Mazina'igan
A Chronicle of the Lake Superior Ojibwe
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Once the big lake opened, the fish were there

By Sue Erickson
Staff Writer

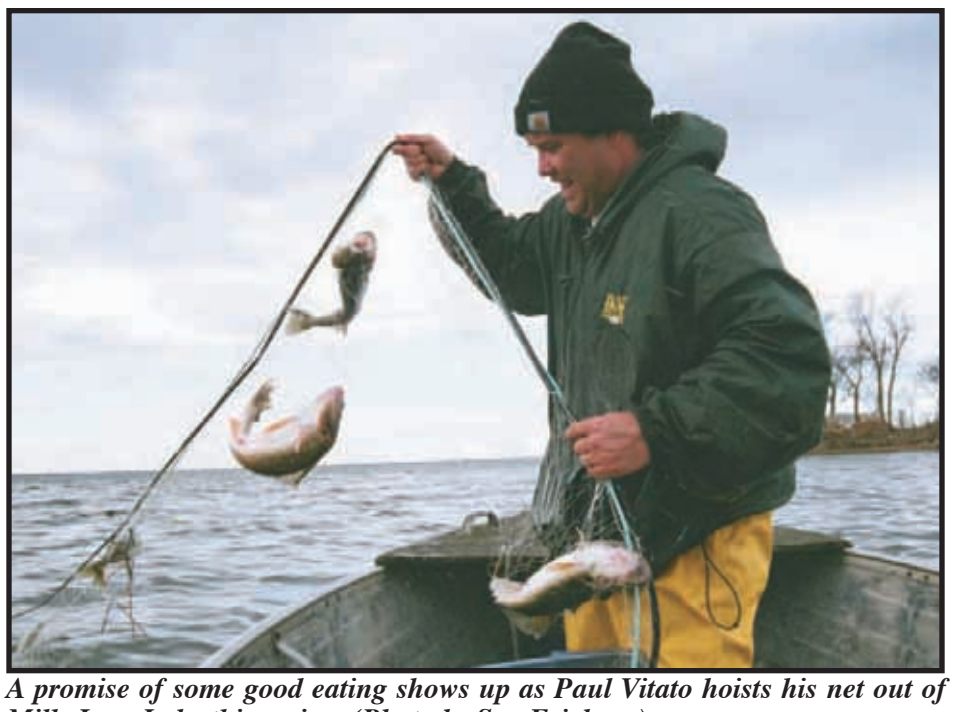
Mille Lacs, Minn.—Mille Lacs members opened the spring 2006 netting season in the on-reservation waters of Mille Lacs Lake on April 3rd. Off-reservation netting and spearing began on April 12th.

With a fair weather forecast and word that the big lake was open, netters from other tribes with treaty rights in Mille Lacs Lake began arriving the following day. The season was in full swing by the weekend of April 14-15.

Those early birds were rewarded with substantial lifts, nets bearing 60 to 70 pounds of walleye with a sprinkling of yellow perch and northern pike. Spearers also found favorable conditions and good numbers of smaller-sized walleye which resulted in more harvest than last year.

Cars, boats and trailers crowded Cedar Creek landing on Friday evening as GLIFWC and Fond du Lac staff issued permits to long lines of tribal members ready to set their nets. Other off-reservation landings at North and South Garrison also experienced plenty of activity throughout the weekend, although Cedar Creek seemed to be the favored spot once again this season. Approximately one-third of the entire spring 2006 tribal walleye harvest from Mille Lacs Lake occurred on April 14th.

Among those participating in the treaty fishery were St. Croix tribal member Ray (Duke) Bender and his nephew Paul Vitato, who pulled full nets out of the lake on Saturday morning. They were there for one night's set only. "We get what we need. That's all we do," says Duke, who was also careful to offer his thanks with asemaa (tobacco) in the water. After having their fish creeled, they **(See Monitoring, page 2)**



A promise of some good eating shows up as Paul Vitato hoists his net out of Mille Lacs Lake this spring. (Photo by Sue Erickson)

Sandy Lake site to remain open on day-use basis

Mikwendaagoziwag Memorial ceremonies slated at the site

By Sue Erickson
Staff Writer

St. Paul, Minn.—Chi miigwech (a big thank-you) to the U.S. Army Corps of Engineers (Corps) for reconsidering their decision to close the Sandy Lake Recreation Area this summer. An April 28 announcement stated that the Sandy Lake site near McGregor, Minnesota will be open for day use and overnight camping.

The Corps' announced earlier in March that the site, which is the home of the Mikwendaagoziwag (They are remembered) Memorial, would be one of four sites selected to be closed this summer due to reduced funding levels. This announcement raised a great deal of concern among the Great Lakes Indian Fish & Wildlife Commission's (GLIFWC) member tribes.

The Memorial, which was completed in 2000 and dedicated the following year, honors Ojibwe ancestors who suffered and died there or en route home as part of the Sandy Lake Tragedy, an

The Mikwendaagoziwag Memorial honors Ojibwe ancestors who suffered and died at Sandy Lake or en route home as part of the Sandy Lake Tragedy. (Photo by COR)

ill-conceived effort to remove Wisconsin and Michigan Ojibwe into the Minnesota Territory in 1850. Many of those people were from GLIFWC member bands, and their determination to return to their homelands played a significant role in the eventual establishment of the present-day home reservations.

Following the dedication of the Memorial, GLIFWC has sponsored annual ceremonies at the site, honoring a promise that these Ojibwe ancestors and their sacrifices will never be forgotten.

Closing of the site would have made access to the monument difficult, if not impossible for most. "The announcement of the closing was very troubling to me," says Leo LaFernier, long-time Voigt Intertribal Task Force representative from Red Cliff, who also participated in the planning, design and construction of the Memorial as well as kept ceremonial fires at the site. "It was like the recognition we had finally achieved for these ancestors after all these years was suddenly going to be shut off and all our efforts over the past six or seven years would be for nothing."

Upon direction of GLIFWC's Board of Commissioners, GLIFWC Executive Administrator James Zorn sent a letter to the Corps registering objections to the site's closing and requesting on behalf of GLIFWC member tribes that the Corps reconsider their position. (See Sandy Lake, page 2)

Thanks to the Corps' recent decision to keep the site open, GLIFWC's annual ceremonies are scheduled to take place at the Sandy Lake site as usual on July 26th. There will be a paddle across Sandy Lake as is traditional, along with noon ceremonies and a feast.

Further information on the Sandy Lake Tragedy is available on GLIFWC's website at *www.glifwc.org* under publications/brochures/Sandy Lake brochure. Information on the July 26 ceremonies is available by contacting GLIFWC at (715) 682-6619 or emailing *pio@glifwc.org*.

Chi miigwech also goes out to the many Indian and non-Indian people who also contacted the Corps with their concerns about the site's closing. Among those expressing concern was Jim Merhar, Chairman of the Iron Range Area Council of the White Earth Reservation, who said in a letter to the Corps that "This is our Memorial to go and give **(See Sandy Lake, page 2)**

Monitoring crews keep long vigils at spring landings

(Continued from page 1)
headed for home and the task of cleaning, packing and freezing the catch.

Creel & enforcement staff work round-the-clock

GLIFWC harvest monitoring and enforcement staff found sleep to be a precious commodity that weekend. The rush was on, and the sheer numbers put the creel crews to the test throughout the weekend.

Biological creel crews and enforcement personnel begin to issue daily permits around 3:00-4:00 p.m. to netters and spearers before nets are set and spearing can begin. They are present in the morning to monitor the net catch, recording the number, poundage, and other biological data on the fish. If spearers go out in the evening, as they did on April 14 and 15, the creel crews must also be available to issue permits and monitor the spear harvest.

On Friday night, the crew at Cedar Creek was kept busy with spearing until 4:00 a.m. the next morning. This left only a small window of time for a catnap in the truck because the landing re-opened at 6:00 a.m. for netters ready to lift.

Duke Bender prepares to offer his thanks with asemaa before lifting his nets. (Photo by Sue Erickson)

Saturday, April 15th was relentless as all the nets were lifted. Once the fish are picked from the nets, they are brought over to the creel station to be counted, weighed, and biological data collected. GLIFWC creel teams and Fond du Lac creel staff were put through their paces all morning. Finally, all the catch data has to be faxed into GLIFWC's main office in Odanah, Wisconsin.

Back in the main office, number crunching staff were hard at it, too. Staff working the weekend in the office received several hundred pages of records from all the open landings from Mille Lacs Lake and landings open for spearing in Wisconsin and Michigan.

Office staff double-checks and enters data received from the field and calculates balances left on quotas on a daily basis to update the number of permits available and to prevent harvest from exceeding the established quotas. New figures must be reviewed with tribes in time for them to adjust quotas, set bag limits, and determine the number of daily permits.

Also in the main office, GLIFWC Enforcement's dispatch is on 24-7 duty, with dispatchers alternating 12-hour shifts throughout the season.

GLIFWC creel team Kathy Morrison and Dave Parisien issue a permit to Susan Matrious, St. Croix (left), at the North Garrison landing on Mille Lacs Lake during the spring harvest season. Biological and enforcement staff were busy day and night monitoring the open landings. (Photo by Sue Erickson)

Sandy Lake site

(Continued from page 1)
our respect at any time we would like to these Anishinaabeg people."

John O'Leary, Corps' Headwaters operations manager, credits the response of local volunteers, service groups, local businesses and the public who have stepped forward to help prepare the sites for the upcoming season, saving money for the Corps.

According to the Corps' announcement, they are continuing to have discussions with the Minnesota Department of Natural Resources, looking for partnering opportunities to keep Sandy Lake and other sites open in the future.

Dear Colonel Pfenning,

I am contacting you to register the Great Lakes Indian Fish & Wildlife Commission's deep disappointment and disagreement with the decision to close the Sandy Lake Recreation Area. When informed of this matter at its recent meeting, GLIFWC's Board of Commissioners was deeply dismayed to learn not only that this decision had been made, but also that it was made without the requisite notice to and consultation with affected Tribal Nations.

The Board simply is unable to comprehend why the Corps would close this particular site in this particular manner such a short time after the dedication of the Mikwendaagoziwag Memorial located at Sandy Lake. This decision is an affront to the memory and sacrifice of those who unnecessarily suffered and died as a result of the Federal Government's misguided and illegal removal attempt over 150 years ago. As a reminder of the history and issues involved here, I have enclosed a pamphlet that recalls the Sandy Lake tragedy and the Memorial's purpose.

In announcing this decision, the Corps mentions neither the significance of this site to the Tribes nor the fact that tribal members and the general public would be denied access to the Memorial. It simply is unfathomable that these aspects would not have entered into the equation. If they had, the Board is confident that you would have reached a different decision because of the Corps' stated commitment to honor this Nation's treaty obligations and trust responsibility toward the Tribes involved in the Memorial.

GLIFWC and its Board of Commissioners urge you to reverse this decision. Clearly there are other options as you have chosen to keep other sites open. Simply put, when the Corps has sufficient funds to operate at least some of the sites under your command, its treaty and trust obligations toward the Tribes involved in the Mikwendaagoziwag Memorial require that Sandy Lake be one of those kept open.

The Corps has honorably, respectfully and proudly stood along side the Tribes in remembrance and commemoration of a sad chapter in our Nation's history. Indeed, Corps' staff have been extremely sensitive and caring partners in helping to watch over and maintain the Memorial. GLIFWC trusts that you now do not intend to convey disrespect and dishonor. Nevertheless, intended or not, that is exactly the message that this decision sends.

GLIFWC's Board has asked that I provide whatever assistance I can to help change this decision. Toward that end, I look forward to hearing from you as soon as possible so that we might rely on our foundation of trust and respect to explore mutually acceptable alternatives.

Sincerely,
James E. Zorn
Executive Administrator

Preliminary spring spearing & netting totals

Mille Lacs Lake

The tribes harvested a combined total of about 69,652 pounds of walleye this spring along with 7,209 pounds of northern pike. The quota for walleye was 100,000 pounds, leaving a balance of 30,348 pounds. The quota for northern pike was 12,496, leaving a balance of 5,286 pounds.

This combined walleye harvest is about 10,000 pounds less than the harvest of 80,057 pounds from spring 2005. The combined harvest for northern pike also decreased from spring 2005 levels by about 1,900 pounds.

Other species harvested this spring included: 1,341 pounds of yellow perch, 15 pounds of cisco and 781 pounds of burbot.

Biologists attribute the smaller walleye harvest this spring to a particularly fast spawning season, which seemed to peak during the weekend of April 15-16 and then taper off quickly.

Wisconsin and Michigan spring spearing seasons

The 2006 spring spearing season in Wisconsin opened on April 8 and ran into May. The tribes harvested fish from 177 ceded territory lakes, landing 27,594 walleye out of a tribal quota of 42,513. This figure is up slightly from the 2005 harvest of 26,877 walleye.

For muskellunge, the tribes harvested a total of 273 muskellunge from a quota of 1,655. The muskellunge harvest is up slightly from 2005 when the tribes harvested 230. The Bad River, Lac du Flambeau, Lac Courte Oreilles, Mole Lake/Sokaogon, Red Cliff, and St. Croix bands all took part in the harvest.

In Michigan the Lac Vieux Desert Band harvested 3,563 walleye from 15 lakes and 8 muskellunge from two lakes this spring.

On the cover

There's lots to learn in the sugarbush. That's why Red Cliff's Marvin Defoe takes time to teach the Red Cliff Headstart youth all about making maple syrup. Headstarters Maleyna Bressler and Tyrone Butterfield listen intently. See story on page 6. (Photo submitted)

Wisconsin legislative resolution honors life & public service of James H. Schlender

Editor's note: *On March 7, 2006, the following resolution was introduced by Senators Brown, Zien, Coggs and Jauch, cosponsored by Representatives Musser, Sherman, Bies, Mccormick and Pettis. Referred to Committee on Senate Organization.*

Relating to: the life and public service of James H. Schlender.

Whereas, James H. Schlender, Sr., was born March 5, 1947, was a member of the Lynx clan of the Lac Courte Oreilles band of Lake Superior Chippewa Indians, and was also known by his Ojibwe name, Zaagajiiwe, meaning "man cresting the hill"; and

Whereas, Mr. Schlender grew up in Milwaukee and on the Lac Courte Oreilles reservation; and

Whereas, Mr. Schlender earned a bachelor of arts degree with honors from the University of Wisconsin–Milwaukee in 1974 and a juris doctor degree from the University of Wisconsin Law School in 1978; and

Whereas, Mr. Schlender served the Lac Courte Oreilles band as tribal attorney from 1978 to 1981 and was elected to the Tribal Governing Board for four consecutive terms from 1981 to 1987 serving as vice chairman and secretary/treasurer; and

James H. Schlender

Whereas, Mr. Schlender played a leading role in litigation and negotiations regarding hunting, fishing, and gathering rights retained by the Chippewa in treaties with the United States, as tribal attorney and later as the first chair of the Voigt Intertribal Task Force; and

Whereas, Mr. Schlender served as executive administrator of the Great Lakes Indian Fish and Wildlife Commission from 1986 to 2005, in which capacity he negotiated with the department of natural resources the implementation of court rulings regarding tribal natural resources rights; and

Whereas, Mr. Schlender was a moderating influence in resolving conflicts with the state and with private citizens surrounding the exercise of those rights; and

Whereas, Mr. Schlender worked closely with state officials to forge cooperative programs by which the department of natural resources and the Great Lakes Indian Fish and Wildlife Commission manage natural resources and conduct law enforcement in the ceded territories; and

Bizhiw is the Ojibwe word for lynx. (Artwork by Biskakone, Greg Johnson, Lac du Flambeau Ojibwe.)

Whereas, Mr. Schlender was instrumental in building the Great Lakes Indian Fish and Wildlife Commission into a highly professional agency providing biological, regulatory, legal, and other services to the Chippewa bands; and

Whereas, Mr. Schlender ensured that the commission acknowledged its unique tribal identity by infusing Ojibwe culture and values into all aspects of its work; and

Whereas, Mr. Schlender served from 1982 to 1989 as vice chair of the joint legislative council's American Indian study committee and as chair of three separate subcommittees of that committee; and

Whereas, Mr. Schlender served on the Wisconsin Supreme Court's board of bar examiners, the Wisconsin Supreme Court's appointment selection committee, the board of directors of the Indian law section of the Wisconsin State Bar, and the board of directors of the Environmental Health Laboratory of the Lake Superior Research Institute, University of Wisconsin–Superior; and

Whereas, Mr. Schlender was the first recipient of the Wisconsin Law Foundation's Belle Case LaFollette Award for Contributions to the Advancements of the Profession in 1992, earned a Bush Foundation Fellowship in 1992 for continuing legal education, and was named Tribal Leader of the Year in 2001 by the Native American Fish and Wildlife Society; and

Whereas, Mr. Schlender was a frequent presenter to diverse audiences on principles of Indian law, tribal sovereignty, and the rights retained by American Indian nations in treaties with the United States; and

Whereas, Mr. Schlender was a tireless advocate for the rights of American Indian nations and the exercise of tribal sovereignty, cresting many hills in his service to the Lake Superior Chippewa bands and the three states in which they are located; and

Whereas, Mr. Schlender suffered an untimely death on August 30, 2005, at the age of 58; now, therefore, be it

Resolved by the senate, the assembly concurring, That the members of the Wisconsin legislature commend the life and public service of James H. Schlender, also known as Zaagajiiwe; and, be it further

Resolved, That the senate chief clerk shall provide a copy of this resolution to Mr. Schlender's wife, Agnes Fleming, of Lac Courte Oreilles, and their children, Tammy Barber and Valerie Tribble, of Lac Courte Oreilles; James Schlender, Jr., of Madison, Wisconsin; Mary Tribble, Justin Schlender, and Melissa Crow, of Lac Courte Oreilles; Jason Schlender, of Red Cliff, Wisconsin; and Jenny and Margaret Schlender, of Lac Courte Oreilles.

Treaty rights expert Ron Satz walks on

By Charlie Otto Rasmussen
Staff Writer

Eau Claire, Wis.—Ojibwe Country lost a good friend March 7 with the passing of Ronald N. Satz, also known as Waabishki-ogichida. Satz was a scholar and historian with a specialty in Indian treaties and Ojibwe treaty rights in the Great Lakes region.

Most recently he served as Provost and Vice Chancellor at the University of Wisconsin-Eau Claire (UWEC). Satz died at Fairview University Medical Center in Minneapolis.

Ron Satz

Over the past two decades Satz has been a consultant of Indian history and treaty rights to several American Indian tribes and organizations, including the Native American Rights Fund, the American Indian Language and Culture Education Board of the Governor of the State of Wisconsin, and the Great Lakes Indian Fish and Wildlife Commission. In addition, Satz has been a member of several organizations committed to improving human relations.

