the taking of walleyes in the ceded territories. It's not, as Schlender puts it, a free-for-all.

"The size and number of fish we take is regulated and closely monitored," he says. "People think that we're taking all of these large female walleyes out of the water without any sort of regulation. That's just not the case. We pay attention to the size of the fish we're spearing. We don't want to take them when they're either too small or too big; we're trying to protect the future of these fish."

And to make sure that they're not harming the populations of these lakes, GLIFWC, individual tribes, and the WDNR have worked together through rigorous data collection, population testing, and stocking to make sure that each lake that is speared continues to boast healthy walleye populations.

"Spearing is the most scrutinized thing that Native Americans do. If an Ojibwe boat touches a lake," Schlender says, "you can be sure that it's been studied extensively."

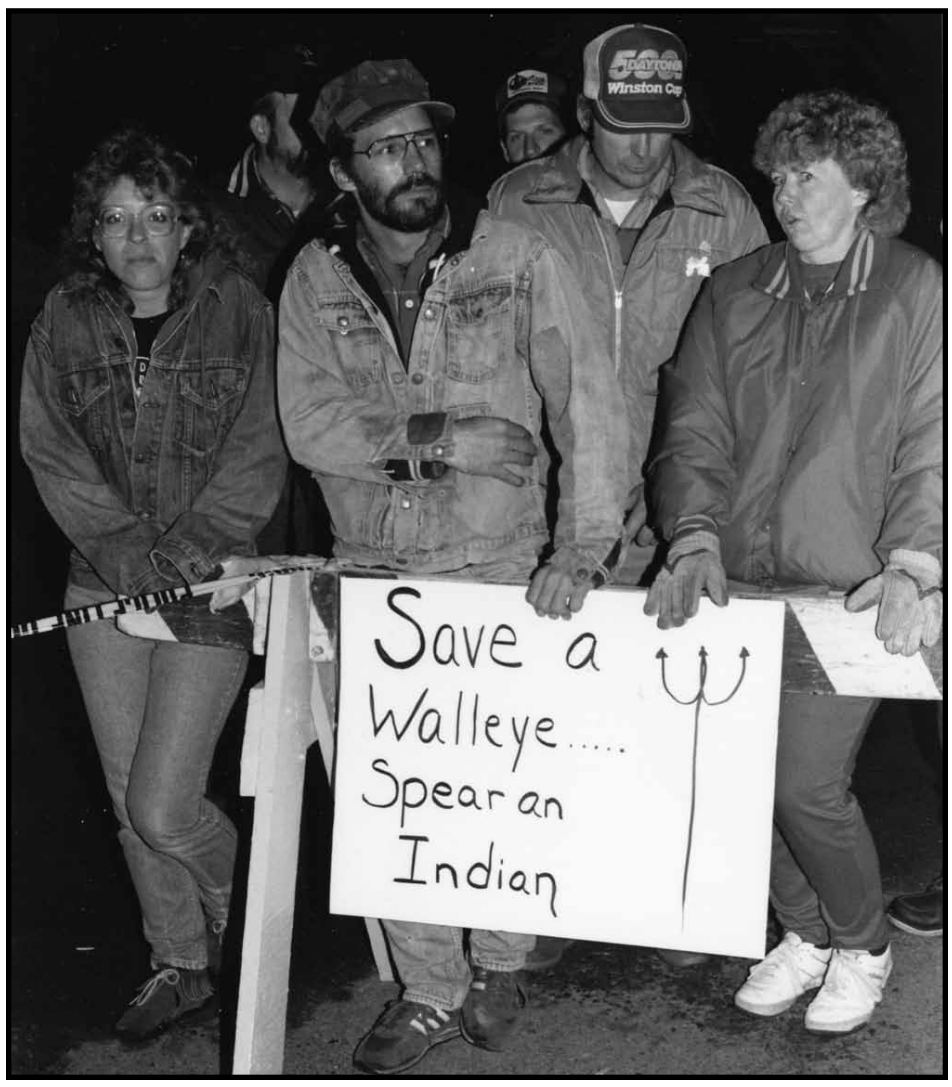
Zach Lawson, a UW limnology and biology graduate student, echoes this statement. "GLIFWC keeps meticulous records of the fish that are speared. When a spearer comes back in, every fish that's been speared is measured, sexed, and recorded. It's very regulated. People say that they're killing the population, but clearly they're not. They do a really good job at keeping all the scientific data on every fish that's speared. Bottom line," Lawson says, "is that spearing is sustainable. And there's an awful lot of data that backs that up."

And, contrary to popular belief, the Indians don't get to spear to their hearts content. Each lake has its own quota that the Ojibwe are allowed to reach.

"After estimating the lake's walleye population through various techniques like boom shocking and fyke netting," Lawson says, "an allowable sustainable harvest number is determined. Essentially this is the number of walleyes that can be taken from the lake without having a negative impact on the quality of the walleye population. The Ojibwe then set quotas based on that sustainable harvest number."

Lawson also dismissed the myth that spearers take too many large, trophy female walleyes.

"There are regulations on how many large walleyes a spearer can take per night. When they come in and have their fish checked, if they have too many big walleyes, they face penalties that can eventually result in the loss of spearing privileges. And when it comes down to it," Lawson says, "their harvest size structure is directly comparable to the size structure that Wisconsin anglers take annually. They both have really similar distribution with an average fish being around 15 inches."



This slogan appeared at many spearfishing landings and protest rallies in the mid-to-late 1980s, brandishing an obvious malicious message and racial animus. (GLIFWC staff photo)

And as an angler, Lawson can testify that the work the Ojibwe, GLIFWC, and the WDNR are doing to keep the walleye populations healthy are working.

"Personally, I fish lakes that have been speared, and I haven't noticed a difference in the quantity of the fish I catch. These lakes can handle spearing," Lawson says. "And besides, I always want to do what my forefathers did. Why should the Ojibwe be any different?"

Closing

The longer I sat and talked with Justin Schlender, the more I realized how much I didn't know about Ojibwe culture. Spearing isn't just a matter of exercising treaty rights for the sake of using them. To the Ojibwe, the importance of spearfishing can be measured in spirituality, cultural tradition, and family. It's not just a two week season that rolls around every spring—it's a way of life that persists throughout the year. It's a part of the circle that is Ojibwe culture.

And as Schlender drove away, his native music drawing the attention of many, I realized something: the traditions and rights of Wisconsin's Ojibwe are still alive and thriving. Like Schlender's native beats echoing across the streets of Madison, so too do the values and traditions of the Ojibwe echo, all the way from the Northwoods to the Capitol.

USCG strengthens tribal relations

(Continued from page 1)
Smart" program the USCG launched encouraging safety measures for the growing numbers of kayakers and canoers.

The USCG visit to GLIFWC evolved from a USCG—Native American/Native Alaskan Consultation Workshop in Juneau, Alaska last August. GLIFWC ANA Coordinator Jim St. Arnold attended, participating on a panel and in numerous discussions throughout the four-day event. Meeting at the workshop, French and St. Arnold discussed the possibility of establishing a meeting subsequent to their return home.

French brought along three colleagues from the Lake Superior region who work in proximity to tribal homelands, including Lt. Aaron Gross, Chief, Response & Contingency Preparedness, USCG Marine Safety Unit, Duluth, Thomas E. Erickson Jr., Port Security Specialist, USCG Marine Safety Unit, Duluth and Lt. Ken Griffiths, Sector Sault Ste. Marie Response Division.

"Tribes have worked with the USCG for sometime now," St. Arnold says, who also hosted the meeting. "In fact four of our member tribes—Bay Mills, Keweenaw Bay, Red Cliff and Bad River—all have Memorandums of Understanding with the USCG, mostly relating to regulation of tribal commercial fishing. However, this meeting was an opportunity to strengthen and widen that relationship, and I think we accomplished that."

Biboon—When it is Winter

Biboong, giizhoo'o. Agwajiing gigibabiinzikawaagane.
Giizhootawage'o dash gigiminjikaawane gaye. Abinoojiiyag biitookizinewag, gisinaamagak.
Odozhi'awaan a'aw goon-ininiwan. Omikaanaawaan odishkiinzhigoon.
o'ow Odookaadaakijaane, miinawaa odoon. Omikaanaawaan omitiginikan.
Odayaan miskaa-wiiwakwaan idash odayaan ozhaawashko-giizhoopizonan.
Minwendam zoogipong. Biiwang, niibawi. Zhoomiingweni apane biboong.