Family, friends and colleagues attended a visitation and ceremony honoring Satz on March 12 at an Eau Claire funeral home. A memorial service was also conducted at UW-Eau Claire's Haas Fine Arts Center. Lac Courte Oreilles (LCO) members John Littlebird Anderson and Rick St. Germaine delivered eulogies at the respective events.

"There aren't enough Ron Satz's in this world. We were blessed to have him with us as our ally, as our friend, our associate, and our leader," said St. Germaine, a UWEC professor and past tribal chairman of the LCO Band

In 1991, Satz received the State Historical Society of Wisconsin's Award of Merit for Distinguished Service to History for his book ***Chippewa Treaty Rights***. In December 1993, he was recognized by the Wisconsin Superintendent of Public Instruction for his "commitment to the advancement of American Indian studies in Wisconsin's public schools" and for "promoting an understanding among K-12 students and staff of the history, culture and tribal sovereignty of Indian tribes and bands in Wisconsin." In 1995, the UW-Eau Claire Foundation Inc. presented him with its Excellence in Service Award. In 1996, the Wisconsin Library Association honored his "Classroom Activities on Wisconsin Indian Treaties and Tribal Sovereignty" with its Distinguished Document Award.

In 1998, the Wisconsin Ojibwe tribes presented Satz's award-winning book, ***Chippewa Treaty Rights***, into evidence before the U. S. Supreme Court in the Mille Lacs Case. The case resulted in the vindication of Ojibwe treaty rights.

Bad River youth achieves honorable mention in statewide competition with essay on the Chippewa treaty struggles

By Sue Erickson, Staff Writer

Odanah, Wis.—Fourteen-year-old Dylan Jennings received an "honorable mention" for coming in fourth place in the junior division of a statewide National History Day competition. The title of his scholarly, historical essay is *"SOMETHING FISHY: How the Chippewa took a stand to maintain their treaty rights."*

National History Day is an academic enrichment program designed to help students learn about historical issues, ideas, people and events. The yearlong program has three central elements that develop students' abilities to complete extensive research; critically analyze and develop historical conclusions regarding information they have researched, and present and defend their interpretations.

Dylan resides in Weston, Wisconsin with his parents, Douglas and Marcene Jennings and attends D.C. Everest Junior High School. His grandparents are Rae Ann Maday, Odanah and Gary Kmiecik of Lac du Flambeau, and his great grandmother is Patricia Maday, Odanah.

Excerpts from Dylan's historical essay follow:

Even though the Chippewa Indians won the court cases in the 1980's and 1990's, they were nowhere near finished with the struggle to maintain the treaty rights. As the protests raged on, the crowds grew larger and more violent. Common racial signs like "Timber Nigger" and "Save a Walleye; Spear a Squaw" made Native Americans feel unwelcome. Signs displayed at shops and restaurants, and Treaty Beer sold at gas stations helped to promote the anti-Indian movement. . . .

As Rae Ann Maday, a treaty-supporting Chippewa from Bad River said, "It made you feel mixed emotions, but it also made you want to fight harder to be there at the boat landings because of all the ugly treatment received at restaurants and almost anywhere in town." There were even instances of occasional gunshots and pipe bombs, aiming to intimidate, injure, or kill spear fishers. For instance, on April 12, 1988, according to the Lakeland Times, a non-Indian man from Wausau was caught with seven powder-packed pipe bombs in his truck. Authorities apprehended him, and the bomb squad was called to the scene.

In another instance, Neil Kmiecik, whose job was to track fish populations for the Great Lakes Indian Fish & Wildlife Commission (GLIFWC), vividly remembers a threatening night in 1987. He recalled the protestors outnumbering both the wardens and treaty supporters. The situation became extremely dangerous as the DNR realizes that they had no control over the situation. Due to the hostile protesting crowds, additional police and game gardens were assigned to protect the indigenous people. Authorities created fences and made many arrests. This was one of the hardest tasks that the wardens and police officers faced, and most of them were reluctant and angered to follow orders.

As Assistant Chief Warden Rollie Lee said, "Like them, we had spent numerous hours protecting spawning game fish, but the wardens would now protect individuals spearing those same fish."

During this whole struggle, the reaction of the Native Americans remained subtle. Through tribal meetings and gathering, Native Americans agreed that "peace" was the way to go and that fighting back would only make the situation worse. So the Native Americans kept on spear fishing as usual, ignoring the hurtful language chanted and rocks thrown. Native Americans who were not harvesting fish gathered at the boat landings, singing with the drum and putting themselves at risk to show their support of the spear fishers.

Raymond Maday, a Bad River tribal elder, wisely told his grandchildren that they must be like the duck. In order to survive, a duck will rub a protective coat of oil on its feathers. This oil keeps the water from penetrating and drowning the bird. Oil represents Native Americans' proud heritage and the youth learned to let degrading and hurtful comments slide off (like water on a duck) as an effective way to take a stand.

Mazina'igan would like to congratulate Dylan for his fine work, and we'll be looking to hear more from this young man in the future!!!

Spearfishing incident on Lake Nokomis

Charges include disorderly conduct as a hate crime

Wausau, Wis.—According to an April 18 report in the ***Wausau Daily Herald***, a 48-year-old Tomahawk man was arrested Saturday, April 15th for threatening tribal spearfishers on Lake Nokomis, Lincoln and Oneida Counties. He is accused of threatening to harm the fishermen with a gun.

He was arrested and released following the posting of a cash bond and is scheduled to appear in court on May 15. Charges included operating an ATV while intoxicated and disorderly conduct as a hate crime.

The ***Herald*** reported that the suspect was tracked to his home by deputies from Lincoln and Oneida Counties' sheriff's departments and Wisconsin Department of Natural Resources wardens.

Great Lakes Indian Fish & Wildlife Commission records indicate that seven Lac du Flambeau members were spearfishing on Lake Nokomis that evening.

Waswagoning Village vandals accept educational alternatives

Lac du Flambeau, Wis.—The owners of Waswagoning Ojibwe Village met recently with the five young men who vandalized, burglarized, and burned the property in July 2005. In the emotionally-charged meeting, Nick and Charlotte Hockings presented the men with alternatives to being charged with felonious criminal charges.

Suspects Jeffrey Hunter, 17, of Woodruff; Kasey Lisner, 18, of Lac du Flambeau (LdF); Joseph Dallapiazzo, 18, of Minocqua; Ryan Meyers, 17, and Timothy Richardson, 18, both from Woodruff were present with relatives to hear statements from the Hockings' and respond to inquiries concerning why they chose to commit the crimes. Also present were two representatives from Restorative Justice for Adults.

According to the criminal report the suspects attended a drinking party at the Lisner's residence and discussed how much they disliked Native Americans. They drove to the Waswagoning Village, located on Highway H in LdF where they proceeded to vandalize and burn several structures including a gift shop, wigwams, and a smokehouse.

An extensive investigation from the LdF police force, with the help of tips from community members, led to their arrests in February. All five have been charged with arson, criminal damage to a property in excess of $2500, and burglary.

However, the Hockings are offering alternatives to them, which would exonerate them from a criminal record. The alternatives that the Hockings suggested are:

1. A 30-day alcohol and drug program, followed by attending weekly AA or NA meetings until the end of their probation.
2. Each prepares a 10 to 15 minute oral presentation explaining his role in the crimes and the consequences of abusing alcohol and drugs. They will also present their uneducated and biased view of Native Americans and how they plan to correct their obvious lack of respect. These oral presentations will be presented to area high schools and elementary schools.
3. Four books have been selected for reading, and each will write an in-depth report made on each selection.
4. They will answer five questions that were gleaned from the book *And Don't Call **Me** A Racist*, selected and arranged by Ella Mazel.
5. 250 hours of community service in Lac du Flambeau
6. Restitution to the business of Waswagoning Village

(These prepared speeches and reports on the four books and the answers to the five questions will be presented as the personal property to Nick and Charlotte Hockings, and they may be made available to area schools for educational purposes. This may be documented by video and audio tape.)

"These young men do not have a serious prior criminal record, so Charlotte and I believe that there is the possibility that what we are recommending to the court system can have a positive effect," said co-owner and LdF Tribal member Nick Hockings. "We've heard people consider this a hate crime too. When we met with the Assistant DA, Mr. Breedlove, and told him of our intentions we were introduced to the concept of Restorative Justice for adults and found out our alternatives to the normal legal channels for these offenses had a name. My inclination is not to press charges. But we cannot condone what they had done. We believed that whoever had done this was more than likely an uneducated racist, under the influence, drunk, or on drugs."

The Waswagoning Village is a recreated traditional Ojibwe village that is visited by hundreds of school children and tourists each year. It has received numerous awards, and is utilized as a location site for the filming of documentaries, catalogs, and educational movies. The damage done by the vandals destroyed years of work done by Hockings, his wife Charlotte, their family, friends, and volunteers.

Hockings plans to have the business fully operational in time for the Summer season.

According to Charlotte, the five young men have agreed to accept the alternatives offered by the Hockings.

"We hope that these five young men will fully appreciate what they are receiving and will fulfill these alternatives in good faith. It is our assumption that if they are NOT met, then the legal system will be enforced. If they are fulfilled in good faith, all charges will be exonerated. Further, we would like to say the philosophy of Waswagoning, since we were involved in the Spring Spearing/Treaty Rights Movement in the 1980's, has been trying to bridge an educational gap between reality and fantasy in regards to the Ojibwe; and in a broader context the relationship between Indians and non-Indians in general."

Two tribal icons proposed for ESA delisting

Migizi and ma'iingan populations on the rebound

By Peter David, GLIFWC Wildlife Biologist

Odanah, Wis.—Two wildlife species with tremendous tribal significance, but troubled histories, have been proposed for delisting under the Endangered Species Act (ESA). Federal biologists feel that populations of migizi (bald eagle) and ma'iingan (wolf) have recovered to the point where protection under the Act is no longer necessary.

If both of these proposals sound vaguely familiar, its likely because the migizi delisting was first proposed in 1999, but the action was never completed. A national ma'iingan reclassification/delisting proposal actually was completed in 2003, only to be overturned in federal courts in 2005. That ruling found the federal action to be overly broad, while noting that recovery likely had been achieved in the Western Great Lakes region.

The bald eagle proposal applies to the contiguous U.S., as migizi was never listed in Alaska and was never found in Hawaii. The migizi population was decimated in the lower 48, largely as a result of habitat destruction and reproduction failure in the form of eggshell thinning induced by the now banned pesticide, DDT.

In this area, the population barely exceeded 400 pairs in 1963, but the birds have responded steadily since protections were put in place. Today, more than 7,000 nesting pairs exist, and the population continues grow, with the ceded territories containing one of the highest concentrations in the contiguous U.S. Wisconsin alone now supports about a thousand pairs.

And delisting will not leave the bald eagle unprotected. At least three federal laws (the Migratory Bird Treaty, the Bald and Golden Eagle Protection Act, and the Lacey Act) will continue to provide significant levels of protection to migizi should delisting occur.

Ma'iingan's story is perhaps more complicated, since the decline in wolf populations was largely the result of intentional persecution, and the remnants of the mind-set that led to that decline still lingers in places. As with migizi, the original listing for ma'iingan applied only to the contiguous US, but unlike migizi, the delisting proposal applies only to the population of wolves found in the Western Great Lakes region.

Ma'iingan's recovery in this area has hinged on significant growth in the remnant Minnesota population, and the natural expansion of that population (possibly with help from Canadian wolves) into Wisconsin and Michigan where wolves had been extirpated.

The Minnesota population, once thought to number well below 1,000 wolves, is currently thought to be near 3,000, while the combined Wisconsin/Michigan population now accounts for about 900 more animals. (Wolf populations are tallied in the late winter/early spring when they are at their lowest; spring pup production will temporarily inflate these numbers significantly.) Growth of the ma'iingan population in the Western Great Lakes appears to be slowing—possibly indicating that much of the most suitable habitat is now occupied.

If this wolf population were to be delisted, the tribes and states would become the primary managers of ma'iingan in the region. The US Fish and Wildlife Service believes that management plans developed by the three states, and management intentions expressed by area tribes, provide adequate protections to keep wolves from needing to be re-listed in the future.

Ma'iingan.

It is not surprising that many tribal members are concerned with the proposed delistings, desiring a high level of protection for two species so central to Anishinaabe culture. At the same time, the recoveries reflect significant success in a long desired goal, and those opposed to the protections of the ESA argue that the Act should be abolished if species which have recovered—the purpose of the Act—are not delisted.

The ESA requires that any delisted species be monitored for five years following delisting, but listed or not, there is little doubt that the tribes will continue to promote careful protection of migizi and ma'iingan. Additional information can be found on the web at: *www.fws.gov/midwest/wolf* and *www.fws.gov/migratorybirds/BaldEagle.htm*.

Wisconsin manoomin harvest data indicates: It WAS a lousy year

By Peter David
GLIFWC Wildlife Biologist

Odanah, Wis.—Biologists tend to be a persnickety bunch. Its not enough for us to know that Wisconsin's manoomin harvest was lousy last fall, we want to document just how lousy it was.

Well, the harvest data is in, and now we can conclusively state, it was very lousy. How lousy is very lousy? Well, let's look at some of the numbers that biologists tend to love.

Lets go right to the top: the total estimated off-reservation wild rice harvest, state and tribal ricers combined, was about 39,450 pounds of "green" (freshly harvested, unfinished) rice. Although that may sound like a decent pile of seed, it is only half the size of the estimated 2004 harvest—and is also the lowest estimated harvest in over a decade.

This decline hit both state and tribal ricers about equally. For state ricers, part of the decline was due to a decline in the number of active ricers themselves, dropping by over 100 to about 472. This was in part due to a decline in license sales, and in part to a decline in the percentage of license buyers who actually attempted to harvest. (The number of tribal pickers held nearly steady.) These declines seem to occur when word gets out that the crop doesn't look too good, and that certainly was the case last fall.

Across Wisconsin the vast majority of beds were only poor to average, with the condition generally declining as one moved eastward. And this was the good news.

Remember how hot it was last July? You might think this anomaly would be a good thing, spurring growth, but hot, calm weather tends to cause problems for this wind-pollinated plant. The reasons for this are not well understood—it may be that the pollen quickly dries out, becoming unviable—but the results are understood: "ghost rice," those empty hulls that form, but never fill with seed.

Ricers found plenty of ghost rice this year, especially in the Hayward and Minoqua, Wisconsin areas. This led to an unusually high number of complaints about the opening dates for those lakes whose season is date-regulated. Many pickers thought the harvest had been missed, when actually, there never was appreciable seed to pick—despite the presence of healthy looking plants.

Perhaps the only bright spot in the fall harvest was the performance of sites that have been seeded in restoration efforts, with four of the top five most heavily harvested sites fitting this description.

Overall, seeded sites provided slightly more of the total harvest (38%) than did the list of "traditional" rice lakes with date-regulated harvest (37%). So far, tribal pickers have not taken to the relatively new, seeded sites as much as state harvesters. This may be because tribal harvest is buffered to some degree by on-reservation harvest, and because tribal ricers may be more traditional in their harvesting patterns.

However, tribal harvesters likely are benefitting indirectly from seeded sites in that they are reducing the harvest pressure by state ricers on traditional rice beds.

Despite the poor crop in 2005, old-time ricers will not fear. As an annual plant, rice has always varied in abundance from year to year, and production busts are not an infrequent part of the plant's history.

Well-established manoomin beds have deep seed banks that help them bounce back from the occasional crop failure.

Hopefully, the submerged plants already reaching for the water surface will bring about a better year for this wonderfully generous plant.

Birch bark harvest

The Chequamegon-Nicolet National Forest has prepared maps identifying proposed timber harvest locations. These maps may be of use to tribal members interested in gathering birch bark prior to the birch being cut. Please be aware that GLIFWC has prepared other maps of areas not planned for timber harvest, but likely contain significant numbers of birch trees for tribal bark gathering. These maps were published in the Fall 2002 ***Mazina'igan*** supplement. Contact Karen Danielsen at GLIFWC offices (715) 682-6619 ext. 125 or email *kdaniels@glifwc.org* if you would like copies of the proposed timber harvest maps or the ***Mazina'igan*** supplement.

The sugar bush:
It's more than making syrup

By Sue Erickson, Staff Writer

Red Cliff, Wis.—En route to George Newago's sugar bush on Red Clliff's Point DeTour, you also pass by Marvin Defoe's home with his boiling vat of maple sap issuing clouds of steam into the morning sky. George and Marvin are among several Red Cliffers who keep the traditional Ojibwe harvest of maple sap alive. They also keep the competitive spirit alive, checking daily as to the amounts they have each processed. If you want to know how much syrup Marvin has processed, ask George, because Marvin makes a ½ pint more, or so says Marvin.

Years ago, entire Ojibwe families headed to their sugar camps a month before the sap was ready to flow just to prepare for this important harvest. They returned to familiar sites where storage caches held many of the necessities for the season. Preparation entailed setting up camp, cleaning the various containers, taps and utensils and in particular getting stacks of wood ready for the continuous boiling of the collected sap—that means hauling, cutting, splitting and stacking—no easy chore. Families would tap hundreds and hundreds of trees each season. Today only a few families make maple syrup and sugar and tap many fewer trees.

George and his brothers grew up spending many springs with their father Sam, and his brother, Mike, at the sugar camp, which is a mile trek into the woods from the roadside. They would tap three to four hundred trees and stay at the camp in a small bunkhouse until the work was complete—all the season's maple syrup done. Occasionally, someone would walk into town, a good five mile trek, to barter maple syrup or sugar for goods, or maybe a few beers and cigarettes, then walk back to camp. That was quite different from today when only the last muddy mile through the woods to the family sugar camp entails a jostling, bumpy, sometimes sloppy, ride on a four-wheeler.

Joined by family and friends who come out to the camp to help with the process—tapping, emptying buckets, the continuous boiling and stoking the wood fire—George has a commitment to keeping the tradition alive.

That commitment came one spring when he as a young man was stopping by the sugar bush to check on his dad, then in his sixties. As George was walking in, he met his dad walking out, looking tired and sad. "'Nobody, nobody wants to be here anymore!'—that's all he would say to me as he continued to walk out of the bush," George relates. When George reached the camp, he found all the precious sap had been dumped out on the ground; the milk can containers cleaned and stored. His dad had given up. With everybody else's lives busy and taking on new interests, few could or would help with the camp, and it was way more than his father could handle alone. That's when George made a commitment to keep the tradition and the camp alive.

Today, a newer, larger "sugar shack" gives residents a protected, birds' eye view of the boiling pots outside. The sweet smell of the maple sap fills the campsite and wafts into the shack as well. A little wood stove, table and chairs, counters, shelves, and beds—make for a cozy environment while tending the sap. George wonders how everyone fit in the tiny, old shack that he and his family slept in so many seasons, but somehow it had worked.

Helped regularly by Lester LaPointe and Faron Beaulieu, he tapped about 96 trees this year—a far cry from the hundreds his father and uncle had always done. But George produces for family need and ceremonies, and he found that tapping several hundred trees produced more syrup than they needed—so he cut back the effort. He had a March 7 start up date this year. That's when he came out to the campsite and shoveled snow for three days. On March 17th he came back to actually set taps.

Marvin Defoe, center, shows students from Ashland's Our Lady of the Lake School, Jake Berlin and Kristen Thannum, how to slow the boil in a vat of maple sap with a balsam branch. (Photo by Sue Erickson)

George Newago, Red Cliff, carries on the tradition of making maple syrup—a skill learned from his father, Sam and uncle, Mike. (Photo by Sue Erickson)

By early April the sap was almost done running this year. You have to watch the weather for warm days and freezing nights to catch the flow of sap. Once it starts running yellow, it's about done, George says.

He has only made sugar for the last several years. Gaiashkibos (Gosh), Lac Courte Oreilles, came out to the camp and showed him how to turn the syrup into sugar several years ago. Gosh, along with many other friends and family—grandkids, nieces, nephews—also stopped out this season just to participate in the camaraderie of sugar time and help with the continuous round of labor. "They come out to help and to eat," George says.

George has learned many things about the art of sugaring over the years and keeps on learning. George boils his sap in large, black kettles over an open fire, keeping a close watch as the sap boils down. Each pot holds about 35 gallons of sap. If it boils up too high, he uses a balsam bough to keep the boil down. "You can also hang a piece of salt pork over the kettle if you have to leave for a while. If the sap boils up too much, drippings from the salt pork will knock the boil back down," George relates.

At a certain point, he transfers the sap to smaller finishing kettles and boils it over a hemlock fire, which produces a low-intensity fire and keeps the syrup at a slow boil. He also learned you can't use aluminum kettles for this, because they seem to be treated with some type of oil which inhibits the boiling process. That one was recently learned the hard way.

This season he did four boils and produced about nine gallons of sap and 18 pounds of maple sugar.

That, of course, would mean that Marvin Defoe produced nine gallons plus a ½ pint of syrup and probably 18 pounds and two ounces of maple sugar.

Marvin taps a stand of maple not far from his home on Blueberry Road. Helped by Crystal Hurley, the couple put in 150 taps this season and were busy collecting sap and boiling from mid-March through early April. They even tapped as early as January 11, but the sap only ran for one day, Marvin says.

This was only Marvin's second season. However, as a young boy he remembers helping his grandfather, Lawrence Butterfield from the Settlement, during sugar time, so was familiar with the process as a young boy. He may also have picked up a few pointers from George along the way—but probably not anything he didn't already know.

Marvin and Crystal's place have been busy with helpers, mostly of the small variety. Thirty-five Red Cliff Headstarters came out to help several times during the season so they could be familiar with all steps of the process—tapping, collecting sap, boiling, eating and enjoying. A fourth grade class from Our Lady of the Lake School, Ashland, also spent a day in the field at Marvin's sugar bush and at the house, where they were treated to ice cream cones with maple syrup drizzled deliciously over the ice cream—messy, but yummy.

"I want the kid's to know that this is an inherent right, and to be practicing an inherent right at an early age. We're not just concerned with a treaty right, it's inherent—a process applied to everyday life that they do. It's living it and doing the process, start to finish," Marvin says, explaining his eagerness and willingness to engage the young in this activity.

Like George, Marvin and Crystal use their product at home throughout the year, for community ceremonies and for people who have helped. It's non-commercial use. He also hopes to give each Headstart helper a small jar of syrup to bring home at the end of the season.

Marvin points out that three other families tap maple in the spring at Red Cliff including Don and Bev Benton, Damian Panek and Melonee Montano, and Charlie and Shelly Gordon. "We all do this on our own," he remarks while drizzling syrup onto a waiting ice cream cone. "And we don't need a grant to do it, either. It's inherent and a tradition that our children should be able to carry on."

Wild turkeys introduced to Big Snow Country

By Charlie Otto Rasmussen
Staff Writer

Saxon, Wis.—Encouraged by the recent success of wild turkey translocation programs in portions of far northern Wisconsin, Department of Natural Resources (DNR) staff and local volunteers turned 53 birds loose last March in the state's final environmental frontier: Big Snow Country. The northern Iron County region collects more than 200 inches of snow annually and was considered by many biologists an outlandish destination for wild turkeys only a few years ago.

"The thinking was that it was too cold and the snow depth too deep for turkeys to survive. There was certainly some resistance to bringing wild turkeys this far north early on," said Larry Wawronowicz, Lac du Flambeau wildlife biologist, who coordinated the release of 31 birds on the reservation in 2000. The Flambeau flock has grown larger each year and helped demonstrate that wild turkeys are hardy and highly adaptable to new environments.

This past winter through a cooperative project between the DNR and members of the National Wild Turkey Federation chapter, Snowbelt Longbeards, wildlife technicians trapped wild turkeys in the Wausau area and placed them in individual boxes for the trip to a 240-acre dairy farm north of Saxon.

Local kids and volunteers released a total of 53 birds into the snow-covered landscape of field and wood including 33 hens and 20 jakes, or young males. Each turkey was marked with a colored, numbered tag to help observers monitor their movements throughout the area. At least four jakes were reported dead in the weeks following the release, said the DNR's Bruce Bacon.

"There may be other turkeys we have not heard about yet. The known mortality is about normal for a release of this size," said Bacon, a Mercer-based wildlife biologist who helped coordinate the Iron County project.

Last February DNR turkey trappers had originally attempted to capture wild turkeys plaguing a Wausau-area ginseng farm for release in Saxon. The birds evaded capture, however, perhaps made too clever by eating a reported $200,000-plus in ginseng plants over the past few years.

While treaty hunters gradually kill more wild turkeys each year, annual totals remain very small. Including both the spring and fall 2005 seasons, tribal members bagged 37 wild turkeys in Wisconsin and no birds were taken in the 1837 Minnesota ceded territory. Most of the harvest occurs along the western edge of Wisconsin in Polk, Burnett and Douglas Counties.

Under tribal codes, the harvest of wild turkeys without a beard is prohibited during the spring hunt to protect nesting hens. An off-reservation small game hunting permit and wild turkey carcass tag are required prior to going hunting. Permits and tags are available from Great Lakes Indian Fish & Wildlife Commission wardens or tribal conservation offices.

Wild turkeys along Wisconsin Highway 122 near Saxon burst from boxes used to transport the flock from the Wausau area. A total of 53 birds were released in the Big Snow Country of northern Iron County in early March through a project sponsored by a local conservation club and the Wisconsin Department of Natural Resources. (Photo by Charlie Otto Rasmussen)

After being wiped out by habitat loss and hunting in the late 1800s, turkey restoration in southern portions of Wisconsin and Minnesota took hold 30 years ago following the release of wild birds from Missouri. Over the last decade, turkey country has dramatically ranged northward through expanding populations and trap-and-transfer projects.

"They use a lot different habitats," Wawronowicz said. "We get quite a few reports from people around area that have spotted turkeys in virtually every habitat type."

GLIFWC calling:

Quick phone surveys aid in resource management

By Sue Erickson, Staff Writer

Odanah, Wis.—The phone rings. A strange voice asks for your husband or wife. Disgusted with calls from telemarketers and the like, you just hang up. . .or if you don't hang up, you wonder, "Now, who is this?" So you ask and find out it's staff from the Great Lakes Indian Fish & Wildlife Commission (GLIFWC) doing a phone survey on off-reservation gathering, and you probably think this is pretty annoying and wonder why GLIFWC is bothering you.

Actually, according to Tony Gilane and Dan North, both who have done phone surveys for GLIFWC, the cooperation level is surprisingly high. "You have to be fast about letting them know who you are and why you are calling," says North. "Otherwise, they may think you are a telemarketer and hang up. But if you can establish you're from GLIFWC and need information on the wild rice harvest, most people are pretty cooperative. They may not be happy about the call, but they are willing to be helpful."

Information obtained from telephone surveys is very important for GLIFWC's management of a number of off-reservation resources, such as waterfowl, wild rice, and various forest products, like birch bark and firewood. It provides data on quantity of resources harvested, the types of resources tribal members use, and preferred places of harvest.

According to GLIFWC Wildlife Biologist Peter David the value of recording harvest quantities is threefold. For one, it demonstrates that people are using the treaty right. Secondly, it provides a data base that resource managers can use to estimate pressure on particular resources, and finally, the information is useful in evaluating the effectiveness of management and restoration efforts. Thus, the information is available to protect both the resources and the treaty rights.

David stresses that the surveys are designed to be short and to the point in order to get the information needed without being unnecessarily intrusive. "Few people like being bothered at home with phone surveys," he says, "but phone surveys have some advantages data-wise over mail surveys, so we use them, but try to make them as painless as possible. Phone surveys can also give harvesters a chance to interact directly with staff, so they can help us learn the harvesters' concerns."

Who gets surveyed?

Surveys regarding off-reservation harvests are based on permits. If tribal members have checked off wild rice, migratory birds, or forest products on their off-reservation harvesting permit, they are likely to be contacted for information on their harvest of these resources. Thus, if you don't plan on picking rice off-reservation, you can avoid getting a call by not checking that category on your permit. (If you later change your mind and decide to harvest—just be sure to go back for a new permit that is valid for that activity.)

What happens to the information?

First of all the information an individual provides is confidential. The data collected is written up as a report on the specific harvest seasons. But since the data is pooled, there is no evidence of individual information. For instance, if Tom Smith indicates he took 100 pounds of rice from Totagatic Lake in 2006, the harvest data will be included in the report, but the harvester's name is not.

GLIFWC has surveyed off-reservation waterfowl and wild rice harvest for years. Periodic waterfowl harvest surveys are required by the US Fish and Wildlife Service in order to evaluate the level of tribal harvest, and the effect of changes in tribal regulations. Wild rice harvest data, which GLIFWC gathers from both state and tribal ricers, is shared and reviewed with the Wisconsin Department of Natural Resources at technical working group meetings.

More recently, gathering of other forest products has also been the subject of phone surveys especially since the Memorandum of Understanding (MOU) between GLIFWC member tribes and the US Forest Service was completed. The MOU provides for harvesting opportunities in the national forests and also requires a permit. Phone surveys help GLIFWC determine which species of forest products have been harvested on national forest lands and how much. "This helps us know what species are of most interest to tribal members," says Karen Danielsen, GLIFWC botanist. "And then we can work with the Forest Service to make those products more accessible to the gatherers."

Popular forest products to date have included conifer boughs, princess pine, ginseng, firewood, and birch bark. Both general and commercial permits are available for forests products. Information from the surveys includes which national forests

(See Phone surveys, page 11)

Art meets functionality: Making baskets with aagimaak (black ash)

By Karen Danielsen
GLIFWC Forest Ecologist

Odanah, Wis.—The black ash baskets that hang from the ceiling rafters in the home of April Stone-Dahl, a Bad River tribal member, store all sorts of supplies and everyday items. Living in a snug, yet comfortable, house with her husband and four young children, April has been forced to become creatively organized. So, her baskets, which for most people would be considered works of art, have transformed into functioning tools of necessity.

For over eight years, she has been making these serviceable baskets. She first learned the fundamentals of weaving from her husband, Jarrod, who himself learned while attending a workshop in Minnesota. Knowing no other basket weavers, her skills evolved simply through trial and error and by reading books.

She professes that the patience and discipline required to learn this craft has increased her confidence and raised her self-awareness. Indeed, she has a serenity that pervades her home, quietly influences her children, and altogether welcomes visitors.

The process for making these baskets begins with a prayer and an offering of asema (tobacco) to aagimaak (black ash) as a gesture of respect for its gift of wood. Then, Jarrod harvests aagimaak, leaving the tree top in the woods and returning home with a long, straight log.

At home, he de-barks the log and begins pounding it with the blunt end of an ax until, eventually, layers of wood separate like an onion. These thin and pliable wood layers, referred to as splints, provide the material for basket weaving. They may be coiled and stored for later use in a location dry enough to prevent mold.

April Stone-Dahl and her youngest child Rena are shown with a collection of aagimaak baskets made by April and her husband Jarrod. (Photo by Karen Danielsen)

Before April begins weaving a basket, she spends a day preparing her materials. She first selects the specific splints she wants to use. Splints derived from the inner heartwood of aagimaak tend to be thicker, darker, and less flexible than splints derived from the outer, younger sapwood. She prefers using sapwood splints, but will often use heartwood splints to make larger, sturdier baskets.

Once the splints have been selected, she soaks them in water for several hours to increase their flexibility. They also soften, allowing her to cut them lengthwise to a desired width, a measurement dependent upon the intended basket style and size.

The following day she soaks the splints for another hour until they bend without breaking. To begin the actual weaving, she lays out a framework of splints, called the uprights, in a crisscross pattern. Then, she weaves other splints (weavers) in and out of the uprights.

She has found that baskets develop a better shape and overall appearance if the upright splints measure twice as wide as the weavers. She has also learned that she needs to maintain a constant tension on the weavers in order to keep the shape of the basket uniform. Most importantly, she knows she must feel relaxed and have good intentions while weaving.

When finished weaving, she allows the basket to dry for one week. During this time, the weaver splints shrink and later must be pushed down, closer together on the upright splints. At week's end, she finishes the basket by lashing a rim on its top edge, using more splints for both the lashing and rim.

She makes baskets of all sizes and styles. Her family uses them as fishing creels and pack baskets, to store food and fabric, to carry lunches and water bottles, to hold the children's toys, and to dry herbs. For some of these baskets, depending on their purpose, Jarrod attaches handles, covers and/or skids (bottom supports) made from baapaagimaak (white ash) or giizhik (northern white cedar).

April enjoys observing the baskets as they age. Hand oils, dirt and extended light exposure tint the baskets a rich honey color. As they become damaged with frequent use, she repairs them. When they become damaged beyond repair, she burns them or lays them down in the woods—a return to nature.

She occasionally sells her baskets, preferring custom orders. She usually charges from $40 for a small basket up to $300 for a large pack basket. A friend of hers once calculated that, at these prices and for all the time and labor expended, April and Jarrod make about $0.50 an hour.

Yet for both, making baskets is a labor of love. They also relish sharing their knowledge of the craft and often lead workshops to teach others—young and old, native and non-native. They believe that, given the fulfillment they receive from making baskets, it would be selfish not to teach others.

For those interested in learning the craft or wishing to purchase a basket, April and Jarrod may be contacted at their business, Woodspirit: (715) 292-2760; P.O. Box 218, Odanah, WI 54861.

Emerald ash borer remains a threat

By Karen Danielsen
GLIFWC Forest Ecologist

The emerald ash borer *(Agrilus planipennis)*, an insect native to Asia, has recently been introduced to North America, probably through wooden shipping crates or pallets.

First detected in May 2002 in southeastern Michigan, it has since spread throughout Michigan into parts of Indiana, Ohio and Ontario, Canada. This insect apparently infests all North American ash species.

The adult borer measures approximately ½ inch long. Its iridescent, metallic green backside (see photo) compliments its bright, emerald green bottom side. The larva, at maturity, has a wormlike body measuring approximately one inch long and divided into triangular-shaped segments.

Adult emerald ash borers lay eggs on the bark of ash trees during late spring and early summer. Soon thereafter, the eggs hatch, releasing larvae that bore through the outer bark to feed on the inner bark and sapwood. The larvae over-winter one or two seasons in the tree, pupate, and emerge as adult beetles the following spring.

Adult females live for approximately 20 days; adult males live only about 13 days.

A tree's inner bark and sapwood provide the transport system for nutrients and water. As the number of emerald ash borer larvae increase, this transport system becomes seriously debilitated until, after two or three years of continuous infestation, the tree dies.

Adult emerald ash borer. (Photo by David Cappaert)

Trees rarely survive an infestation. It has already killed millions of ash trees and could seriously reduce all ash populations within the ceded territories.

Researchers suspect that adult borers can fly as much as a half mile in distance. However, the spread of this insect has occurred primarily through the transport of infested firewood and logs.

Consequently, quarantines have been established around infestation sites to regulate the export of ash wood products. The Wisconsin Natural Resources Board recently passed an emergency rule prohibiting the importation of out-of-state firewood onto Wisconsin state-owned properties.

Within unregulated areas, authorities strongly recommend limiting the movement of firewood and ash wood. Campers choosing to bring their own firewood to campsites should take home any unburned firewood.

To report a potential infestation, please contact the USDA Animal and Plant Health Inspection Service (APHIS) at 1-866-322-4512. For more information, please visit the following websites: *www.emeraldashborer.info* or *www.ncrs.fs.fed.us/4501/eab.*

Contaminants in Lake Superior fish: What have we learned?

By Matt Hudson
GLIFWC Environmental Biologist

Odanah, Wis.—GLIFWC biologists, with the help of tribal commercial fishermen, the Lake Superior Research Institute (LSRI), and Pace Analytical, Inc. have now completed three studies on chemical contaminants in Lake Superior fish. The data gathered provides valuable information to tribal fishermen needing to meet federal regulations to sell their fish commercially and to consumers of Lake Superior fish concerned about contaminant levels in these fish.

The following article summarizes results of testing and provides information about contaminant levels in different species of Lake Superior fish and how they compare to contaminant levels in these same species in other Great Lakes and in other commercially available fish.

GLIFWC's Lake Superior contaminant testing program

GLIFWC's testing is in part as a response to federal HACCP (Hazard Analysis Critical Control Point) regulations requiring commercial food producers (including commercial fishermen) to develop a program to ensure the safety of the food they are producing.

Part of the seafood HACCP process involves ensuring that chemicals in fish tissue being sold at market are below levels regulated by the United States Food and Drug Administration (FDA). The testing also provides valuable data that can be used to evaluate which species and sizes of Lake Superior fish contain the lowest levels of chemical contaminants and therefore are the safest to consume.

In 1998-99, GLIFWC measured 38 different chemical contaminants and contaminant groups in the largest sizes of Lake Superior lake trout, whitefish, and herring that are commonly harvested by tribal commercial fishermen. GLIFWC also measured these same contaminants across the commonly harvested size range of siscowet trout (range: 17-25.5 inches).