(When it is winter, s/he dresses warmly. Outside s/he wears a coat. S/he wears earmuffs and s/he wears mittens also. Children they wear boots, when it is cold weather. They make him/her that snow-man. They find them, his/her eyes, carrot-nose, also his/her mouth. They find his/her stick arms. S/he has a red-hat and s/he has a blue-scarf. S/he is happy when it is winter. When it is a blizzard s/he stands up. S/he is smiling always, when it is winter.)

Bezhig—1

OJIBWEMOWIN (Ojibwe Language)

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

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

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

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

Proper names in Ojibwe

From **Survival Ojibwe** by Patricia M. Ningewance, Mazinaate Press, Winnipeg, Manitoba ISBN 0969782608

Elder speakers may speak English names by substituting Ojibwe vowels, consonants and consonant clusters. L, F, V and R are not used in Ojibwe. L, R are replaced by N. F, V are replaced by P, B. TH (unvoiced) is replaced by T. TH (voiced) is replaced by D.
Allan—Aanan
Eugene—Yoojiin
Charles—Jaanis
Mary—Menii
Jerry—Jenii
Thomas—Daamas

Niizh—2

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

A. Biboong, ningagwedwe, "Aaniin ezhinikaazod wa'aw giizis?"

B. Gidikid, "Izhinikaazo Manidoo-giizisoon wa'aw giizis.

C. Ikido, "Gichi-manidoo giizis wa'aw giizis." Gichi-gisinaa!

D. Nindikid, "Daga gibiindiganaag ingiw animoshag idash gaazhagensag."

E. Ikidowag, "Izhinikaazo Namebinigiizis wa'aw giizis. Gegaa ziigwan!

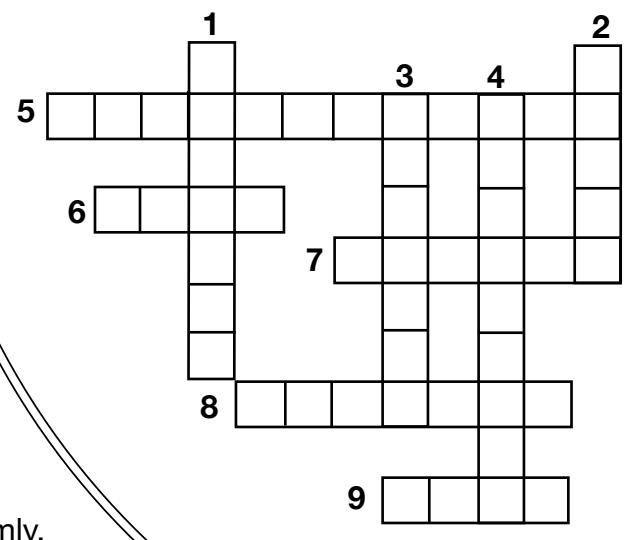
F. Azhigwa nindibaajimomin idash nimazinigwaasomin.

G.Nindikidomin, "Miigwech. Gichi-manidoo."

R	G	Q	N								
G	I	I	Z	I	S						
B	I	B	O	O	N	G					
A	Z	D	G	G	C	N	I				
Z	I	T	I	O	E	D	P	I			
H	S	A	S	K	A	G	W	E	N		
I	Z	H	I	N	I	K	A	A	Z	O	
G	V	F	N	A	K	D	G	A	T	O	J
W	L	U	A	N	I	M	O	S	H	A	G
A	G	M	A	N	I	D	O	O	S	I	S
I	K	I	D	O	A	H	S	A	D	I	N

Niswi—3

IKIDOWIN ODAMINOWIN (word play)



Down:
1. S/he stands.
2. S/he says.
3. Spirit
4. S/he dresses warmly.

Across:
5. When it is cold....
6. Come
7. 2 (in counting)
8. S/he sets a snare.
9. Snow

Niiwin—4

Proper Names
I say..., We say..., You say...
Alexander—Nindikid, "Aniksaandan."
Daniel—Nindikid, "Daaniyan."
Charlotte—Nindikid, "Zhaanat."
Andrew—Nindikidomin, "Aandanoo."
Nancy—Nindikidomin, "Naanisii."
Sharon—Nindikidomin, "Zhenan."
Katie—Gidikid, "Getii."
Jennifer—Gidikid, "Jinipen."
Matthew—Gidikid, "Maatiyoo."
John—Gidikid, "Jwaan."
Izhinikaazowin—Name

Goojitoon! Try it!
Translation below.

Gebin

Ma'ik

Wiiniyam

Ganistapan

Anizibat

1. _____(Elizabeth) gii-ikido, "Waabooz bi-izhaa omaa."
2. _____(Kevin) gii-ikido, "Gaawiin bi-izhaasii. Izhaa imaa noongom."
3. _____(Mike) gii-ikido, "Ambe omaa Waabooz!"
4. _____ (William) gii-ikido, "Gego bi-izhaaken!"
5. _____ (Christopher) gii-ikido, "Ninga-agoodoo dash ninga-naandagoodoo ga-waabang."

Translations:

Niizh—2 **A.** When it is winter I ask, "What is she named this moon (month)?" **B.** You say, "She is called the Little Spirit Moon (Dec.) this moon." **C.** She says, "She is named the Great Spirit Moon (Jan.) this moon. It is very cold. **D.** I say, "Please bring them in those dogs and cats." **E.** They say, " It is called the Sturgeon Moon (Feb.) this moon. Almost it is spring." **F.** At this time we tell stories and we do beadwork. **G.** We say it, "Thank you Great Spirit."

Niswi—3 ***Down:*** **1.** Niibawi **2.** Ikido **3.** Manidoo **4.** Giizhoo'o ***Across:*** **5.** Gisinaamagak **6.** Ambe **7.** Niizho **8.** Agoodoo **9.** Goon

Niiwin-4 **1. Anizibat** did say, "Rabbit is coming this way here." **2. Gebin** said, "No S/he isn't coming this way. S/he is going there now." **3. Ma'ik** said, "Come here Rabbit!" **4. Wiiniyam** said, "Don't come in this direction!" **5. Ganistapan** said, "I will set a snare and I will check the snares when it will be tomorrow.