In 2003-04, GLIFWC measured the same contaminants (with the exception of selenium) across the commonly harvested size ranges of lake trout (range: 17-28.5 inches) and in 2004-05 on whitefish (range: 17-24 inches). GLIFWC hopes to conduct a similar study on herring in the near future.

How do contaminants get into fish?

Chemicals produced by humans get released to the environment through combustion, from the end of a pipe, by land application, and from many of the products we use. Once in the environment, each chemical behaves in a different manner that depends on things like its chemical structure and on environmental conditions like temperature and wind speeds.

Some chemicals break down quickly in the environment and don't pose a significant health risk to humans or wildlife. Other chemicals are more persistent and resist being broken down. Those that persist are often able to travel long distances through the atmosphere before they are deposited on the land and in water through rain or on dust particles. Many of these have the ability to cause toxic responses in humans and wildlife if they reach high enough concentrations. Luckily, these chemicals are normally at low enough concentrations in water and air to not pose a health risk to humans. However, through a process called bioaccumulation, certain persistent chemicals are concentrated many times in the tissues of organisms, usually fish, to the point where they may become a health risk.

Potential health risks from contaminants in fish

Contaminants in fish pose different risks to different groups of people. The developing fetus and children under the age of 15 are most sensitive to contaminants. Mercury, PCBs, dioxins/furans, and other contaminants may impair human growth and development if present in significant enough concentrations.

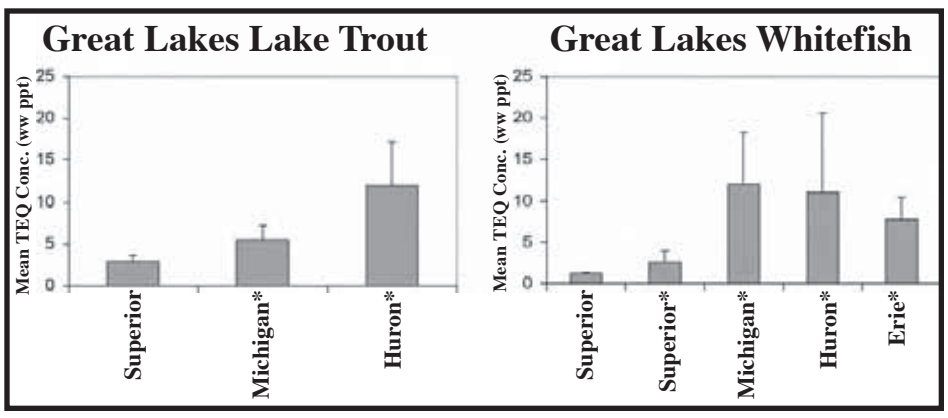
The real effect of long-term exposure to contaminants in fish and the exact concentration of any given contaminant that could cause an adverse health effect are not known and likely vary from person to person. Luckily our bodies are able to get rid of these contaminants over time, but if they are continually consumed in greater quantities than they are removed, they can build up in our tissues.

Fish consumption advice, such as that offered through GLIFWC's mercury advisory maps or by most states, is based on the most current and accepted toxicology science. The advice is meant to limit our exposure to contaminants in fish by informing people of species and sizes of fish that are lower in contaminants and offering advice on how many fish meals can be consumed to maintain contaminant levels in our bodies that are not a concern to our health.

Additional safety factors are applied depending on whether the advice is for the most sensitive population (children, women of childbearing age, pregnant women) or for the less sensitive general population (men over age 15 and women beyond childbearing age). Women of childbearing age are considered part of the sensitive population not because of additional risks to the woman's health, but because of concerns about exposure of unborn children to contaminants during pregnancy and afterwards in breast milk. Often advice will vary slightly between jurisdictions based on the assumptions and safety factors that are used. Despite small differences that may exist between jurisdictions, a few general rules of thumb apply when making choices about which fish to eat.

Lake Superior fish species and fish consumption rules of thumb

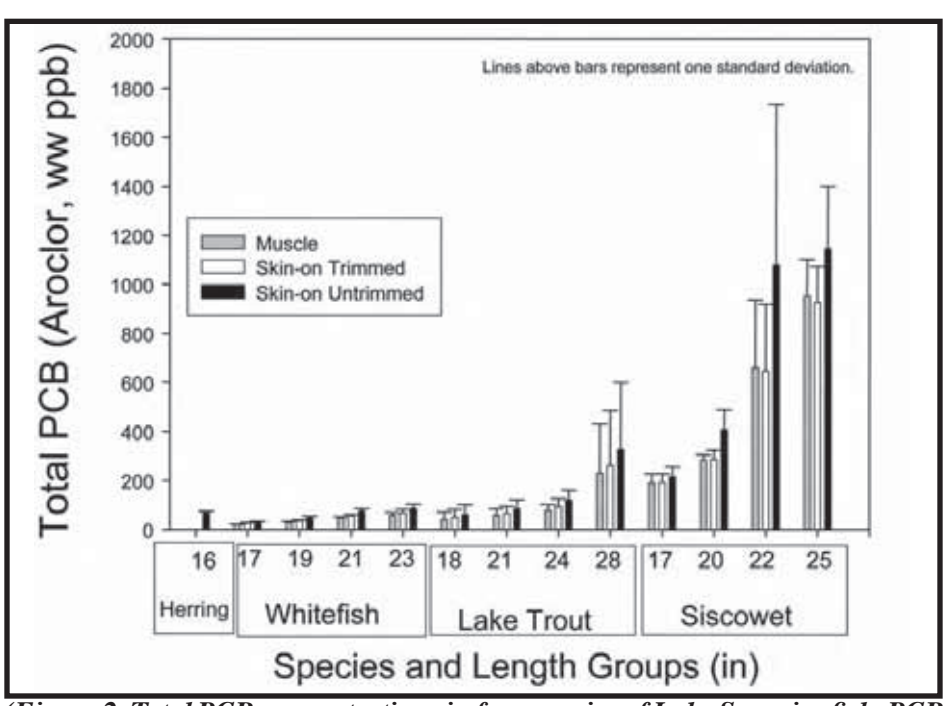
1. Know where your fish comes from: With few exceptions, Lake Superior fish have lower contaminant concentrations than the same species of fish from other Great Lakes (Figure 1).



(Figure 1. Dioxin/Furan concentrations in some Great Lakes lake trout and whitefish.)

* Data collected by Michigan Department of Environmental Quality. Lake Superior data collected by GLIFWC. Lines above the bars represent one standard deviation.

2. Choose species of fish known to be low in contaminants: **In general, species of fish at the top of the food chain, such as siscowet and lake trout, tend to have higher concentrations of contaminants than fish lower in the food chain such as whitefish and herring** (Figure 2). When compared to other commercially available fish, concentrations of mercury in Lake Superior whitefish and herring are similar to those that have been reported for species such as cod and canned light tuna, which are classified as low mercury species by the FDA (Figure 3). Whitefish and herring contain less mercury than other common commercial species such as Canadian walleye, albacore tuna, and orange roughy (Figure 3).



(Figure 2. Total PCB concentrations in four species of Lake Superior fish. PCB concentration differs between species and by size of fish within a species. The same general pattern holds true for other contaminants in Lake Superior fish. Also note how trimming skin and fat tissues can reduce the PCB concentration in each fillet.)

3. Choose smaller sizes of fish: As fish grow longer and older, they accumulate more contaminants in their tissues (Figure 2). **Within any species of fish, smaller fish are a better choice to reduce contaminant exposure. Smaller fish tend to taste better too!**

(See Health benefits of consuming Lake Superior fish, page 23)

Mille Lacs northern pike population study

By Nick Milroy, GLIFWC Inland Fisheries Biologist

Odanah, Wis.—Early in the spring, as the hours of daylight increase and water from melting snow and rain runs off the land into nearby streams and lakes, many fish instinctively know the spawning season is upon them. One of the first species to spawn during spring in many ceded territory waters is the northern pike.

On Mille Lacs Lake northern pike begin their spawning journey even while a thick sheet of ice is still covering the lake. They seek out shallow weedy areas where the ice first begins to retreat from the shoreline. Many find their way into the mouths of streams to spawn amongst the flooded vegetation of marshy estuaries.

For the past two spring seasons, fishery assessment crews from the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) have plied the cold waters of Mille Lacs Lake in an effort to trap northern pike en route to their spawning grounds.

Once captured, data are collected from each fish and they are fitted with one or two uniquely numbered tags. These tags are inserted on the right hand side of each fish just below the dorsal fin. The tagged northern pike are then set free to finish their spawning journey.

Later in the season northern pike return to their feeding grounds to recuperate from the spawning season. Here there is a mixture of northern pike that have tags and many that do not. Assessment crews return at this time to capture northern pike in survey gill nets.

These nets are set for about an hour at a time and captured northern pike are observed to document the number of tagged and untagged fish. From the proportion of tagged to untagged fish, biologists are able to estimate the size of the overall population of northern pike. Very few fish are sacrificed during this survey as all fish that appear capable of surviving are released back into the lake after data are collected.

Other important information obtained as part of this study includes the size, age, and sex structure of the population. State and tribal fishermen can provide valuable information to this study by obtaining tag numbers, fish length, and location caught from tagged fish caught throughout the season.

This important information allows biologists to determine growth rates, harvest characteristics, seasonal movement, and spatial distribution of the Mille Lacs Lake northern pike population.

Northern pike are not the only tagged fish species in Mille Lacs Lake. Keep your eyes open for tags on walleye and muskie too. If you capture a tagged fish, please record the length, location caught, tag number(s), and if the fish was released or harvested.

Tribal members should send this information to GLIFWC Inland Fisheries at the address below or via email to *nmilroy@glifwc.org*. Information from state-licensed anglers can be sent to Minnesota DNR Fisheries at the address below or emailed to *fishtags@dnr.state.mn.us*. In return a history of the fish will be sent to you.

Cooperators in this interagency effort to study the Mille Lacs Lake northern pike population are fishery assessment crews from GLIFWC, Minnesota Department of Natural Resources, and the Fond du Lac Band.

The last northern pike tagging effort on Mille Lacs Lake ran from 1992 through 1998 and was conducted solely by the Minnesota DNR. The current study was funded for two years and will be wrapping up this season.

GLIFWC Inland Fisheries at P.O. Box 9, Odanah, WI 54861 or Minnesota DNR Fisheries 1200 Minnesota Avenue So., Aitkin, MN 56431

2006 assessment crews cover 16 lakes

This spring, adult walleye population estimates were conducted on 16 Wisconsin lakes (see table below). The surveys were conducted from April 11 to April 22, 2006 by one Mole Lake, one St. Croix, one U.S. Fish & Wildlife Service and four GLIFWC crews.

In addition, survey crews collected mercury samples from nine lakes in Wisconsin. Survey data will be entered and summarized this summer in preparation for the August Technical Working Group meeting.

Miigwech to the survey crews who helped out this year!

County	Lake	Acres	Shore Miles	Mercury
Bayfield	Siskiwit	330	4.0	N
Forest	Butternut	1,292	8.0	N
Oneida	Bearskin	400	5.6	Y
Oneida	Crescent	612	7.4	Y
Oneida	Squirrel	1,317	13.2	N
Sawyer	Sissabagama	719	8.2	Y
Sawyer	Windfall	102	1.6	Y
Vilas	Anvil	380	4.8	N
Vilas	Big (Boulder Jct)	835	9.6	Y
Vilas	Big St. Germain	1,617	7.6	Y
Vilas	Boulder	524	7.7	N
Vilas	Harris	507	6.0	Y
Vilas	Kentuck	957	6.0	N
Vilas	Sherman	123	2.2	Y
Vilas	Squaw	785	9.0	Y
Washburn	Bass/Patterson	188	2.9	N

GLIFWC would like to say miigwech to the spring 2006 electrofishing crew members.

Spring survey crew members were: top photo, from the left, Mole Lake crew members were: Mike Preul, Scott Poler and Josh Schloesser. Second photo: GLIFWC crew Caine Heffner, Sam Quagon and Ron Parisien. Third photo: St. Croix crew Tony Havranek, Donnie Taylor, and Tom Frye.

Bottom left photo: GLIFWC crewDavid Moore, Shane Cramb and Duane Soulier. Bottom middle photo: USFWS crew Casey Bigboy, Frank Stone and Mitch Soulier. Bottom right photo: GLIFWC crew Butch Mieloszyk and Billy Jo Nelis (not pictured is Bill Soulier)

GLIFWC crew not pictured: Charles Wiggins, Rick Nelis and Michele Wheeler. (Photos by Michele Wheeler)

Accolades go to Roscoe Churchill, leader in WI resistance to mining

By Sue Erickson, Staff Writer

Lac Courte Oreilles, Wis.—The 2006 Earth Day Community Gathering at the Lac Courted Oreilles Ojibwa Community College (LCOOCC) was all about Roscoe Churchill, the "father of the anti-mining movement in Wisconsin." Churchill, who will celebrate his 90th birthday this summer, gracefully accepted the accolades from many speakers during the Earth Day event.

"We can't quit fighting, and we're not going to!" Roscoe Churchill's words reflect the spirit and determination that kept him going during the losses and victories in a grassroots struggle to protect Wisconsin's resources from degradation as a result of mining practices. Churchill and his wife Evelyn, who has passed on, devoted their time and energies over the years to holding the Wisconsin Department of Natural Resources, the Flambeau Mine near Ladysmith, Wisconsin and the Crandon Mine accountable for protecting the natural resources from potential environmental degradation.

Founder of the Rusk County Citizens Group that worked tirelessly in opposition to the then proposed Flambeau Mine, Roscoe and Evelyn also brought their knowledge and energy into the fight against the proposed copper-sulfide mine near Crandon, Wisconsin and were influential in helping get Representative Spencer Black's moratorium on mining legislation passed.

Al Gedicks, UW-La Crosse professor and author of *The New Resource Wars and Resource Rebels*, noted that Churchill has been an "inspiration in grassroots struggles" and at the "heart of the resistance to preserve sustainable economies in Wisconsin." Gedicks said that the grassroots movement succeeded in sending a strong message to the international mining industry to the extent that Wisconsin is now at the bottom of the list of places preferred for future mine sites.

Many of Churchill's experiences and a history of the Wisconsin resistance to mining will be found in a book being co-authored by Churchill and Laura Furtman entitled *The Buzzards Have Landed*. The book should be available this summer.

In addition to the many kind words, gifts and shared memories of the grassroot struggles against corporate giants, gaiashkibos, LCO council member, presented Churchill with a plaque and resolution of appreciation from the LCO Tribal Council.

The event was organized and moderated by Sandy Lyons. It was co-sponsored by Anishinaabe Niijii, the LCOOCC Renewable Energy Program and the LCO Sustainable Living Program. Music provided by artists like Bobby Bullet, Skip Jones and Mike Miles was enjoyed throughout the afternoon.

A letter of appreciation to Churchill from the Great Lakes Indian Fish and Wildlife Commission follows:

Roscoe Churchill receives a blanket in appreciation for his devotion to the grassroots struggle to protect Wisconsin resources from mining practises. Helping with the honor are, from the left, Fran Van Zile, Mole Lake; Sandy Lyons, Anishinaabe Niijii; Laura Furtman, Ladysmith and Al Gedicks, LaCrosse. (Photo by Sue Erickson)

Dear Roscoe,

On behalf of the Great Lakes Indian Fish and Wildlife Commission, thank you for your leadership and dedication in confronting the issues posed by mining projects in Wisconsin. It is only fitting to honor you today for your tireless commitment, great foresight, and enduring wisdom. You have proved to us all that a sound moral compass, a deep compassion for Aki, hard work, and sheer determination can yield change. You have served as an important bridge between disparate communities and peoples to help them unify in support of healthier and more sustainable communities.

For GLIFWC's member tribes and staff, you are an honored and respected brother on the long journey of protecting Aki from irresponsible and harmful practices. We are proud that you have allowed us to walk with you, proud to call you a friend, and proud of your efforts that have made such an important difference for future generations.

As we honor you today, please know that we also remember and honor Evelyn who remains a shining star among us. Your abiding love for one another inspires us and your unselfish work together for the benefit of others is greatly appreciated.

Chi-miigwech!

James E. Zorn
Executive Administrator

Contaminated discharge continues at Kennecott Minerals' Flambeau mine

By GLIFWC Staff

Odanah, Wis.—Four years after Kennecott Minerals Company notified the State of Wisconsin that it had reclaimed the Flambeau mine site, the company's own reports document an ongoing release of contaminants at the site. These unresolved contamination issues are causing unease among officials at Great Lakes Indian Fish & Wildlife Commission (GLIFWC).

"The Flambeau mine site continues to be a source of contaminants to waters of the state, and efforts by Kennecott to fix the problems have been unsuccessful," said Mic Isham, Vice Chairman of GLIFWC's Voigt Intertribal Task Force. "In addition to the negative environmental impacts at the site, this raises questions about the safety of future sulfide mining projects."

Containing copper, silver and gold ore, the mine located on the Flambeau River just south of Ladysmith, Wis. operated from 1991-1997. The orebody is known as a sulfide deposit, meaning that the metals are bonded to sulfur, forming sulfide minerals. When exposed to air and moisture, a chemical reaction generates sulfuric acid that can leach into the surrounding environment and can cause the release of metals such as copper. Previous efforts to control contamination at the site involved removal of the company's rail spur and its gravel base. In spite of these efforts, discharges of contaminated water continue, and copper has been measured in this water at levels several times the state standard for surface waters.

The latest remediation plan involves removal of a gravel parking lot. However, it is unclear whether this will resolve the problem because the extent of the contaminated soil is unknown. GLIFWC has asked the Wisconsin Department of Natural Resources to hold Kennecott accountable for the ongoing problems at the site and to require the company to perform additional investigations into the sources and extent of the contamination.

These problems are fueling additional concerns for GLIFWC's Voigt Intertribal Task Force. Kennecott recently submitted permit applications to Michigan regulators to construct and operate a new sulfide mine on the Yellow Dog Plains, an undeveloped expanse of wild land situated between the Keweenaw Bay Indian Community and the City of Marquette.

Phone surveys aid in resource management

(Continued from page 7)

are being used and an estimated amount of each species being harvested. Again, this also helps determine harvest impact on species and is especially important for some species, like ginseng, Danielsen points out, which are considered sensitive species. This information is shared with the Forest Service.

In addition to off-reservation gathering and waterfowl seasons, information on the off-reservation deer harvest in Michigan is collected through phone surveys. While surveys on the harvests mentioned above are annual surveys, occasionally other, one-time phone surveys are also performed to elicit specific information, such as those done relating to mercury consumption.

Mercury consumption surveys

GLIFWC has used phone surveys in 2005 and 2006 as part of a grant from the Environmental Protection Agency to determine how and if tribal members use GLIFWC's mercury maps. The maps show lakes commonly speared by tribal members and indicate the levels of mercury found in each lake's fish. The phone surveys are used to assess the success of the maps as a tool to curb mercury consumption by tribal members.

Miigwech for your help!

GLIFWC staff want to thank all tribal members who have helped us over the years gather the information needed to more fully understand the off-reservation harvest dynamics and ultimately to better manage the resource.

We realize phone calls at home are an imposition few people welcome, so we fully appreciate the level of cooperation we have been receiving. We will do our best to keep it brief!

Go native! Native plants for gardening & landscaping

By GLIFWC Staff

Odanah, Wis.—The Anishinaabe culture has a rich tradition of using native plants for food, medicine, tools and shelter. From harvesting sugar maple syrup for food to using goldenrod as a hair conditioner, the Anishinaabe people relied on their vast store of knowledge of the habitats, life histories, and potential uses of many native and some introduced plants.

Native plants are an integral part of Anishinaabe daily life, influencing the culture and language. Unfortunately this intimate knowledge is in danger of being lost, even as many native plants have been greatly reduced or eliminated entirely from significant parts of our region.

Today native plants continue to be displaced by a growing number of herbs, shrubs and trees brought over accidentally or intentionally from overseas. A minority of these introduced plants cause serious problems ranging from disruption of natural habitats to significant economic losses. Many of them were (and still are) imported as ornamentals, before their detrimental effects were realized or even considered. At the same time many formerly common native plants are now totally unfamiliar to most northwoods residents.

Many beautiful, unique, and easy-to-grow native plants have unfortunately been virtually ignored by the horticultural industry. But using native plants for gardening and landscaping has a number of advantages, including:

1) Saving time and effort. Get rid of part of your lawn, along with the constant mowing, fertilizing and chemical use! Unless the site is highly degraded you can plant to suit the site, rather than trying to change the site to satisfy the plants. Once plants that are appropriate to a site are established, they will often be self-sustaining. Weed problems become reduced as native plants take over.

2) Experiencing a bit of the sights and smells of natural landscapes in your own backyard. Your yard will have a unique look and flavor, while representing a small piece of our region's natural and human history.

2) Doing something good for the environment. Converting unused parts of the lawn to natural landscapes can save valuable energy in a period of declining resources. And you will provide valuable habitat for wildlife, while avoiding introducing troublesome new weeds to the surrounding landscape.

Native plants can be used to create screens, flowerbeds, and even lawns. Wild bergamot, bluebell and wild columbine are choice wildflowers that are both easy to grow, thriving in full sun or partial shade on average soils.

Native ground cover plants like barren strawberry (in partial shade) and bearberry (on sunny, dry sites) make good substitutes for goutweed (or snow-on-the-mountain), periwinkle, and other weedy, often troublesome introduced ground covers. And beautiful natives like blue flag iris and winterberry thrive in wet areas where many introduced ornamental plants fail.

What's in a name?

As readers may know, plants are often known by a variety of common names, whether in English or Anishinaabe. When buying plants from commercial sources, though, the most reliable names are usually the "scientific" or "Latin" names. Scientific names of plants mentioned in this article are included below.

Native plants that can be used for landscaping include:

English	Anishinaabe	Scientific
Alder-leaved buckthorn	—	*Rhamnus alnifolia*
Balsam fir	zhingob	*Abies balsamea*
Barren strawberry	—	*Waldsteinia fragarioides*
Bearberry	saga'kominagunj or miskwaabiimag	*Arctostaphylos uva-ursi*
Black spruce	zhingob qaawaandad	*Picea mariana*
Bluebell	ziiginish(e), or mekmi swa	*Campanula rotundifolia*
Blue flag iris	zhaabozigan, nabagashk, or wiikenh	*Iris versicolor*
Goldenrod	ajidamoowaanow or giiziso-mashkiki	*Solidago canadensis*
Sugar Maple	ininaatig, aninaatig or adjagobi'min	*Acer saccharum*
Sweetgrass	wiingashk	*Hierochloe odorata*
White birch	wiigwaasi-mitig	*Betula papyrifera*
White cedar	gizhikens	*Thuja occidentalis*
White spruce	gaawaandag	*Picea glauca*
White trillium	ini'niwin'dibige'gun or baushkindjibgwaun	*Trillium grandiflora*
Wild bergamot	sasap-kwanins or moshkos'wa owi s	*Monarda fistulosa*
Wild Columbine	misudidjeebik	*Aquilegia canadensis*
Winterberry	animoshi-min or awenisiibag	*Ilex verticillata*

Introduced plants that should be avoided include:

English	Scientific
Bachelor's buttons	*Centaurea cyanus*
Common buckthorn	*Rhamnus cathartica*
Dame's rocket	*Hesperis matronalis*
Glossy buckthorn	*Rhamus frangula*
Goutweed or snow-on-the-mountain	*Aegopodium podagraria*
Periwinkle	*Vinca minor*

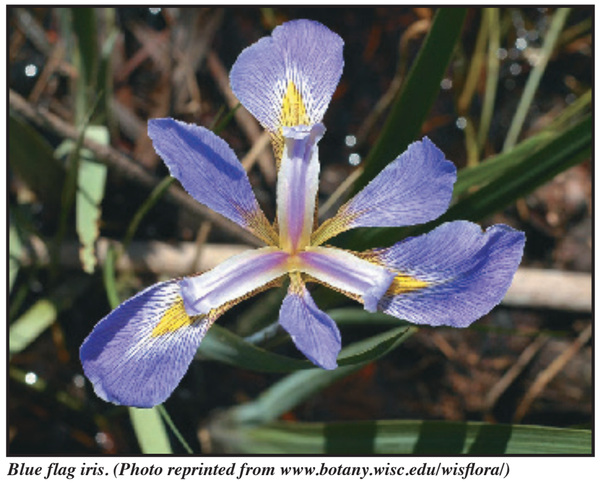
Planning your natural landscape

The first step in planning a natural landscape is to make a drawing of your area. The drawing should include buildings, walkways, existing trees, wet areas, vegetable gardens, areas used by children, and other considerations. Deciduous trees (those that lose their leaves in winter) are best for planting near the south side of a house, for example, while conifers (pines, white and black spruce, balsam fir) can help protect the area north of the house from cold winter winds. (Large trees and shrubs are generally inappropriate next to a house, though. And sites that are still in a natural state should be left that way if at all possible.) Finally, decide which areas you want to convert to natural plantings.

It is important that plants be matched to the site. Is the site wet, dry or moderate? Sunny, partly shaded or shaded? Is the soil texture very fine (clay), average (loam), or coarse (sandy or gravely)? The pH of the soil (whether it is alkaline, neutral, or acid) can also be an important consideration for certain plants. Some native plants are not fussy, though, and will do well in a range of habitats. But in general the better your plants are matched to the habitat, the better they will do.

Learning about plants that grow in your area and the habitats they live in may seem like a lot of work at first, but can be fun and rewarding as well. Readers who spend a significant amount of time in the great outdoors have no doubt noticed how vegetation changes as one crosses wetlands, streams, uplands, sandy barrens, and other natural habitats. By noticing which plants grow in these different habitats, and how these habitats compare to areas in your backyard that you may want to revegetate, you can quickly gain valuable knowledge as to what might be possible with your own native plantings.

Barren strawberry in bloom. (GLIFWC photo)



Blue flag iris. (Photo reprinted from www.botany.wisc.edu/wisflora/)

Obtaining native plants

The best plants to grow are those derived from local populations, as these will be best adapted to local conditions. When purchasing plants from nurseries, always ask from where the plants originated. The Northern Native Plants Project at the Sigurd Olson Institute at Northland College in Ashland holds a native plant sale in spring, and are usually able to answer questions and give advice about native plant gardening year-round. (See accompanying article: *Northern Native Plant Project cultivates new approaches to gardening.*)

With a little patience many native plants such as bee balm, wild columbine and some grasses can be grown from seed you collect yourself from nearby wild populations. Depending on species, plants can be started from cuttings, seeds, tubers, or rhizomes (underground stems). Grasses such as sweetgrass can be grown from pieces of rhizome, if kept well-watered while they are establishing.

Wild plants often have more than one common name, so the scientific name (genus and species) should be relied upon for final identification (see Northern Native Plants Project below). For example, "buckthorn" might be used to refer to the native alder-leaved buckthorn, which is a small shrub of wet areas in our region, or to the introduced common buckthorn and glossy buckthorn, both large, highly invasive shrubs of wetlands and forests.

Seeds of many native plants need what is called "cold stratification" to germinate. This simply means that the seeds need to be stored under cold, moist conditions (usually three months is adequate) before they will sprout. This can be accomplished by simply planting them in an appropriate spot in the fall, or by planting them in small flats and keeping them in the refrigerator (watering occasionally) for the winter. (The refrigerator method has the advantage of preventing seed predation and giving the new seedlings a head start on the competition in the spring.) While the seeds of some wild plants like wild bergamot readily germinate, even without stratification, others, including some woodland plants such as white trillium, may not germinate until the second year after planting.

A note of caution when buying native plants: Plants which have been dug from the wild, potted and sold as "nursery grown" should be avoided. The same goes for most commercial "wildflower mixes" and "native plant mixes," which often contain nonnative plants such as dame's rocket and bachelor's buttons.

Bluebell flowers are a sure sign of summer. (GLIFWC photo)

Like gardening in general, native planting is not an exact science. Some plants will do well while other may not, sometimes without an obvious reason. But learning about these plants while participating directly in their preservation is all part of the fun and satisfaction of gardening with native plants!

Winterberry keeps its berries well into fall. (GLIFWC photo)

For more information

An excellent book on natural landscaping is:

Natural Landscaping: Designing with Native Plant Communities, by John Diekelmann and Robert Schuster. Published in 2002 by the University of Wisconsin Press, Madison, Wisconsin.

The Northern Native Plant Project has lots of information for purchasing, propagating and growing native plants on their website: *www.northland.edu/Northland/Soei/Programs/NativePlants/.*

Wild Ones Natural Landscapers Native Plants, Natural Landscapes is a nonprofit group started in Wisconsin. Their site has a wealth of information on native plant gardening and restoration: *www.for-wild.org/.*

The Wisconsin State Herbarium website has information and (usually) photos of all the plants known to be growing outside cultivation in Wisconsin, both native and introduced. Go to *www.botany.wisc.edu/wisflora/* and click "Name" to search for the plant you're interested in.

The Minnesota DNR has native plant gardening information at *www.dnr.state.mn.us/gardens/nativeplants/index.html*.

Finally, the Wisconsin DNR and the GLIFWC website has extensive information on invasive species. See *www.dnr.state.wi.us/invasives/* and *www.glifwc.org/invasives/* respectively.

Northern Native Plants Project cultivates new approaches to gardening

By Karen Danielsen
GLIFWC Forest Ecologist

Odanah, Wis.—The Great Lakes Indian Fish & Wildlife Commission (GLIFWC) has been a partner of the Northern Native Plants Project (NNPP), a program of the Sigurd Olson Environmental Institute of Northland College, since its inception in 2001. Other partners include the Bad River Band of Lake Superior Chippewa, USDA Forest Service, Natural Resources Conservation Service, Wisconsin Department of Natural Resources, and University of Wisconsin-Extension.

NNPP strives to help recapture the true northwoods by advancing native plant diversity through gardening and landscaping. Though most visitors to this region see "pristine" woods, many changes to the plant species composition have occurred since the extensive timber harvests of the late 1800's.

One significant change has been the increase of non-native plants, many of which escaped from gardens and other landscaped settings. In light of this unfortunate situation, NNPP has steadfastly encouraged gardeners to recognize the advantages of planting northern natives: they provide habitat for birds and butterflies, offer unpretentious beauty and a sense of place, and require less water and fertilizer.

NNPP has increased the awareness of native plant gardening by sponsoring workshops and seminars, publishing and distributing brochures, creating displays for county fairs and other community events, and establishing demonstration native plant gardens.

NNPP has also published an engaging native plant coloring book for kids of all ages and a well-received pamphlet, *A Guide to Northern Native Plants.*

From the start, NNPP realized a challenge that needed to be addressed: few local nurseries sell northern native plants. Some sell prairie plants—though native, are adapted to the Great Plains region and not appropriate for growing in the northwoods.

NNPP has worked diligently to increase the availability of northern native plants. Accomplishments include collecting, stratifying, storing and propagating local native seeds; creating a comprehensive database on native plant propagation techniques; assisting commercial nurseries with the promotion of northern native plants; and donating northern native plants to commercial nurseries, federal agencies, local schools and community groups (tribal and non-tribal).

Future plans of the NNPP include recruiting local landowners to form a cooperative for collecting and growing local native seed.

GLIFWC has greatly benefited from being a project partner. As a dedicated adversary to invasive non-native plants, GLIFWC sees the potential of NNPP to convince gardeners and landscapers to choose native over non-native plants.

For more information contact: *www.northland.edu/Northland/Soei/Programs/NativePlants/.*

Wild columbine flower. (E. Sutton, GLIFWC)

Wild rice conference planned for August

"Manoomin Niikaanisa—Wild Rice Coalition Building & Conference," is being planned for August 8-11, at the Lac Vieux Desert Resort and Casino, in Watersmeet Michigan. The main goals of the conference are to build a regional network of communities and individuals partaking in sustainable ricing cultures, and to introduce land managers to wild rice restoration and management opportunities.

This conference will provide a great opportunity for individuals interested in learning—or learning more—about rice harvesting or management. It will have concurrent sessions, aimed primarily towards harvesters and managers, because both of these groups will be critically important in determining the future status of this unique and valuable resource.

Scott Heron, Assistant Biology Professor at Ferris State University and Conference Co-chair, is one individual leading the effort to build sustainable ricing cultures. His work is motivated by a conviction that ricer harvesters are also rice stewards, and can be the ones on the forefront to protect and restore the manoomin resource. Ricers value this resource, and want to see it valued by others; they are also the ones out on the beds each year, observing their condition and how they are being impacted by various forces. They can be the first ones to recognize problems as they occur.

The conference is also co-chaired by Patrick Robinson, University of Wisconsin Extension, who holds a great interest in expanding the ability of land managers in caring for this resource throughout the wild region—primarily the states of Minnesota, Wisconsin and Michigan.

Presentations will include a broad array of speakers who will cover an equally broad array of topics. Those interested in harvesting will find presentations on identification, harvest, finishing and even cooking manoomin; managers can attend talks on rice ecology, status, restoration and management techniques, and the potential implications that genetically engineered wild rice could have on natural stands. Various managers will share their failures and successes in rice management, and efforts to develop a regional network to sustain wild rice will be presented.

Registration and a full agenda will be available at *uwex.edu/ces/regionalwaterquality*. There is also a pow-wow scheduled for August 11-13 at the pow-wow grounds near the LVD Resort and Casino, on the shores of Lac Vieux Desert.

For more information contact Scott Herron at (231) 591-2087 (*herrons@ferris.edu*), Patrick Robinson at (920) 465-2175 (*Patrick.robinson@ces.uwex.edu*), or Peter David at (715) 682-6619, ext 123 (*pdavid@glifwc.org*). For more information on the Lac Vieux Desert Band of Lake Superior Indians visit *www.lvdtribal.com*. For more information on conference facilities visit *www.lvdcasino.com*. **SEE YOU THERE**

Small spirits: The Crandall Collection of American Indian dolls

On exhibit at the Madeline Island Museum, La Pointe, Wis.

Nearly 200 rare American Indian dolls will be on exhibit at the Madeline Island Museum this summer. *Small Spirits: The Crandall Collection of American Indian Dolls* is on loan to the museum from Jean Dyer Reese, granddaughter of Wisconsin pioneer photographer H. H. Bennett. Bennett started a photography studio in Kilbourn City, Wisconsin (now Wisconsin Dells) shortly after the Civil War and began taking pictures of the Ho-Chunk people who had called the region home for centuries before European contact. Bennett's daughter, Nellie Crandall, also took a strong interest in Native American culture and, in particular, their arts as expressed through handcrafted, traditional dolls.

In 1920 Mrs. Crandall began collecting American Indian dolls with the goal of broadening the scope of her collection to eventually include dolls representing the artistry of every tribe in North America. She continued to collect until her death in 1951, whereupon her daughter Lois Musson continued collecting. Both Mrs. Crandall and Lois Musson meticulously documented the names of the doll makers and the tribes they represented. By the time of Mrs. Musson's death in 1972, the collection contained nearly 500 dolls.

The Crandall Collection was acquired by the Wisconsin Alumni Research Foundation which employed doll experts to catalog and photograph each doll in the collection. In time, the collection reverted to the Bennett family—Jean Dyer Reese and her husband Oliver Reese.

Comprised of 200 dolls from the Crandall Collection and representing most of the tribes of North America, the *Small Spirits* exhibition was previewed at the H. H. Bennett Historic Site in Wisconsin Dells from 2003 to 2005. Of particular interest are those dolls made by artists representing northeast woodland tribes, like the Ho-Chunk, Menominee, Ottawa, Mahican, Cayuga, Seneca and Mohawk, since the doll making traditions of these tribes reflect the cultures and environments found throughout the northern Great Lakes region. This showing at the Madeline Island Museum is only the second time the collection has been on public display.

The Museum is open from 10 a.m. to 5 p.m. daily. For more information on this exhibit, summer programs, admission rates or group tour opportunities, call the museum at (715) 747-2415 or visit their website: www.*wisconsinhistory.org/madelineisland*.