Manoomin: A Wild Rice Adventure

Manoomin workbook

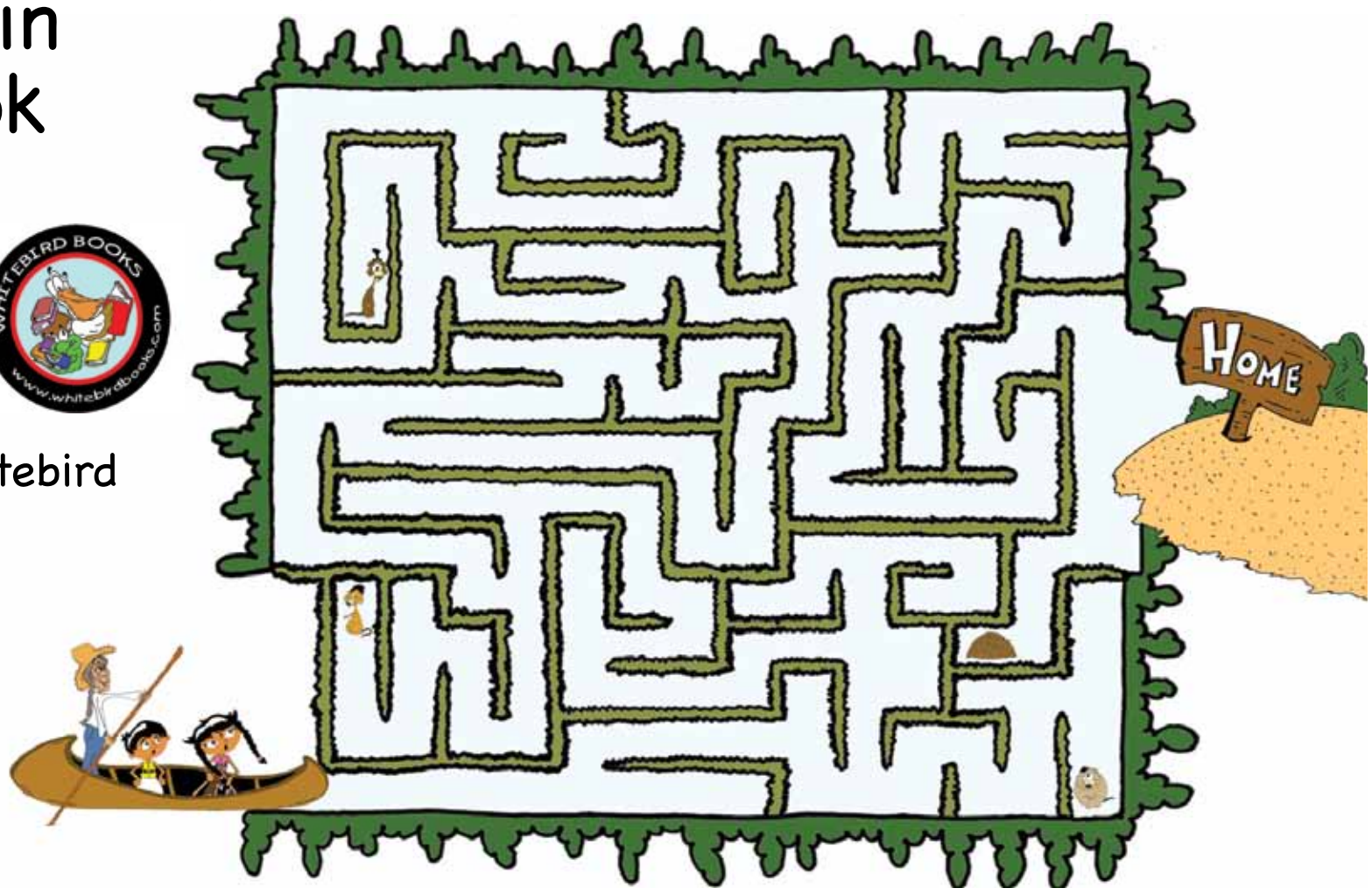
Starring
Miika
& Mino

Written & illustrated by
Joshua M. Whitebird

In addition to the hard-cover book, a CD filled with activities related to the book and its characters is included in the purchase price. Along with the activities reprinted on this page there are also other fun things to do like games, coloring, and craft activities make the CD a great learning resource.

The book/CD is available through Whitebird's website at *www.whitebirdbooks.com* for $19.95. E-mail address is *whitebirdbooks@gmail.com*.

Help Papa, Miika and Mino find their way home.



manoomin (wild rice) manoominike (harvesting wild rice)
zaaga'igan (lake) jiimaan (canoe)

Animal Puzzle

www.whitebirdbooks.com

GOOKOOKOOO
ZHIGAAG
MISKWAADESI
ZHAANGWESHI
MAKWA

MIGIZI
ESIBAN
MAIINGAN
WAAGOSH
MISAJIDAMOO

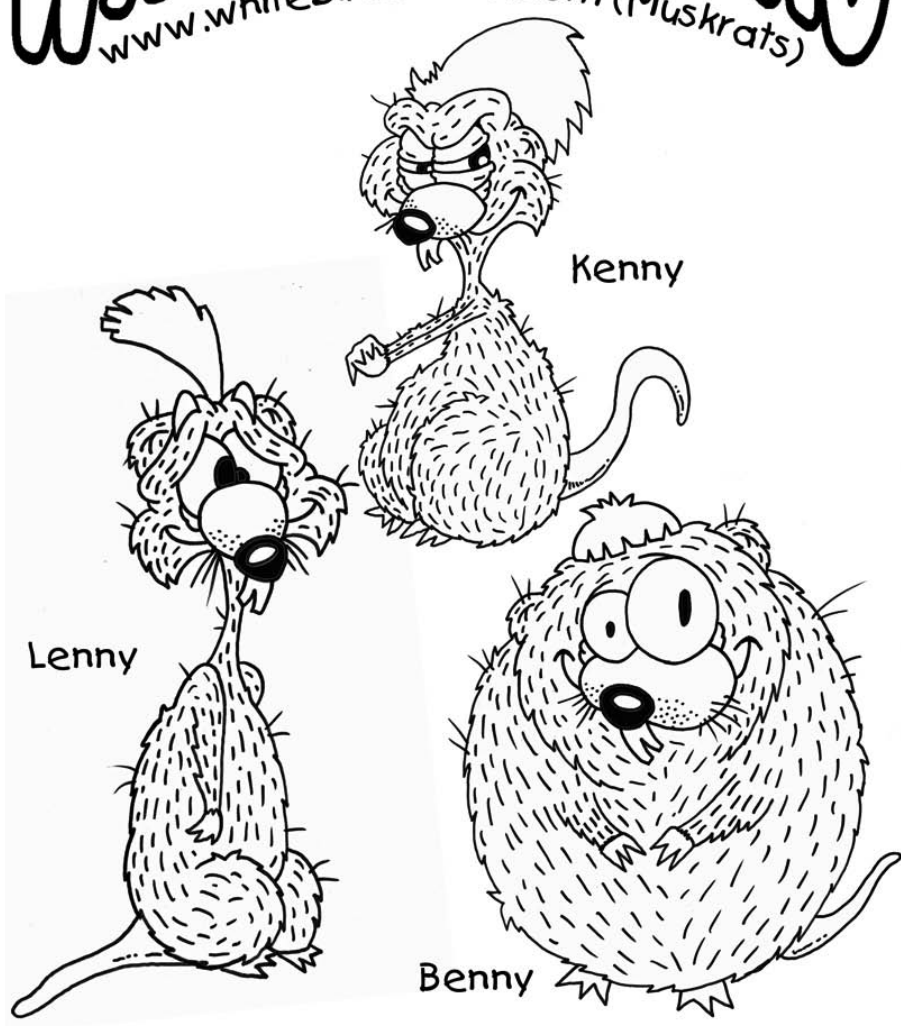
A	R	I	H	S	E	W	G	N	A	A	H	Z
G	T	V	E	J	Z	U	H	E	W	L	P	K
I	O	K	X	C	O	L	P	K	T	Z	F	R
S	H	O	B	N	G	R	A	M	O	H	J	O
E	Y	W	K	L	A	M	N	A	B	I	S	E
D	C	V	U	O	S	G	Q	Y	E	G	V	Q
A	Q	R	M	F	O	I	N	A	X	A	N	I
A	J	H	I	X	U	K	D	I	M	A	W	S
W	A	A	G	O	S	H	O	F	I	G	B	D
K	T	O	I	H	Q	U	P	O	B	A	C	X
S	E	L	Z	Y	C	V	E	H	O	T	M	A
I	G	D	I	P	O	N	Y	K	F	W	A	G
M	I	S	A	J	I	D	A	M	O	O	J	Z

English translations:

gookookooo—owl; zhigaag—skunk; mishwaadesi—painted turtle; zhaangweshi—mink; makwa—bear; migizi—eagle; esiban—raccoon; maiingan—wolf; waagosh—fox; misajidamoo—grey squirrel.

WAZH-ASHK-WAG

www.whitebirdbooks.com (Muskrats)



Color these three naughty little muskrats from the Manoomin story. Wazhashk means muskrat in the Ojibwe language, and wazhaskwag is the plural form.

This page is being reprinted with permission from the author and illustrator Joshua M. Whitebird. Miigwech (thank you) Joshua!

Help has arrived:

GLIFWC welcomes six new staff

By Sue Erickson, Staff Writer

Brian Brost, data analyst

Northward bound, Brian Brost, GLIFWC's new data analyst, arrived from Flagstaff, Arizona this fall when he came to work for GLIFWC. Having recently completed a Master of Science degree in Forestry at Northern Arizona University, Brian, a native of Illinois, is looking forward to some snow.

Already familiar with Wisconsin, Brian completed his undergraduate work at the University of Wisconsin-Madison where he received his Bachelor of Science degree in zoology. Following graduation, he took a break from school and went to work for the US Forest Service, coordinating a carnivore monitoring program in California's Sierra Nevada. Specifically, he was researching the abundance of fishers and martens, so he has some familiarity with one of GLIFWC's premier research programs.