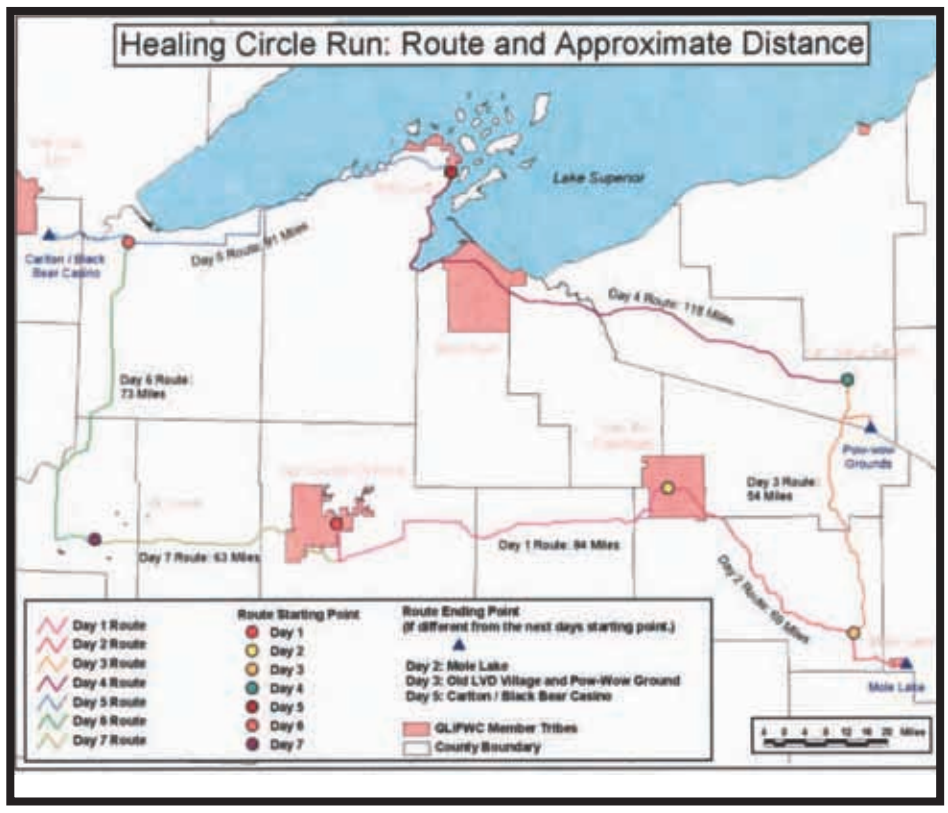
Healing Circle Run July 8-14, 2006

Participants welcome at any point en route!

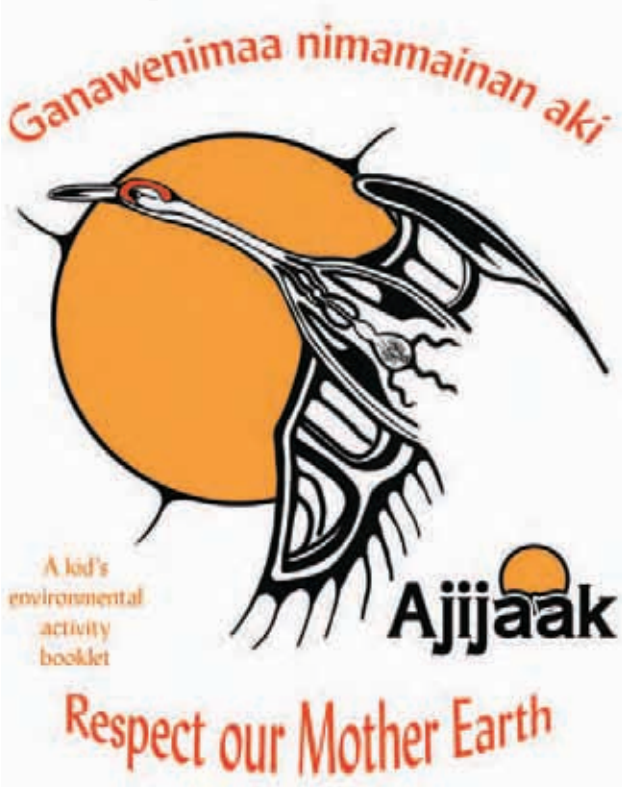
The 2006 "Healing Circle" run/walk will occur from July 8-14, 2006. The run/walk will connect eight Ojibwe reservations in northern Wisconsin, Michigan, and Minnesota (see below map) starting at the Lac Corte Oreilles Reservation on July 8 (Day 1), at Lac du Flambeau on July 9 (Day 2), at Mole Lake on July 10 (Day 3), at Lac Vieux Desert on July 11 (Day 4), at Bad River/Red Cliff on July 12 (Day 5) , at Fond du Lac/Black Bear Casino on July 13 (Day 6), and at St. Croix and returning to Lac Courte Oreilles on July 14 (Day 7).

The 2006 "Healing Circle" run/walk is intended to be a prayer for healing. During the 2001 Healing Journey Run, participants thought of a teaching on healing—"for a nation to heal, it must begin with the individual. As a person heals, then that person can help heal his/her family. As a family begins to heal, they can help heal their community. As communities heal, they can help the nation heal. As nations heal, they can help Akii (the earth), our plant and animal relatives to heal." Individual and family healing is possible after addictions (e.g. alcohol, drugs) and abusive or violent behavior are acknowledged and steps taken to prevent them from returning. Healing is also needed after the loss of a loved one and by the incarcerated, the orphaned, and sick. Native people also suffer from the inter-generational trauma and scars left by war, racism, oppression, and many destructive policies as a result of assimilation.

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



Ganawenimaa nimamainan aki (Respect our Mother Earth)



GLIFWC's Public Information Office recently published *Ganawenimaa nimamainan aki*. This publication is a twenty-page environmental activity booklet for elementary youth. It offers basic information about the Lake Superior watershed, its inhabitants and encourages conservation and respect of the water.

For a copy of the publication write: GLIFWC, P.O. Box 9, Odanah, WI 54861; email *pio@glifwc.org* or call (715) 685-2150. One copy of *Ganawenimaa nimamainan aki* is free and additional copies are $1.00 each. To see all publications available from GLIFWC, go to our website at *www.glifwc.org* and click on "publications."

Bad River youth get the scoop on trapping and ice fishing

By GLIFWC Staff

Odanah, Wis.—Great Lakes Indian Fish & Wildlife Commission (GLIFWC) Conservation Officers Vern Stone and Mike Wiggins provided instruction on trapping and ice fishing skills to Bad River tribal youth this winter. "These are important traditional, subsistence skills that youth need to learn so they can take advantage of harvesting opportunities in the future," says Stone.

In February the two GLIFWC officers teamed up with Bad River Tribal Warden Matt O'Claire and the Bad River Healthy Lifestyles–Activities Coordinator Tom O'Connor to conduct a trapping workshop. Seven youth and three parent volunteers attended the activities.

The students were given a hands-on introduction to trapping and snaring. In addition they completed some class time learning about treaty rights and off-reservation harvesting opportunities and regulations.

Topics discussed during the "classroom" segments included:

- ✍ Ojibwe outdoor skills and ways of life
- ✍ Treaty Rights Treaty Trapping Regulation Summary
- ✍ Fur and the Fur Trade
- ✍ Trap Presentation (using GLIFWC-ANA equipment—different types and different size traps displayed and demonstrated, dyed, sprung)
- ✍ Snaring presentation

During the hands-on experiential portion of the program the kids participated in the following activities:

- ➲ Offered up Tobacco and Prayer for the animals and plants.
- ➲ Harvested and utilized sumac buds to dye their traps.
- ➲ Made and set snares for rabbits.
- ➲ Practiced how to set up weasel sets utilizing small leg hold traps and bait.
- ➲ Checked an actual trap-line with Matt O'Claire, seeing first hand how the leaning pole sets and cubby sets are used for bobcat and fisher. The kids actually teamed up to "re-set" one of Matt's leaning pole sets.
- ➲ Learned how to fill out an Off-Reservation Harvesting Permit
- ➲ Placed weasel sets out in Iron Co., thereby exercising treaty rights.

All in all, the youth were given an excellent introduction to snaring and trapping. During the course of the weekend, one rabbit and one weasel were harvested on the Bad River Reservation.

Frannie and Archie Shinaway cooked lunch for everyone on both days of the workshop. Appropriately, the menu even included rabbit stew to highlight what snaring rabbits was all about.

Bad River youth participated in an ice fishing workshop which took place on Lake Superior last winter. (Photo by Mike Wiggins)

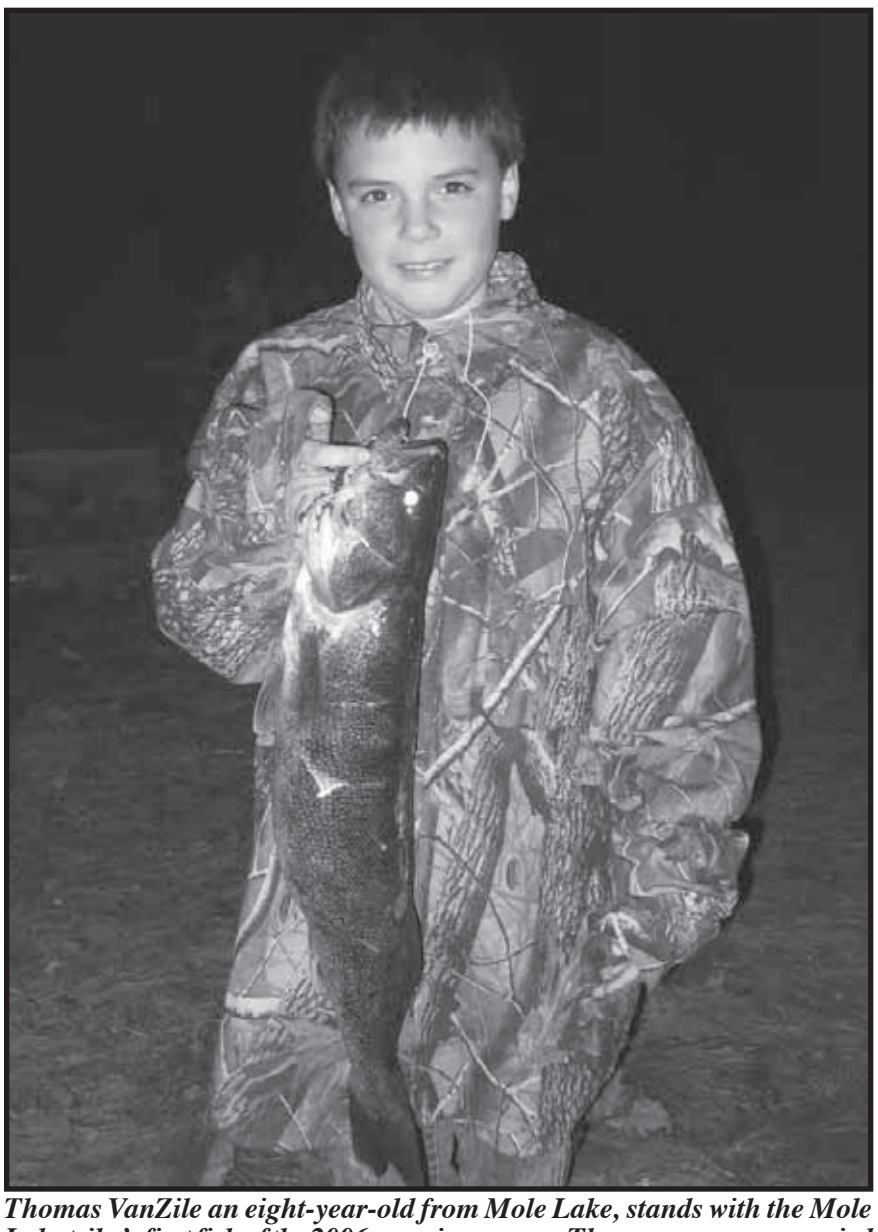
In March a Youth Ice-Fishing Workshop took place on Lake Superior's frozen Chequamegon Bay. Once again Tom O'Connor teamed up with GLIFWC officers as did Bad River tribal member Eric Maday to present the workshop.

The students were given a hands-on introduction to ice fishing. In addition they completed some educational time learning about fishing, the off-reservation model code, mercury and it's effects, and general facts about fish and ice.

During the hands-on experiential portion of our workshop, the youth participated in the following activities:

- ➲ Checking ice for safety
- ➲ Drilling holes in the ice and preparing them for fishing
- ➲ Setting tip-ups, hooking bait, using jigging techniques
- ➲ Setting up and utilizing a teepee for protection from the wind
- ➲ Practicing patience
- ➲ During the course of the day no fish were caught, but the warm weather and the atmosphere of "the big lake" seemed to keep the kids fired up.
- ➲ Next year, the event will be held earlier in the winter and will be implemented on an inland lake, pending safe ice conditions.

If you missed this year's workshops, be sure to watch for them coming up next winter. It's an opportunity for some good winter fun, good chow and learning.



Thomas VanZile an eight-year-old from Mole Lake, stands with the Mole Lake tribe's first fish of the 2006 spearing season. Thomas was accompanied by his father Charlie VanZile. Thomas, according to his dad, speared all the fish (4). This was Thomas' first time spearing. As a matter of fact, these were the only fish that the tribe speared the first night, not bad for an eight-year-old!! (Photo by Roger McGeshick)

Fee-exempt camping at national forest campgrounds

Through an agreement between participating GLIFWC member bands and the U.S. Forest Service, tribal members exercising treaty rights may camp for free and without length of stay restrictions for most campgrounds in the Chequamegon-Nicolet, Ottawa, Hiawatha, and Huron-Manistee National Forests.

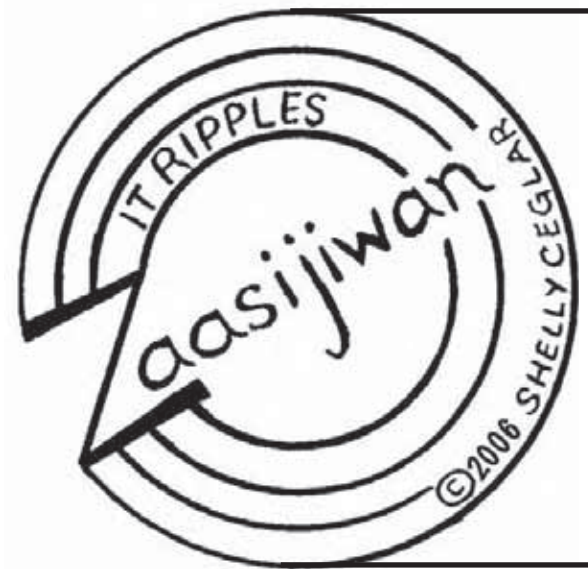
Member bands that have ratified the agreement include Bad River, Bay Mills, Keweenaw Bay, Lac du Flambeau, Lac Vieux Desert, Red Cliff, and Sokaogan (Mole Lake). Member bands that have not yet ratified the agreement include Lac Courte Oreilles, Mille Lacs, and St. Croix.

Some fee-exempt campgrounds still maintain length of stay restrictions between June 15 and August 15. The Forest Service states that these campgrounds experience high visitation rates during these summer months. This provision will be periodically reviewed to ensure that these restrictions are not interfering with the exercise of treaty rights.

In addition, some campgrounds operated by concessionaires will not have fee or length of stay exemptions until the solicitation and awarding of new concessionaire contracts. Expiration dates for the existing contracts will continue until 2009.

For fee-exempt camping in ***National Forest*** campgrounds you must:

1. Be a member of a band that has ratified the Tribal/USFS Campground Agreement.
2. From your tribal conservation department or other person designated by your band, obtain a tribal camping permit, the list of fee-exempt campgrounds, and the booklet entitled *Regulations Summary: National Forest Treaty Gathering and Camping.*
3. Follow the camping registration procedures at the campground. Generally, this involves providing information requested on a registration form or envelope.
   a. Indicate the number of days that you plan on camping on both the tribal camping permit and on the campground registration form.
   b. Instead of paying a fee, give the camping permit to the campground registration personnel or place the permit in the envelope.
4. Camp only at the campsite for which you have registered.



Niibin—It is Summer

Chi-noodin idash aabawaa agwajiing. Megwaayaak, ningii-wiigwaasikemin. Weweni i'iw apii, ningii-maniwiigwaasemin. Gaawiin ningii-nisaasiinaanig, ingiw wiigwaasi-mitigoog. Nooshkaachinaagan idash ziinzibaakwado-makak, niwii-ozhitoonan. Wayiiba niwii-mawinz. Niwii-aabajitoonan onow makakoon. Gaye, Ninoshe odoozhitoonan oziisigobimizhii-makakoon.

(It is very windy and warm weather outside. In the woods, we removed birchbark from the tree. Correctly at that time, we gathered the birchbark. No, we do not kill them, those birch trees. That fanning basket (winnowing tray) and sugar basket, I want to make them. Soon I will go pick berries. I want to use these baskets. Also, my Aunt she makes willow-baskets.)

Bezhig—1

OJIBWEMOWIN
(Ojibwe Language)

Double vowel system of writing Ojibwemowin.
—Long vowels: AA, E, II, OO
Omaa—as in father
Miigwech—as in jay
Wiigob—as in seen
Boozhoo—as in moon

—Short vowels: A, I, O
Dash—as in about
Imaa—as in tin
Endaso—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

Verbs
Transitive Inanimate

These are the "to it" verbs; the action goes to an inanimate non-living object.
Ziinibidoon—Squeeze it!
Ninziinibidoon.(an)—I squeeze it. (them)
Giziinibidoon.—You squeeze it.
Oziinibidoon.—S/he squeezes it.
Oziinibidoonaawaa.—They squeeze it.
Waabandan!—See it!
Niwaabandaan(an).—I see it (them).
Giwaabandaan.—You see it.
Owaabandaan.—S/he sees it.
Owaabandaanaawaa(n).—They see it.

Niizh—2

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

A. Biijinaago wiigob ningii-pisha'igobii omaa.

B. Ningii-pishagibidoonan wiigobiin. Minwendaagwad.

C. Ningii-kashkigwaanaa oziisigobimizh-mitigoog.

D. Aabajitooyaan oziisigobimizh, mashkawaa i'iw makak.

E. Dakobidoon i'iw makak. Aabajitoon wiigob. Wewiib, ozhitoon!

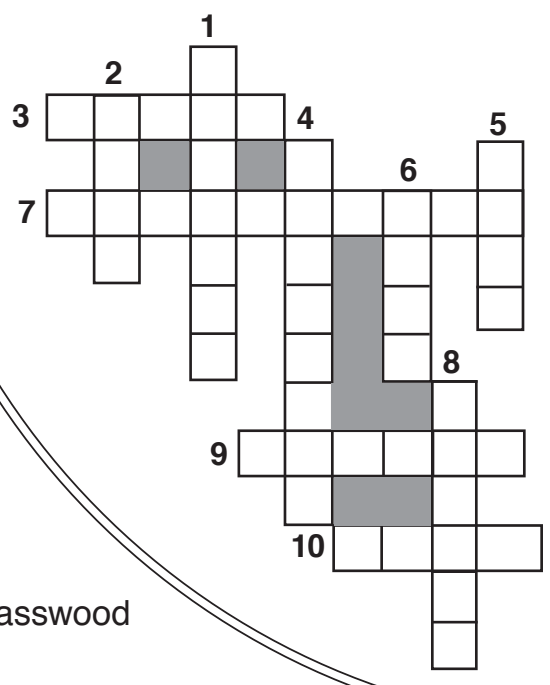
F. Izhinikaazo "ode'imiini- giizis" a'aw giizis!