As GLIFWC's data analyst, Brian will be providing statistical and biometric advice, conducting a variety of analyses, and managing data sets. An understanding of statistics, he says, is necessary for answering biological questions. While estimating the size of fish populations will be part of his work, he will be involved in other areas, too. For instance, he is currently working on an elk habitat suitability model that could be used to guide Wisconsin's elk relocation efforts.

Brian was drawn to GLIFWC's data analyst position because it's challenging and offers a variety of tasks. Having visited northern Wisconsin, he also likes this region.

Brian lives in Ashland, loves photography, cooking and to be outdoors hiking, kayaking and skiing.

Brian can be reached at 715.685.2131 or email *b.brost@glifwc.org*.

Lisa David, manoomin biologist

Having worn a variety of GLIFWC hats over the past two decades, Lisa David recently returned to GLIFWC as the manoomin biologist, a position made possible through the Great Lakes Restoration Initiative. Starting as a GLIFWC wildlife biologist during the 1990s, with a focus on the Michigan ceded territories, Lisa is well-acquainted with GLIFWC's operations and issues.

During her hiatus from the Commission, Lisa worked with Bayfield County Planning & Zoning Department on various grants related to Lake Superior shoreline zoning issues. She also returned to GLIFWC at intervals as a conference coordinator, working on a Wild Rice Conference, later an Aquatic Invasive Species Conference, and most recently, the 2009 Minwaajimo Conference.

A graduate from UW-Madison, Lisa earned a Master of Science degree in bio-geography. Following graduation, she was employed by the Wisconsin Department of Natural Resources for ten years, working in for the Bureau of Endangered Resources, Wildlife Management, and lastly Research.

As GLIFWC's manoomin biologist, Lisa will be assisting with the compilation of a joint state/tribal wild rice management plan, meeting with tribal focus groups, and also with manoomin outreach and education, especially encouraging youth involvement in wild rice activities. "This could be re-seeding, or ricing, or even making ricing sticks; just trying to get more tribal youth involved," she says. Other areas of work will include reviewing aquatic plant management permits and some GIS mapping.

Lisa and husband, Peter, live in Washburn. They have three children—Madeline and Ben are both in college, while Andy is in eighth grade.

Lisa enjoys ricing and "everything manoomin." She also likes to take to the water in her kayak and especially enjoys "hangin' out at the cabin."

Lisa can be reached at 715.685.2185 or email *lisa@glifwc.org*.

LaTisha McRoy, ANA Minwaajimo project coordinator

Boozhoo giinawaa. Niin LaTisha McRoy indizhinikaaz zhaaganaashiimong miinawaa Animikii Ikwe indigoo Ojibwemong. Niin makwa indoodem. Niin Mashkoziibing indoonjibaa idash Gichiwiikwedong indaa. LaTisha McRoy, Ojibwe name Animikii Ikwe, bear totem, living at the Bad River reservation and Ashland.

Former GLIFWC intern, LaTisha McRoy, recently came aboard as the coordinator for the ongoing Minwaajimo project. She will be heading up the summation of "Minawaajimo—Telling a Good Story: Preserving Ojibwe Treaty Rights for the Past 25 years" project, funded under the newest Administration for Native Americans (ANA) grant.

McRoy grew up on the Bad River reservation, graduating from Ashland High School and obtaining a Bachelor of Arts degree in history and first nations studies from the University of Wisconsin-Superior with Magna Cum Laude honors. Highlights of her studies at UW-Superior include studying abroad in Scotland for three months in 2009, receiving the Chancellor's Leadership award in May 2010, and initiating a language policy change within the University of Wisconsin—Superior curriculum. The language policy change allows students to count a heritage language, such as the Ojibwe language, towards a Bachelor's of Arts degree.

McRoy worked with GLIFWC for several summers as an ANA language intern and as an assistant event planner for the 2009 Minwaajimo conference.

While working as the assistant event planner, she says she began to grasp the full impact of the struggle behind treaty rights issues. Although she had taken many classes and heard lectures about the various court cases and boat landing protests and thought she understood the struggle, she realized at the start of the conference that she was "incredibly mistaken."

LaTisha can be reached at 715.682.6619 or email *lmcroy@glfiwc.org*.

Alex Wrobel, forest ecologist

Alexandra (Alex) Wrobel joined the Biological Services Division staff as a forest ecologist this fall. In her new position Alex will be monitoring off-reservation gathering harvests and permits, work on a birch bark project and continue work on GLIFWC's long term study on the impact of logging on understory plants.

Affiliated with the Walpole Island Band of Ojibwe, Odawa and Potawatomi, Wrobel grew up on Harsens Island, Michigan, graduating from Algonac High School. She received both her Bachelor and Master of Science degrees in applied ecology from Michigan Technological University, Houghton, Michigan.

Previous work experience includes a stint with the Natural Resources Conservation Service in Iowa focusing on farm and crop management and later working with a Michigan Conservation District in Dickinson County where she concentrated on invasive species, public education and environmental research.

Living in Ashland, Wisconsin, Alex enjoys time with her two dogs, Mabel and Otto, as well as a wide range of outdoor activities, including running, camping, fishing and cross-country skiing. She also enjoys quiet time reading and bird-watching.

Alex can be reached at 715.685.2125 or email *awrobel@glifwc.org*.

New staff continued

Ben Michaels, fishery biologist

Working in the best of two worlds, Ben Michaels, GLIFWC's new fishery biologist will be employed part-time with the Great Lakes section and part-time with the inland fisheries section, so will experience both Gichigammi and the smaller, inland, ceded territory lakes.

Ben is already familiar with the big lake as he worked as a Great Lakes section intern assisting with lake trout and whitefish assessments in the Michigan waters of Lake Superior over a period of four years. However, he has already been immersed in the fall electrofishing assessments on inland lakes, so is quickly gaining familiarity there as well.

After graduating from Northland College with a Bachelor of Science degree in natural resources, Ben enrolled in a graduate program with Ball State University where he received a Master of Science degree in aquatic biology in 2010.

Besides his previous experience with GLIFWC, Ben worked for the Prince William Sound Aquaculture Corporation in Alaska, raising primarily pink salmon, and he also assisted a graduate student from South Dakota State University with research on fishery management.

While on Lake Superior, Ben will be involved with fall assessments of lake trout and whitefish and in the summer with siscowet and juvenile whitefish assessments. To date, he and his crew already spent some exciting days rocking and rolling on the big lake trying to do assessments during a full-scale, fall blow.

For inland he will participate in the spring monitoring of spearing and netting harvests as well as spring and fall walleye population surveys.

Ben and his wife, Melanie, live in Ashland. He enjoys hiking, being out-of-doors, and, not to anyone's surprise—fishing.

Ben can be reached at 715.685.2175 or email *smichaels@glifwc.org*.

Dr. Sara Moses, environmental biologist

Coming all the way from Alaska, Dr. Sara Moses joined the Environmental Section's staff as the new environmental biologist this fall shortly after receiving her PhD. in wildlife toxicology from the University of Alaska-Fairbanks.

Sara grew up in Keene, New Hampshire and completed her undergraduate studies at the College of the Holy Cross, Worcester, Massachusetts with a Bachelor of Art degree in chemistry. She proceeded to obtain a position with Pfizer as a pharmaceutical scientist but decided her career needed a different bent, one leaning more towards the outdoors and wildlife. That decision brought her to Fairbanks and put her on course for her doctoral research, working with Alaska Natives and focusing on contaminants in subsistence species.

Based on her research experience, she thought GLIFWC's posting for an environmental biologist to work with mercury contamination in fish seemed like a good fit for her, so she applied.

In her new position she will be collecting data on mercury in walleye in select ceded territory lakes and analyzing the data so it can be used to update GLIFWC's mercury-in-walleye maps. Under a Great Lakes Restoration Initiative capacity grant, Sara will also be presenting a tribal perspective in inter-agency meetings that deal with chemical issues.

Sara is currently living in rural Mason, along with her partner, a 110-pound malamute named Trouble. Together they enjoy backpacking, camping, hiking and snowshoeing. A hunter and fisher woman, Sara has largely hunted birds but plans to try her hand at whitetails as well. Inside, she loves to cook—not bake—balanced meals utilizing as many local ingredients as possible

Sara can be reached at 715.685-2109 or email *s.moses@glifwc.org*.

GLIFWC mercury maps provide guidance for safe ogaa (walleye)

By Sara Moses
GLIFWC Environmental Biologist

Odanah, Wis.—The harvest of ogaa (walleye) from inland lakes is an important part of the Anishinaabe lifeway. By participating in the spring and winter spearing seasons, tribal members reaffirm their off-reservation treaty harvest rights while providing their families with a nutritious food source. Yet, along with this tradition often comes a concern about exposure to mercury through consumption of fish. Tribal members generally consume more fish than other segments of the population, putting them at potentially greater risk of negative health effects associated with mercury.

GLIFWC's mercury maps have been provided to tribal members since 1996 so that they can make informed choices that allow continued ogaa consumption while reducing their exposure to mercury. The maps provide the facts about mercury levels in ogaa in ceded territory waters where member tribes commonly harvest these fish.

Brief history of the mercury maps

GLIFWC began collecting information on mercury in walleye from inland lakes in 1989 in response to concerns raised by tribal leaders about mercury in fish and the potential health effects to tribal members. This data, along with fish contaminant data shared by the Wisconsin Department of Natural Resources, was used to produce the first GLIFWC mercury maps in 1996. Additional mercury data are collected each year. The consumption advice provided by the maps is updated periodically in order to incorporate the most recent information available on the levels of mercury in ogaa from inland lakes.

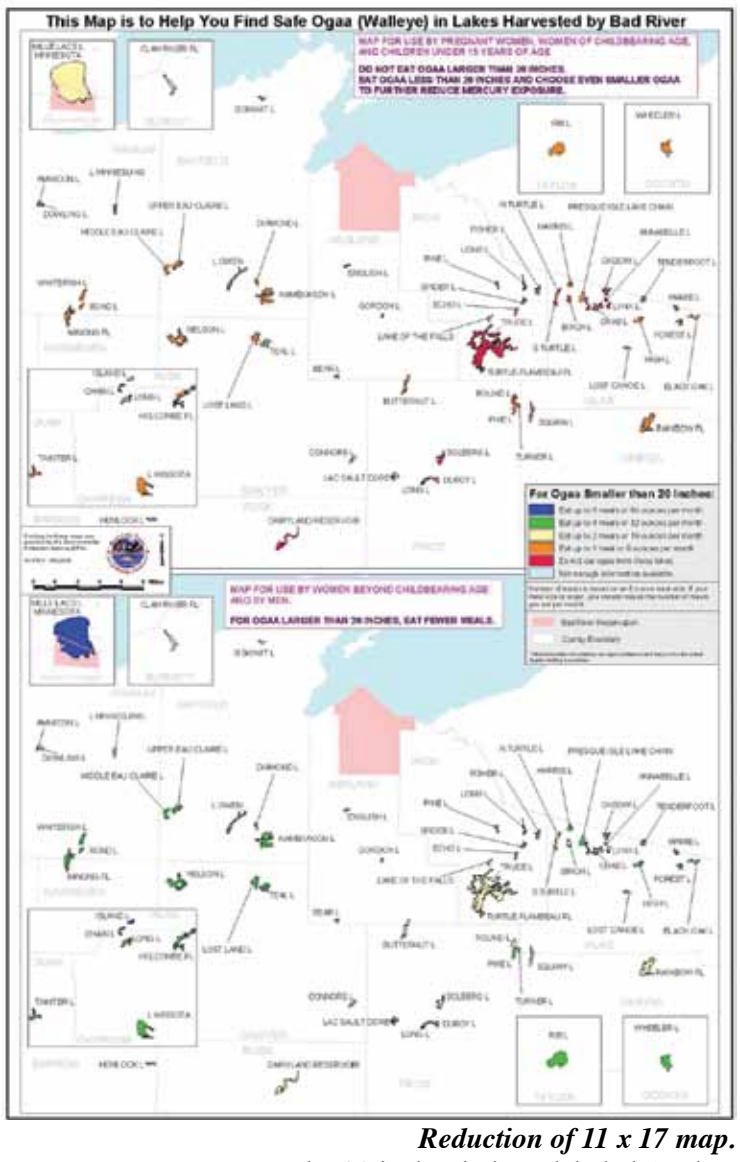
How to use the mercury maps

The front of each mercury map shows two maps of the lakes in which ogaa are typically harvested by a given member tribe (see sample map to the right for Bad River). The top map applies to women of childbearing age and children under 15 years of age. The bottom map applies to the remainder of the population, males 15 years of age and older and women beyond childbearing age.

Each lake on the map is color-coded to display how many meals of walleye per month from that lake have been deemed safe to eat. The two maps show that fewer meals are recommended for women of childbearing age and children under 15 in order to protect the developing brain of the fetus or child from the potential detrimental effects of mercury.

The consumption advice provided on the mercury maps represents the safe number of meals for all lakes combined. For example, if you have eaten four ogaa meals in a month from a green colored lake, you should not consume any additional ogaa meals that month from any other lake. A meal size is considered to be 8 ounces, the amount of meat from an average 19 inch ogaa. If your meal size is larger, you should eat fewer meals of ogaa. If it is smaller, you can safely eat more meals.

The back of each GLIFWC mercury map shows a color-coded listing of the lakes from the map specifying the number of safe meals per month for ogaa from that lake. This information is the same as that provided by the maps, but presents the information in another format allowing quick location of information for a given lake and easy comparisons between lakes.



Reduction of 11 x 17 map.

Suggestions for reducing mercury exposure

There are a number of ways a person can reduce their exposure to mercury while still harvesting and consuming ogaa.

- Sort and label ogaa prior to freezing.
- Put ogaa under 20 inches in bags labeled "under 20 inches."

(See GLIFWC mercury maps, page 22)

Resources for kids

Lure youth into the Ojibwe language

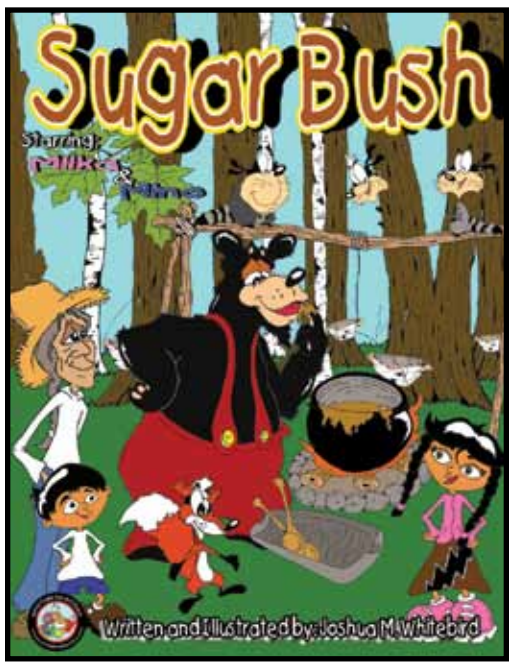
Children's book teaches culture, language

Miika & Mino provide an alternative to Dora

By Sue Erickson, Staff Writer

A newly released children's book from Whitebird Books, **manoomin: A Wild Rice Adventure**, stars two adventurous Anishinaabe kids, Miika and Mino.

Because Miiko and Mino's papa is teaching his children the tradition of manoominike (wild rice harvest), the children are guided through the entire process of ricing, from gathering manoomin to finally relishing the cooked rice, but adventure is also part of the story.