G. Izhaadaa. Mawinzodaa. Ikidon miigwech.

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

Niswi—3

IKIDOWIN
ODAMINOWIN
(word play)



Down:
1. my aunt
2. there
4. trees
5. these (inanimate)
6. here
8. inner bark of the basswood

Across:
3. tree
7. Tie something.
9. It is windy.
10. please

Niiwin—4

VTI—I, You, He/She, They

Bimiwidoon!—Bring it along!
Nimbimiwidoon(an).—I bring it (pl) along.
Gibimiwidoon(an).—You bring it (pl) along.
Obimiwidoon.—S/he brings it along.
Obimiwidoonaawaa(n).—They bring it (them).
Nagadan!—Leave it behind!
Ninagadaan(an).—I leave it (pl) behind.
Ginagadaan (an).—You leave it.
Onagadaan.—S/he leave it.
Onagadaanaawaa(n).—They leave it.

Goojitoon! Try it!
Translation below.

O.....

O.....aawaa

Ni....

Gi....

1. ____ waabandaan i'iw makak adoopowining.
2. Dibikak ____ziinibidoon i'iw apikweshimon.
3. Daga ___nagadaanan iniw makakoon.
4. __gii-bimiwidoon___ i'iw wiisiniwin imaa.
5. Nimaamaa ___waabandaanan iniw onaaganan.

Translations:
Niizh—2 **A.** Yesterday, the inner bark of the basswood tree, I peeled wiigob here. **B.** I peeled them by hand, the wiigob strips. It is fun. **C.** I sew them willow sticks. **D.** When I use willow, it is strong, that basket. **E.** Tie up! that basket. Use it! inner basswood bark. Hurry, make it! **F.** She is called "strawberry"moon (June) this moon. **G.** Let's all go. Let's all pick berries.
Niswi—3 **Down: 1.** Ninoshe **2.** Imaa **4.** Mitigoog **5.** Onow **6.** Omaa **8.** Wiigob
Across: 3. Mitig **7.** Dakobidoon **9.** Noodin **10.** Daga
Niiwin—4 **1.** I see it that basket (box) on the table. **2.** At night she squeezes it that pillow. **3.** Please you leave them, those baskets. **4.** They brought it that food there. **5.** My mother she wants to see them, those dishes.

There are various Ojibwe dialects; check for correct usage in your area. Note that the English translation will lose its natural flow as in any world language translation.

Whose living in my neighborhood?
An outdoor game for niibin (summer)

Sometimes we think of our neighbors just as other people who live around us. Actually, we all have many other neighbors living near us. Ojibwe people often refer to other living creatures that share our Earth as "brothers" and "sisters," making a great big family of the living!

In the summer, it is easy for us to go outside and take a look around our home to see who else might be living there. Let's see if you can spy any of these neighbors around your home or neighborhood!

We give the name in English and Ojibwemowin (Ojibwe language):

Bring a pencil and check the box if you spy one!

Omakakii.

Ajidamoo

- ☐ Chipmunk—agongos
- ☐ Red squirrel—ajidamoo
- ☐ Spider—asabikeshiinh
- ☐ Cat—gaazhagens
- ☐ Crow—aandeg
- ☐ Frog or toad—omakakii
- ☐ Dandelion—doodooshaboo ojiibig
- ☐ Salamander—okaadiginebig
- ☐ Robin—opichi

Doodooshaboo ojiibig and amoo.

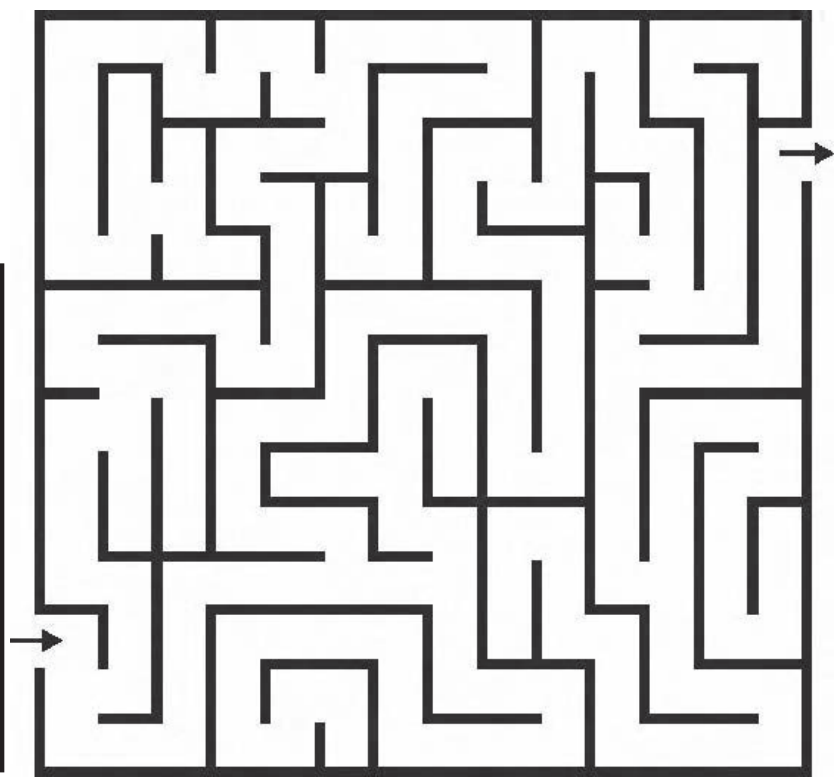
Waabooz.

- ☐ Red-winged blackbird—miskwinigwii asiginaak
- ☐ Caterpillar—mishimoose
- ☐ Fly—oojii
- ☐ White pine tree—zhingwaak
- ☐ Mouse—waawaabiganoojiinh
- ☐ Ants—enigoons
- ☐ Butterfly—memengwaa
- ☐ Worm—moose
- ☐ Hummingbird—nenookaasi
- ☐ Dog—animosh
- ☐ Chickadee—gijigijigaaneshiinh
- ☐ Rabbit—waabooz
- ☐ Bee—amoo
- ☐ Wild flower—waabigwan
- ☐ Birch tree—wiigwaasimitig

How many of these neighbors did you find in your neighborhood? Minose (good luck)!

Can you help the robin find its way back to the nest?

Opichi.



Wadiswan (bird nest).

(*Maze answer on page 20.*)

Ojibwe names for bineshiinhyag (birds) common to the ceded territory

ANA grant seeks to inventory plants, animals, places

Editor's note: The following translations were made possible with assistance from elders and speakers from Lac du Flambeau, Mille Lacs, Lake Lena, St. Croix, Fond du Lac, Lac Courte Oreilles, and the Bad River communities and funded by a grant from the Administration for Native Americans (ANA), Administration for Children and Families, Health and Human Services.

The Natural Resources Anishinaabe Language program is identifying a spectrum of natural resources in the ceded territories by their Ojibwe name and collecting additional cultural information about them.

The Ojibwe name for the bird is listed first. The plural of the word is shown in parenthesis. The common name is listed second, and then the scientific name. Dialects shown are central western (c/w) and eastern (e).

(Photo by Ed Sigda; primehookbirding.com)

C/W—ajiijaak (wag); beswewed (jig)
E—shagi (oog)
Great Blue Heron
Ardea herodias

Beswewe refers to the echo sound of his voice. He attracts the fish by mamaajinigwiibani'o, a movement of his shoulders making his feathers look like small fish when seen in the water to attract other fish.

(Photo by U.S. Fish & Wildlife Service)

C/W—mooshka'oosi (yag)
American Bittern
Botanus lentiginosus

Stands really still with his head looking upward, often mistaken for stumps hidden in cattails, bulrush, or wild rice.

(Photo by Dave Rintoul)

C/W—gopii ajiijaak (wag)
E—jijaag (oog)
Sandhill Crane
Grus canadensis

Gopii refers to going inland from the water. This bird is on land most of the time, unlike beswewe who is always hunting and fishing in the water. Gopii ajiijaak is often found in open fields.

(Photo by Joe Kosack, pgc photo)

C/W—jiichiishkiiwe (wag)
E—jiichishkwenh (yag)
Killdeer
Charadruis vociferous

Translates to "long legged whistler."

(Photo by Fred Hartmann, pgc photo)

C/W—ginwaa'okojiis (g)
E—jiichishkwenh (yag)
Common Snipe
Gallinago gallinago

"Little bird with long bill."

(Photo by Rick Layson)

C/W—badashka'anzhi (g)
American Woodcock
Scolopax minor

"Bada" as in badakai'igan which references fork-like jabbing action, "shkanzhii" refers to fingernails or talons. He jabs his talons into his prey (worms and bugs). Found in woody areas next to lakes and rivers.

(Photo by Dave Rintoul)

C/W—moonigwane (wag)
Common Flicker
Cotaptes auratus

He tells that it is spring.

(Photo by Ed Sigda, primehookbirding.com)

C/W—piichigiigwane (wag)
E—bjiikwaanewe (g)
Osprey
Pandion haliaetus

(Photo reprinted from clipart.com)

C/W—nenookaasi (wag)
E—naanookshkaans (ag)
Ruby Throated Hummingbird
Archilochus colubris

Noonii is to suckle. Nenoogshkaa is to hover. Refers to suckling from the flowers while he hovers.

Fresh from the big lake to your plate

Portable fish boil unit debuted at Red Cliff

By Sue Erickson, Staff Writer

Red Cliff, Wis.—Huge pots were bubbling, hissing and throwing up steam in the parking lot of the Red Cliff Bingo Hall on the evening of March 29th. It was chilly, but the smell of fresh fish cooking lured a number of curious observers towards pots where Lake Superior fish was being fried and boiled.

This was a "test run" for GLIFWC's Tony Gilane, Sharon Nelis and Lee Cloud and Red Cliff's Joanne Peterson, when they set up and put on a fish boil/fry for attendees at the Fishermen's Conference in Red Cliff that evening.

They arrived early to assemble the shiny, all-new, portable fish boil equipment and, even though it was the first time through, put out an excellent feed for conference participants that night.

The equipment, purchased through a grant from the Administration for Native Americans (ANA), will be used to demonstrate fish boils/fish fries at select functions in the region over the next two years.

According to Jim Thannum, GLIFWC's natural resource development specialist, the idea is to increase consumer awareness of locally harvested Lake Superior fish, expand market demand, and provide an outlet for new enterprises that will be processing value added fish products. "Lake Superior whitefish is a natural choice—heart healthy, lean, clean, full of omega-3, 0 carbs, and locally grown in Lake Superior," says Thannum.

"Lake Superior whitefish is a natural choice—heart healthy, lean, clean, full of omega-3, 0 carbs, and locally grown in Lake Superior."
—Jim Thannum, GLIFWC natural resource development specialist

To maintain a viable treaty fishery we need to improve promotion of Lake Superior's delicacy—whitefish.

Buy local and read packaging closely

To Thannum it only makes sense to promote and consume a local fish product, especially one that is healthy and has undergone rigorous laboratory testing to ensure the fish meet FDA chemical contaminant safety standards.

"Why buy Canadian walleye, that hasn't been adequately tested for mercury (See side bar), or Canadian inland whitefish that is shipped ***all the way to China*** for processing and then shipped back to midwest grocery stores and restaurants?" he asks.

Thannum advises customers to closely examine packaging for the "Country of Origin" label. A new federal law requires disclosure of fish production and processing locations, and many people have been shocked to discover the fish they are selecting for their meals or restaurants are coming from foreign countries—salmon from Chile, zander from Eastern Europe (sometimes sold as perch and walleye), catfish from Vietnam, or Canadian inland whitefish processed in China.

Product demonstrations & capacity building

The fish boil equipment purchased under the ANA grant includes a trailer loaded with the necessary cooking pots and portable gas burners, tables, utensils, a portable, self-contained sink, and a portable serving booth, replete with a spiffy, blue and white striped canopy and clean, white serving counters.

This summer Gilane will be providing product demonstrations in reservation communities near Lake Superior. The following year, product demonstrations will be provided for inland GLIFWC member tribes to make their membership aware of the wonderful taste and health benefits of Lake Superior fish.

The equipment will also be used for training to build local capacity to sponsor fish boils in the future. On June 7th, Jon Anderson, an expert on fish boils and fish fries will be putting on a training session for Gilane and interested tribal fish

(See Marketing Lake Superior fish, page 20)

Fish contaminants

Lake Superior whitefish, lake trout, and lake herring have undergone rigorous laboratory testing to ensure these fish meet FDA chemical contaminant safety standards.

Unfortunately, this is not the case with much of the fish eaten by Midwesterners that is not harvested and processed in the United States. A recent Chicago Tribune article noted:

✔ *"The FDA has tested only four walleye samples since 1978, 14 fewer than the Tribune."*

✔ *"The Newspaper found that* ***[Canadian]*** *walleye averaged 0.51 parts of mercury per million parts of fish tissue..... Four of the* ***[Canadian]*** *walleye samples [22%] were even above the much weaker U.S. limit of 1 part per million [ppm]".*

✔ ***"The amount the Tribune found in walleye, which was imported from Canada, is above the limit at which the Canadian officials can ban the fish from sale within that country's borders."***

Toxic risk on your plate, ***Chicago Tribune***, December 11, 2005 Sam Roe and Michael Hawthorne *www.chicagotribune.com/news/specials*

Laboratory testing has verified no Lake Superior whitefish, lake trout, or lake herring exceeds the 1 part per million FDA mercury limit.

Joanne Peterson, Red Cliff, prepares to feed fish into the fryer during the fish boil/fry at Red Cliff this spring.

Photos by Sue Erickson, Staff Writer

GLIFWC staff Tony Gilane and Sharon Nelis do a trial run with fish boil equipment to be used in an effort to promote Lake Superior whitefish.

Tribes engage Great Lakes restoration plan

By Charlie Otto Rasmussen
Staff Writer

Washington, D.C.—A far-reaching plan to protect and restore the Great Lakes is moving forward following a recent round of testimony before the Senate Committee on Environment and Public Works.

On behalf of tribal nations involved in the Great Lakes Regional Collaboration, (GLRC) Little Traverse Bay Band Chairman Frank Ettawageshik articulated tribal perspectives on Great Lakes management to United States senators during a March 16 hearing.

"The Collaboration's Strategy to Restore and Protect the Great Lakes exemplifies the region coming together to support protection and restoration of the Great Lakes," Ettawageshik said. "Tribal nations and tribal agencies are valuable partners in this process, providing a multitude of environmental and natural resource programs that efficiently deliver services to tribal communities that in turn benefit surrounding communities."

Following a 2004 executive order from President George Bush, the U.S. Environmental Protection Agency enlisted more than 1,500 people from government and nongovernmental organizations to form the GLRC in an effort to better coordinate environmental efforts across the five Great Lakes.

While the GLRC strategy addresses a catalog of cleanup and protection needs for the lakes, dealing with the mounting threat from exotic invasive species is likely the biggest priority for most stakeholders said GLIFWC Policy Analyst Kelly McKnight.

"The consensus around the region seems to be that controlling and stopping the spread of invasive species is key to the future of the lakes," said McKnight, a GLIFWC representative to the GLRC.

From the trout-killing sea lamprey that penetrated the lakes in the 1950s to the more recent arrival of the predacious spiny waterflea, natural resource managers struggle with a growing list of exotic plants and animals that have the ability to alter habitat and native species distribution on all levels. Without effective, coordinated control efforts, Great Lakes residents may witness significant changes to the local environments, McKnight said.

Reining in pollution like mercury emissions is another area of particular concern for tribal communities, McKnight said. In the Lake Superior region, tribes are contributing to GLRC objectives through ongoing pollution reduction programs like phasing out backyard burn barrels.

The Bad River Band, for example, has a burn barrel and screen exchange program that brings its on-reservation members into compliance with tribal ordinances. In 2002 the tribal council passed a rule limiting open burning and the use of burn barrels. Household waste burned in steel barrels typically incinerates trash at low temperatures, sending toxic microscopic particles into the air. After entering the atmosphere, the toxins can return to earth attached to precipitation or simply settle across the landscape as fine particulates.

As some provisions of the GLRC move ahead, full funding remains an obstacle to implementing the strategy agreed upon by the various stakeholders.

Congressional leaders are reviewing the budgetary needs of the program and are considering legislation to provide program dollars to implement priorities set forth by the GLRC.

Marketing Lake Superior fish

(Continued from page 19)

fish marketers. The instructor will take them through the process step-by-step and provide tips he's learned through years of successful fish boils and fish fries.

"We want the ***Fresh from the Lake to Your Plate-Lake Superior Fish Boils and Fries*** to be known as a Northwoods regional specialty, so we are investing time and money to learn the skills needed to maintain high quality boiled or fried fish. We have a great product; it is essential we prepare and present it well to the public," Thannum says.

The project will only be targeting a few area events its first year in order to build the experience and management capacity needed to insure high quality product preparation and presentation. By the end of the second year, it is hoped tribal fishermen and their families will be setting-up ***Fresh from the Lake to Your Plate-Lake Superior Fish Boils and Fries*** at many community events and fund-raisers throughout the region.

While our northern Minnesota, Wisconsin, and Michigan communities have numerous festivals, celebrations, and fund-raisers throughout the year, only a few communities have fresh Lake Superior fish available to the public. We are hoping to introduce new customers to Lake Superior fish through an enjoyable dining experience.

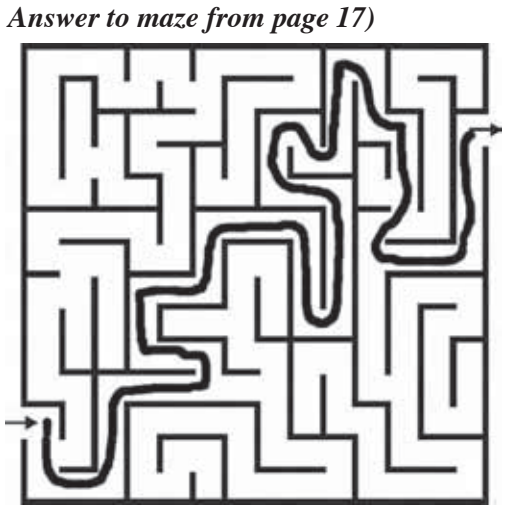
New marketing efforts

GLIFWC is also working with Michigan State University Sea Grant to improve markets for Great Lakes whitefish and is coordinating its efforts under the ANA grant with this initiative.