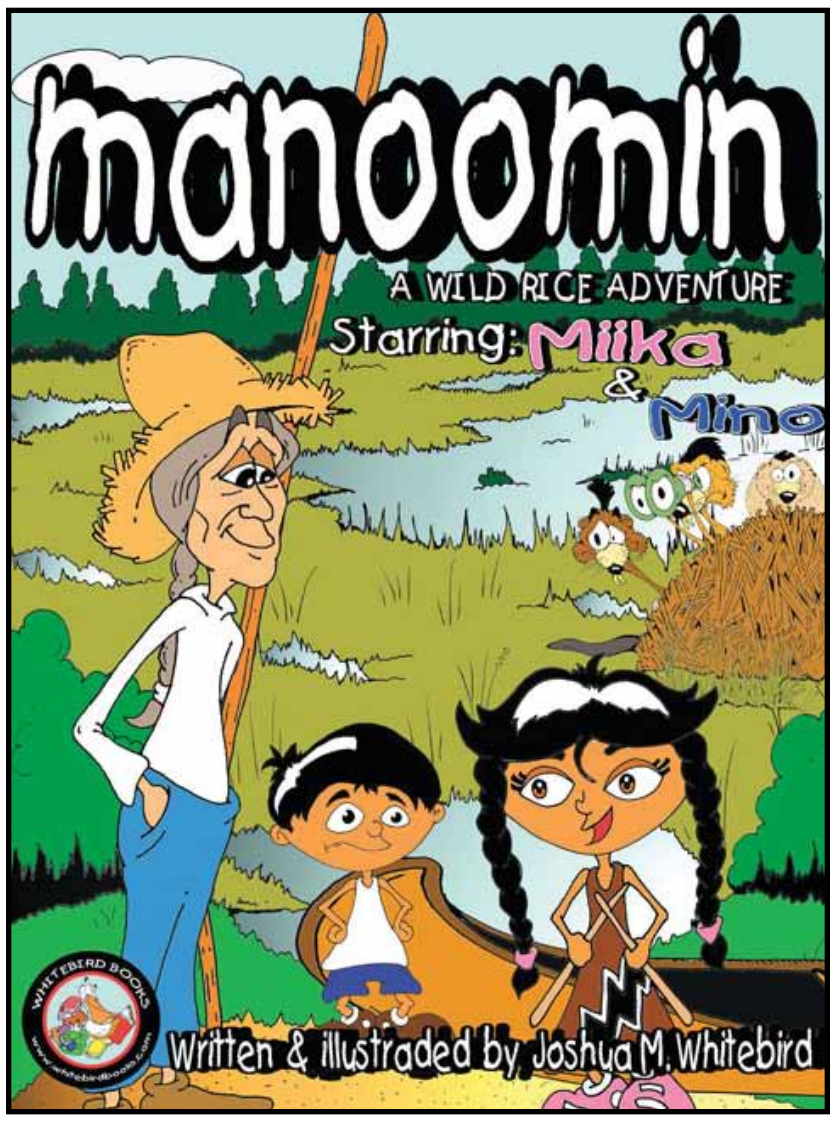
Written by Joshua Whitebird, Fond du Lac tribal member and avid ricer, *manoomin*, also features use of the language throughout the text, including page numbers and a pronunciation guide at the end of the book. Some traditional teachings and protocol are also woven in, along with a Wenaboozhoo story about how manoomin was first discovered.

Beautifully illustrated throughout, the book brings to life characters like Lenny, Benny and Kenny, three naughty wazhashkwag (muskrats) who live in the lake and are up to tricking Miiko, Mino and Papa! There's also Bobby the Beaver, Mindy the Mink, Toots the Turtle and many others. Colorful and delightful, they all make you smile and reflect the Anishinaabe's close ties to the natural world!

Just for extras, a CD filled with activities related to the book and its characters is included. Pages of fun things to do like games, coloring, and craft activities make the CD a great learning resource. Several activities from the CD appear on page 17 of this edition of *Mazina'igan*.

Coming soon as part of the Miiko & Mino series is another illustrated book Sugar Bush.

The book/CD is available through the website at *www.whitebirdbooks.com* for $19.95. Shipping is free when ordering 1-3 books, an additional $5.00 shipping will be charged on orders of three or more. E-mail address is whitebirdbooks@gmail.com.



Great resources for teaching Native American curriculum

Native American Educational Series

By Sue Erickson, Staff Writer

Odanah, Wis.—Teachers, check these resources out! Available at *act31resources.com*, a series of 21 videos discuss one by one all the Wisconsin tribes as well a variety of related, contemporary Native American topics.

The videos are available for purchase, but also can be played online or downloaded. Excellent curriculum that corresponds with the series is also downloadable. Besides a video on each of the Wisconsin tribes, a few other titles include:

- *Treaty Rights and Tribal Sovereignty*
- *Mahnoomin-Wild Rice*
- *Preserving the Harvest*
- *Casting Light Upon the Waters* (about inland treaty fishery management)
- *Lake Superior Fishery—The Big Water*
- *Clans of the Anishinaabe*
- *Ojibwe Tales and Trails of the Moose*

This unique and extensive Educational Series was produced through a partnership of the U.S. Bureau of Indian Affairs, the Great Lakes Intertribal Council, Discover Mediaworks, Native American Tourism of Wisconsin, the Wisconsin Education Association Council, Wisconsin Counties Association, and participating tribal governments.

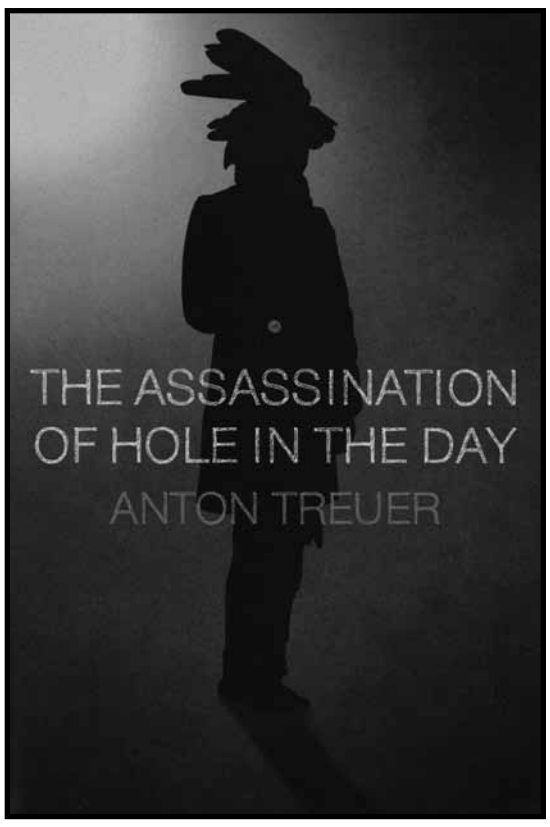
Currently some limited online specials are being run for the purchase of multiple videos. Check out the website for more information —a great resource not to be overlooked by teachers presenting Native American curriculum!

New releases: treaty rights related materials & language

The Assassination of Hole in the Day (Bagone-giizhig)

History plus intrigue related from an Ojibwe perspective

By Sue Erickson
Staff Writer



Odanah, Wis.—A party of his own people assassinated Ojibwe leader Bagone-giizhig (Hole in the Day the Younger) on June 27, 1868 in Minnesota. Why would this be? Dr. Anton Treuer's new book explores in-depth the life of the controversial Ojibwe leader Bagone-giizhig as well as the events that led up to his assassination and ultimately the aftermath of Bigone-giizhig's murder. Well-researched and based on extensive interviews, Treuer's account uniquely portrays this period in history from the perspective of the Ojibwe who were living through times of great social and cultural upheaval.

Bagone-giizhig's influence is evidenced by the fact that his death made national news with the *New York Times* running an article from St. Paul's June 30,1868 edition of the Pioneer. It reads in part:

"Mr. Charles Grant, who arrived yesterday from Pembina, has furnished us with the particulars of the murder of the celebrated Indian Chief "Hole-in-the-Day."

…It appears that the Indians had previously visited Hole-in-the-Day's house, and pillaged it of all the arms they could find. They then left, and on the road met the chief, and killed him with his own weapons. The place where the deed was committed was on the Gull Lake River, between Crow Wing and the Agency. After the murder they cut his body with knives, and threw it into the road, where it was found a short time after by Mr. Charles A. Ruffee and Mr. Aspinwall."

Motives for the murder could have been many: jealousy over Bagone-giizhig's affluence, or retaliation for his past actions and trouble-making, or maybe it was a conspiracy on the part of greedy businessmen, or even a response to his self-proclaimed status as leader of the Ojibwe. Because Bagone-giizhig was an outspoken, forceful and controversial leader, there are many possible motives.

While we may be educated about treaty rights and some of the treaties that where signed during the treaty-making era, little has been told about the Ojibwe headmen who were involved in political struggles both with the growing American society and within and between tribes. This account leads the reader into the lives and minds of that era's Ojibwe people and is an eye-opener as to the extent of political maneuvering and statesmanship carried out at a time when Ojibwe leaders fought to retain their homelands. More than a biography of one very colorful, courageous and crafty Ojibwe leader, Treuer hands us a very readable and intriguing slice of history Ojibwe style.

This book is both educational and truly enjoyable reading. Long winter months ahead provide the opportunity to curl up with a book, and this would be an excellent selection.

The book's ISBN number is 978-087351-801-7 and is published by the Minnesota Historical Society Press. It is available at Birchbark Books: 612-374-4023 or online at *www.birchbarkbooks.com*.

Author Dr. Anton Treuer, professor of Ojibwe at Bemidji State University, has also authored *Ojibwe in Minnesota*, several books on the Ojibwe language, and is editor of the Oshkaabewis Native Journal, the only academic journal of the Ojibwe language.

Excellent educational resource on treaty issues

"After the Storm" explores factors behind the '80's spearfishing protest

By Sue Erickson, Staff Writer

Madison, Wis.—A newly released DVD, "After the Storm," explores the socio-economic dimensions behind the violent protest movement in Wisconsin during the mid-1980s and early 1990s. Targeting Ojibwe tribal members exercising their recently court affirmed treaty rights in ceded territories, the protest drew large numbers to spearfishing landings and quickly took on a profoundly racist profile.

This DVD, produced by UW-Madison students under the supervision of Professor Patty Loew, interviewed people who had witnessed the protest movement from both sides of the fence in an effort to determine the cause of such a disturbing eruption of racial animus on the northern Wisconsin landscape.

Filled with testimonials that render insight into treaty rights, the meaning of the treaty harvest, the impact of the protests as well as the nature and extent of tribal self-regulation of the treaty harvest, this DVD is truly an educational tool.

Referred to in the DVD as "the perfect storm" by GLIFWC's Executive Administrator Jim Zorn, the protest evolved from numerous factors that emerged simultaneously with the exercise of the treaty right. Those factors included economic recession in northern Wisconsin and a changing tourism dynamic, a fishery already stressed, public ignorance of treaty rights, and a racial animus bubbling beneath the surface.

Together these factors generated the "perfect storm" that was unleashed at boat landings throughout northern Wisconsin.

Thoughtfully developed and offering important background information on treaty rights and tribal sovereignty, the DVD succeeds in providing both a backwards look at the factors generating the violent and racial protest and an optimistic look towards the future of a shared resource valued by all.

A copy of this DVD is available at the cost of $12.00 through GLIFWC's Public Information Office or through GLIFWC's website at *www.glifwc.org*. Contact: PIO at 715-685-2108 or e-mail at *pio@glifwc.org*.

New DVD soon to be released from GLIFWC: Treaties, Land and Water

Designed for use in schools, the new, soon-to-be-released "Treaties, Land and Water" DVD provides background on Ojibwe treaties and treaty rights, relating legal rights to the Ojibwe's deep cultural connection to the land and water.

Short and to-the-point, this 14-minute DVD answers many of the questions related to the important contemporary subject of treaty rights: What are treaty rights, and why are they relevant today? Why are treaty rights so important to the Ojibwe people?

These questions and more become part of an intimate look at today's Ojibwe people, treaty history, and the timeless cultural importance of treaty-protected resources.

In January 2011, "Treaties, Land and Water" will be downloadable from GLIFWC's website at *www.glifwc.org* and can be purchased for $12.00 on-line or by calling 715-685-2150.

Biomass, forests & our energy future

(Continued from page 11)

A number of other plants are being contemplated for biofuel production, most of which are not native to North America. These include reed canarygrass *(Phalaris arundinacea)*, common reed *(Phragmites australis*, especially the European subspecies *australis*), "miscanthus" or silvergrass *(Miscanthus x giganteus)*, Johnsongrass *(Sorghum halepense)*, and giant reed *(Arundo donax)*. Reed canarygrass and common reed are already established in the Great Lakes region, where they are major invasives.

"Miscanthus" is a hybrid between two Asian grasses, both of which are grown as ornamentals in North America. One of these *(Amur silvergrass,* or *Miscanthus sacchariflorus)* is already sparingly established in the upper Great Lakes region and shows signs of being invasive. Johnsongrass and giant reed are both warm-climate grasses from overseas and aggressive invasives in the southern US.

The tallgrass prairie was once one of the largest and most productive ecosystems on the North America continent. Today only scattered remnants remain. Interesting work by University of Minnesota Ecologist David Tilman (described in Kintisch 2008) shows that growing a mix of switchgrass and other native prairie plants can result in twice the energy yield as switchgrass alone. This work gives promise that as a side effect of the rush for biofuels, something resembling the tallgrass prairie could be restored on degraded farmland across the former Great Plains.

Switchgrass along a roadside in western Upper Michigan, October 2010. (Photo by Steve Garske)

Heading down the wrong path

Five small wood-to-energy plants that burn primarily wood waste are currently up and running in Michigan, and more are in the works. New plants being proposed will have to rely on whole logs to operate, according to even the pro-biomass group Michigan Biomass (Melzer 2010a). The first biomass-to-energy plant operating in Wisconsin is located in Cassville. This 40 MW plant, which burns material ranging from "green wood residue from forestry and tree trimming operations, railroad ties, demolition waste and sawdust" began operations just days before this writing (Cartledge 2010).

About 11 large biomass facilities are already operating in Minnesota, six of which use material directly from logging operations (MDNR 2010). These totals do not include a number of smaller waste wood facilities operating in each state, which are mostly associated with papermills and other wood products manufacturers. The Natural Resource Department websites of all three of these states enthusiastically promote the use of forests for biofuels. Meanwhile the US Forest Service promises to "Help Develop New and Expanded Markets for Bioenergy and Biobased Products" and "Facilitate a Reliable and Sustainable Supply of Biomass" (see *www.fs.fed.us/woodybiomass/strategy/index.shtml*).

A final note

If you are still reading this, you would probably agree that this issue is an incredibly complicated one. As Gibbs (2009) points out, energy grids currently in use need a constant "baseload" of power in order to function properly. While truly renewable sources of electricity such as solar and wind are fully capable of producing large amounts of electricity, that electricity is variable (depending on sunshine and wind). The current electrical grid in this country can only handle about 20% variable energy (Gibbs 2009). (The US is currently at about 5% from renewables overall, so there's still lots of room for solar and wind, even with the current grid.) Technological improvements (a "smart grid") could allow the grid to handle much higher percentages of renewable energy.

Renewable energy technology is also advancing rapidly, with significant breakthroughs in energy efficiency and storage being announced every few months. Proven, cost-effective technologies to replace some electricity use (such as solar water heaters) already exist. By far the most cost-effective way of saving money and energy, though, is through efficiency. Things like insulating buildings, using energy-efficient lighting, combining trips, and driving higher-mileage vehicles all save energy and money, with little or no loss of comfort and convenience. Finally, we need to cut our consumption and avoid using energy in frivolous ways. For better or worse, the future of Mother Earth is truly in our hands.

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GLIFWC mercury maps

(Continued from page 19)

- Put ogaa over 20 inches in bags labeled "over 20 inches."
- Label bags with the name of the lake the fish where the fish were harvested.
- Follow the advice provided on the mercury maps or the maximum safe number of ogaa meals per month.
- Eat smaller ogaa (those under 20 inches) and ogaa from lakes with lower mercury levels such as those color-coded blue or green.

Alternately, tribal members can choose to eat safer giigoonh (fish) species known to contain less mercury. Giigoonh such as walleye, muskellunge, largemouth bass, smallmouth bass, and northern pike generally contain more mercury than other giigoonh such as lake whitefish, herring, bluegill, sunfish, perch or crappie.

Fish contain a number of nutrients that are critical to good health. By making informed decisions about the size and species of fish eaten and the lake from which those fish are harvested, tribal members can safely eat ogaa and other giigoonh as part of a healthy diet.

Future testing of mercury in ogaa

To date, GLIFWC has collected and analyzed mercury levels in 5102 walleye fillets from 233 inland waters within ceded territories in Wisconsin, Minnesota and Michigan. GLIFWC was recently awarded funds by the U.S. Environmental Protection Agency (EPA) to continue walleye collection and mercury analysis in 2011 and 2012. As a part of this project, the current consumption advice provided by the mercury maps will be reviewed and updated. GLIFWC will continue their outreach and intervention activities, with a focus on women of childbearing age, women with young children, and tribal harvesters in Minnesota and Michigan. The emphasis on these segments of the population is based on the results of a recent GLIFWC study that suggested these tribal members would receive the greatest benefit from this program.

Where to get mercury maps

Mercury maps are available for the six GLIFWC member tribes in Wisconsin as well as the 1837 ceded territory of Minnesota (Mille Lacs) and portions of the 1842 ceded territory of Michigan (Lac Vieux Desert). The maps can be found online at *www.glifwc.org/Mercury/mercury.html*. In addition, maps are posted at tribal health centers and will be made available at tribal spring spearing registration locations. For additional information on mercury in ogaa or to request a copy of a GLIFWC mercury map please feel free to contact me at *s.moses@glifwc.org* or (715) 682-6619 ext. 109.

The heart of the matter was nibi (water) for an August Grandmothers' Gathering for Gichigamiing (Lake Superior) on Madeline Island. The island setting in Gichigamiing was ideal for the four-day gathering focused on celebrating and healing water. The event drew 48 "grandmothers" from twelve states, including Margaret Behan, Cheyenne-Arapaho and one of the International Council of 13 Indigenous Grandmothers, who shared her personal story, encouraging women to heal themselves and to be proactive. (Photo by Sue Erickson)

Reminder

Remember that *Mazinai'gan* is now published only three times a year. Watch for the spring/summer edition in May 2011.

A camouflaged Colonel Michael J. Price, US Army Corps of Engineers, moves through the giveaway line near the Sandy Lake Memorial site following a ceremony and feast August 4. (Photo by Charlie Otto Rasmussen)

Wild river water pumpkin harvest yields 29 jack-o-lanterns

By Sue Erickson, Staff Writer

Odanah, Wis.—Fall harvesters landed 29 wild river water pumpkins this season. Bad River tribal members Maria Nevala and Gina Secord, both veteran water pumpkin harvesters, coordinated this unique event, which took place in October on an undisclosed river on the Bad River reservation.

Adventurous by nature, Nevala discovered the wild river water pumpkins some years ago in a remote river location and kept it a secret. Taking young harvesters to the river over several seasons now, she says the river pumpkins break from their vines in the fall and can be found floating in the river.

Harvesters go down river by boat in search of the bobbing, orange pumpkins. Found free floating or lodged in all kinds of crooks and crannies in the river, they are scooped up with a landing net and taken aboard. This can be tricky because water pumpkins generally are quite heavy and difficult to lift over the boat's gunnel undamaged.

Only about four or five harvesters go out at a time, each landing one water pumpkin because there are a limited number of wild river water pumpkins available. Also, too many water pumpkins in a small boat could be unsafe.

"This year was particularly exciting because a few of the boys found the very rare, greenish-orange pumpkins further down river and were successful in netting them," Nevala says. "That was exciting!"

Nevala has researched wild river water pumpkins, searching the Internet for information, but has found no reference to them. She is led to believe that the water pumpkins may be unique to this one on-reservation river. Nevala was very pleased with this year's harvest and was happy to see the pumpkins turned into jack-o-lanterns with scary faces for Halloween. Of course, wild river water pumpkin harvesting is only for adventurous souls with youthful spirits and truly wild imaginations!

Bad River's wild river water pumpkin harvesters unload in a secret mooring spot on the river where water pumpkins grow. Pictured are, from the left, Maria Nevala, boat captain, Eva Neveaux, Dillon Oja, Ethan Neveaux, Logan Neveaux, and Paul Neveaux, first mate. (Photo by Sue Erickson)

Eva Neveaux successfully landed a small wild river water pumpkin on her first trip out. She was aiming for a small one and got it. (Photo by Sue Erickson)

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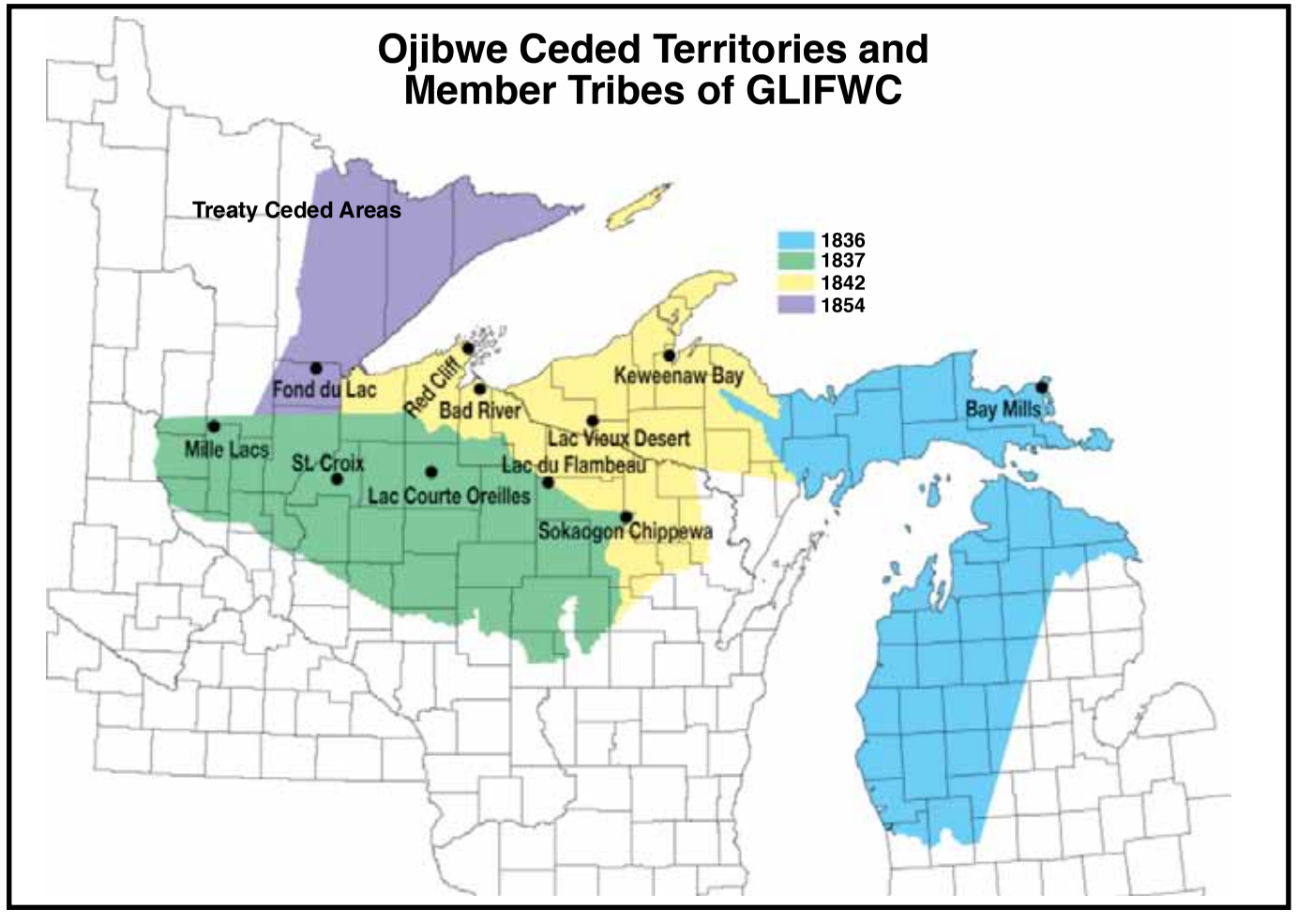
Although **MAZINA'IGAN** enjoys hearing from its readership, there is no "Letters to the Editor" section in the paper, and opinions to be published in the paper are not solicited. Queries as to potential articles relating to off-reservation treaty rights and/or resource management or Ojibwe cultural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

For more information see GLIFWC's website: www.glifwc.org.



Mazina'igan

A Chronicle of the Lake Superior Ojibwe