Under the ANA grant, GLIFWC will assist tribal fish processors in marketing their product through brochures, fliers, and custom labels. At your next visit to a local tribal fish market, pick-up free information on Making the Purchase and Preserving the Tradition, health benefits of omega-3 oil, Lake Superior fish, and other materials.

GLIFWC is also preparing a new web site to promote Lake Superior fish containing information on the history of Lake Superior's fishery, health/nutrition/recipes, purchase locations and products, and the sustainable management of Lake Superior's fishery (see *www.lakesuperiorwhitefish.com./*).

Answer to maze from page 17)



Proposed funding cuts threaten to limit sea lamprey control

By Bill Mattes, GLIFWC Great Lakes Section Leader

Odanah, Wis.—The Bad River is once again teaming with spawning fish—suckers, walleye, lake sturgeon, and sea lamprey. As of May 10th, 881 adult spawning sea lamprey were captured at the Bad River falls by GLIFWC crews monitoring assessment traps there as part of a coordinated effort between the Bad River Natural Resources Department, the U.S. Fish & Wildlife Service (USFWS), and the Great Lakes Fishery Commission (GLFC) to control sea lamprey in Lake Superior.

While the lamprey population remains high in the Great Lakes, the current federal budget for 2007 proposes to cut funding to the GLFC by $2.2 million. This proposal, if allowed to stand, will result in major cuts to sea lamprey control and assessment next year, which will leave more lamprey in the system.

During this spring's assessments, 67% (590) of the 881 sea lampreys captured were removed from the system. The male lampreys were transported to a USFWS facility where they will be sterilized and then returned to rivers to compete with non-sterile males for nest sites, thus reducing the number of young lampreys hatching. Female lampreys were taken to a land fill.

Thirty-three percent (291) of the lampreys were fin clipped and returned to the river, where they mix with other lampreys not yet trapped—to be recaptured. This is part of a mark-recapture population estimate to determine how many lampreys are ascending the river to spawn. Last year this method was used to estimate that 12,383 adult lampreys spawned in the Bad River.

The sea lamprey is an invasive species which came to the Great Lakes through the Welland Canal in the early 1950's. After invading, lampreys quickly helped to decimate lake trout populations basin-wide. In 1955, the GLFC was established by the Canadian/U.S. Convention on Great Lakes Fisheries. The GLFC coordinates fisheries research, controls the invasive sea lamprey, and facilitates cooperative fishery management among the state, provincial, tribal, and federal management agencies.

Kim Kocinski and Jason Meacham, GLIFWC Great Lakes fishery section interns, hoist a lamprey trap out of the Bad River this spring. GLIFWC participates in the annual spring sea lamprey population estimates in cooperation with the US Fish and Wildlife Service's Sea Lamprey Control Program. (Photo by Bill Mattes)

The mercury menace

How safe is tuna?

Federal regulators and the tuna industry fail to warn consumers about the true health hazards of an American favorite

By Sam Roe & Michael Hawthorne, Chicago Tribune

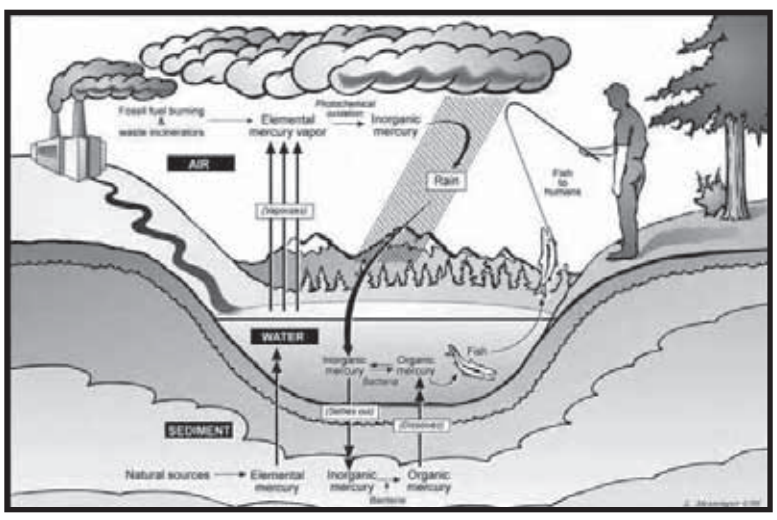
Editor's note: *The following article is being reprinted from a series by the* ***Chicago News-Tribune*** *entitled the* Mercury Menace. *This article ran in the* **News-Tribune** *in December 2005 and relates to mercury in tuna.*

Mazina'igan *ran the first article in this series in our Spring issue. This is the second and final part to the series.*

Chicago, Ill.—In the fall of 1970, a chemistry professor in upstate New York reached into his pantry, grabbed a can of tuna and, on a hunch, tested it for mercury. What he found stunned him: levels of the toxic metal far above U.S. safety limits. Embarrassed regulators immediately did their own testing, which confirmed the professor's results.

Tainted tuna soon captured national headlines and became a cultural reference point, from the butt of Johnny Carson jokes to the lyrics of a Marvin Gaye hit: "Fish full of mercury/Oh mercy, mercy me."

Government officials characterized the high mercury levels as an anomaly. After recalling 12 million cans, they pronounced tuna safe to eat again. But three decades later, canned tuna still contains mercury—sometimes in amounts as high as those found by the professor.



The source of most mercury to aquatic ecosystems is deposition from the atmosphere, primarily associated with rainfall. (Reprinted from www.mercuryinschools.uwex.edu/curriculum/national-curriculum.htm)

A Tribune investigation shows the tuna industry has failed to adequately warn consumers about the risks of eating canned tuna, while federal regulators have been reluctant to include the fish in their mercury advisories—at times amid heavy lobbying by industry.

When the Food and Drug Administration (FDA) updated its mercury warning last year, it arbitrarily classified canned light tuna as low in mercury to "keep market share at a reasonable level," one agency official told an FDA advisory panel, according to transcripts of the meeting.

The government has recommended that children and pregnant women eat canned light tuna because it generally contains less mercury than canned albacore does. Yet industry officials acknowledged in interviews that tens of millions of cans of light tuna sold each year are made with a species that on average contains just as much mercury as albacore.

Some of these cans carry special labels marketing them as a "gourmet" product, but others are sold as regular light tuna. That means shoppers have no way of knowing whether the can of light tuna they buy at the store tonight is potentially risky.

Making choices about canned tuna based on mercury risk is complicated because not all tuna species contain the same amount of the toxic metal, which can harm children's developing brains and cause neurological problems in adults.

Albacore tuna is a big fish and therefore tends to have higher mercury levels. The government has warned young children and pregnant women to limit how much albacore they eat.

There are no warnings for light tuna, because most of it is made with skipjack, a relatively small species with lower levels of mercury. But some canned light tuna comes from another species: yellowfin. While the mercury content of yellowfin varies, industry testing found the average to be equal to that of albacore.

About 15 percent of canned light tuna is made with yellowfin, the industry acknowledged. Each year, roughly 180 million cans of yellowfin are sold in the U.S. All of these cans are sold as "light tuna," and only about half are labeled as "yellowfin," "gourmet" or other wording that might signal to shoppers that the fish inside is likely high in mercury.

The other half, or about 90 million cans sold each year, have labels identical to those on other cans of light tuna. These cans contain three times more mercury on average than cans containing skipjack, the industry said. Industry officials acknowledged their boats catch more yellowfin tuna than they can sell as a gourmet product. So instead of discarding the fish, they sell it as regular light tuna.

A top official with the Food and Drug Administration (FDA), which is responsible for the safety of commercial seafood, said in an interview that the agency did not know the industry is putting high-mercury yellowfin into a product the government has explicitly recommended to groups at risk for mercury exposure.

"We do not have information on what is put in canned light tuna," said David Acheson, the FDA's chief medical officer. When the FDA tests light tuna for mercury, he said, it treats each can as if it were the same. "If there are some of those tuna that have higher levels, then that will come out through the testing by means of an average," Acheson said.

Agency officials said they stand behind the FDA's position that canned light tuna is a good choice for at-risk groups concerned about mercury exposure. The average mercury levels in canned light tuna are low, they said.

They also denied giving special treatment to industry, saying public health decisions are based on the best scientific evidence available at the time.

Tuna industry officials say their lobby is small and wields little influence in Washington. They said the mercury risks are overblown and there is no credible evidence that anyone has been harmed by eating tuna.

"There are no Americans at risk," said John Stiker, who until recently was an executive vice president of tuna producer Bumble Bee Seafoods and a leading industry spokesman.

Stiker and others in the fishing industry point to a study conducted in the Seychelles Islands in the Indian Ocean that found no significant harm to children whose mothers ate large amounts of fish while pregnant.

But the National Academy of Sciences, the nation's leading scientific body, concluded in 2000 that a larger body of evidence shows mercury does cause harm and that exposure limits should be based on that research.

Tuna industry officials remain unconvinced, stressing that their product is one of the healthiest foods children and pregnant women can eat.

Medical experts say fish is a good low-fat source of proteins and omega-3 fatty acids, which are thought to help prevent heart disease. The industry points to these qualities in touting tuna as a healthy meal.

At-risk consumers do not need to steer clear of gourmet canned tuna or canned light tuna in general, Stiker said. Though he thought the government's consumer warnings on mercury in fish were too strict, he said the industry believes at-risk consumers should heed the advice and eat no more than 12 ounces of fish in a week.

David Burney, executive director of the U.S. Tuna Foundation, an industry lobbying group, said he feared consumers will overreact to the mercury issue. "That would be the greatest calamity to public health in this country," he said, "if we literally reached a point where everybody said, 'My God. I'm so worried about eating fish. I'm just not going to eat it anymore.'"

35 Years ago, FDA said problem fixed

When Bruce McDuffie tested that can of tuna 35 years ago, the results reverberated far beyond his campus laboratory. "It was the shot heard around the world," recalled McDuffie, 84.

Then a chemistry professor at the State University of New York in Binghamton, McDuffie had been testing fish for pollutants in a creek near campus. One day, an undergraduate student remarked, "The only fish I care about is tuna fish."

The professor wondered: Is it possible canned tuna is polluted? He found a can of tuna in his pantry and ran the tests. The levels were 0.75 parts of mercury per million parts of fish tissue—higher than the FDA's limit at the time, 0.5 parts per million. The professor called the local newspaper, and the story went nationwide.

The FDA immediately started its own testing, finding numerous samples of canned tuna over the limit. Within weeks, the agency recalled millions of cans.

Such bold action came at a time when both regulators and the American public were embracing environmental issues. The first Earth Day had recently been held, and the government had just created the Environmental Protection Agency. A year earlier, in 1969, the FDA for the first time had set limits for mercury in seafood.

FDA officials said they were unsure why mercury levels in the canned tuna they tested were so high. The prevailing theory—one now widely accepted—was that mercury was everywhere in the oceans and that it accumulated up the food chain.

That meant large predator fish, such as tuna, would contain high amounts of mercury. Because little could be done immediately to rid the oceans of mercury pollution, the toxic metal would continue to taint large species year after year.

Despite this knowledge, the FDA characterized to the public that the mercury it found in canned tuna was an unusual, one-time incident. After the agency recalled 12 million cans, it announced that Americans could safely eat tuna again.

"We've audited the entire tuna supply in the United States," FDA Commissioner Charles Edwards told the media in 1971, "and, for all practical purposes, got the contaminated stuff off the shelves."

For years afterward, the FDA tested few cans of tuna, and the issue dropped from public view. Even McDuffie, the professor who gained brief fame, moved on to other experiments.

Prompted by the National Academy of Sciences report on mercury's hazards, the FDA decided in 2000 to issue a new consumer warning. Early drafts indicated some FDA officials thought the public should be cautioned about canned tuna.

The drafts were tested on consumer focus groups, and during one session the parent of a 15-month-old child asked about the risks of canned tuna. Alan Levy,

(See How safe is tuna, page 22)

How safe is tuna?

(Continued from page 21)

chief of the FDA's consumer studies branch, answered: "It would be, you know, prudent to cut back if he's eating more than a can-and-a-half a week," according to transcripts of the meeting.

Addressing another focus group, Levy acknowledged that the agency's mercury limit in fish—since relaxed from 0.5 to 1 part per million—was not low enough to protect fetuses. But a stricter standard, he said, would "put the availability of certain kinds of fish in question," according to the transcripts. "We would lose some fish." "Like king mackerel, shark, and swordfish?" the moderator asked. "Well, those in particular," he responded, "but also tuna."

One group firmly opposed any FDA warning on tuna: the U.S. fishing industry. Industry leaders met privately with FDA officials five times in late 2000 when the agency was crafting its mercury warning, FDA records show.

During one meeting, the U.S. Tuna Foundation argued that if consumers were warned about tuna, the market for canned tuna would shrink about 20 percent, the U.S. tuna fleet would default on loans, and the seafood industry could face numerous class action lawsuits "at substantial cost and adverse publicity," a copy of the industry presentation shows

In the end, the FDA rewrote the draft and released the final version of the warning to the public in January 2001. It recommended that at-risk groups not eat shark, swordfish, king mackerel and tilefish. Tuna was not mentioned.

A month later, the FDA issued a statement explaining the warning. It said canned tuna was not included because consumers did not eat enough to cause a significant risk. Yet the federal government's own data showed canned tuna was then the nation's No.1 consumed seafood.

The FDA said material from the National Food Processors Association, an industry lobbying group, suggested that "consumption is not as great as anecdotal observations would indicate" and that the vast majority of people consumed less than 7 ounces a week. The FDA told the Tribune it did not favor industry in its decisions, noting the agency also had met privately with consumer and health groups. But Vas Aposhian, a University of Arizona toxicologist who served on an FDA advisory panel at the time, thought the agency had caved to industry pressure. "What's more important: the health of the tuna industry or the mental health of American children?" he recalled thinking.

When the Environmental Working Group, a non-profit advocacy organization, released transcripts of the FDA focus group sessions showing the agency's reluctance to warn consumers about canned tuna, an embarrassed FDA said it would re-evaluate its advice.

Warning categories set 'arbitrarily'

The FDA spent more than two years reviewing its mercury warning. Finally, in March 2004, it released a joint advisory with the U.S. Environmental Protection Agency, in part to coordinate federal advice.

But the revised warning misled consumers in fundamental ways.

FDA officials classified mercury levels in fish as low, medium or high. Consumers were told that canned light tuna was low in mercury and that high-risk groups should eat this fish as opposed to many other kinds.

But the FDA classified canned light tuna as low in mercury not because it was especially low, but "to keep market share at a reasonable level," FDA official Clark Carrington had told the advisory panel just three months before the warning's release, according to transcripts.

Acheson, the FDA's chief medical officer, told the same panel that all of the categories—low, medium and high—"were arbitrarily chosen to put light tuna in the low category."

That decision had implications far beyond tuna. Once the FDA defined canned light tuna as low, all other kinds of seafood with comparable levels of mercury, such as cod, also had to be listed as low. When asked in an interview why officials arbitrarily chose the low mercury level instead of employing scientific calculations, Acheson said: "It was a perfectly appropriate scientific decision to choose that value compared to any other value. You could certainly move it up, you could move it down, and you might get a different result." But he said industry interests did not affect the decision. "Our mission here at FDA is to protect public health," he said. "It has nothing to do with safeguarding market shares."

The 2004 warning did caution consumers about eating canned albacore tuna, putting it in the medium category for mercury. But even if consumers followed the government's suggested limits on albacore, they would absorb too much mercury, according to calculations devised by the EPA and recognized by the FDA.

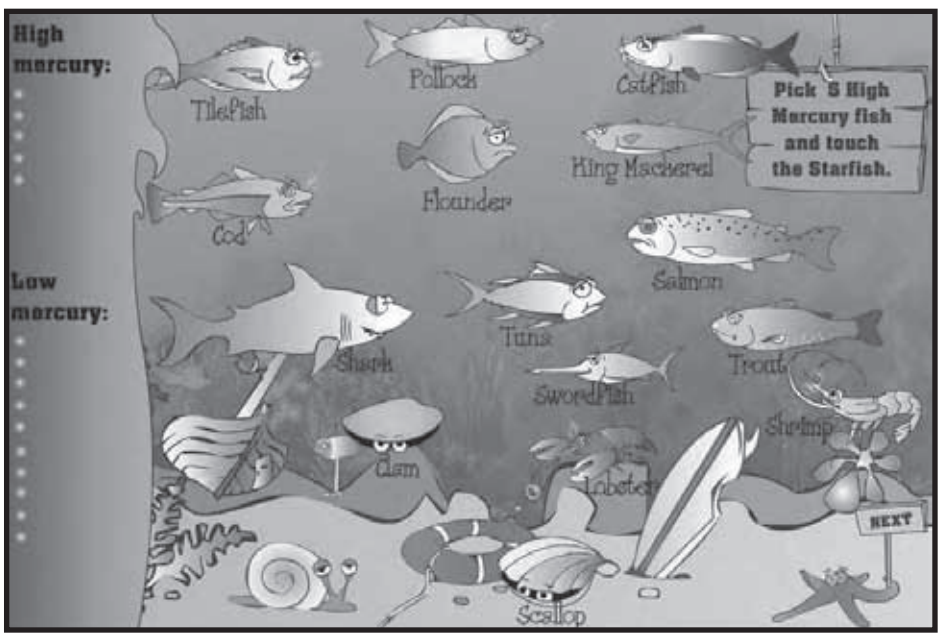
The warning says pregnant women, nursing mothers, women of childbearing age and young children can safely eat one 6-ounce can of albacore weekly, plus six ounces of another fish. But a 161-pound woman—the average weight of a U.S. female of childbearing age—would exceed the EPA's exposure limit just by eating the can of tuna.

Aposhian was so upset that the government was not tougher on canned tuna that he quit the FDA advisory panel. "Nobody asked what this is doing to children," he recalled. "Nobody seemed really concerned about what this would do to pregnant women."

Not all light tuna low in mercury

While many consumers might be aware that mercury levels can be high in albacore tuna, what hasn't been fully disclosed is the hidden mercury risk in canned light tuna. Government and industry officials repeatedly have stated that canned light tuna is a healthy, low-mercury fish. But they do not tell consumers that about 15 percent of all canned light tuna sold is made with yellowfin, a high-mercury tuna species.

Industry officials said these cans, often marketed as a gourmet product but not always labeled as such, contain about 0.35 parts per million of mercury—the same as albacore canned tuna, for which there is an FDA warning. Mercury levels



"Mercury in Seafood" is an on-line game for kids to make them aware of the risks of eating fish with high mercury levels, such as tuna. The game explains where mercury comes from and reminds kids that fish is good for you, but how much fish you can eat depends on your weight. Included in the game are charts for kids and women of childbearing years and another for women beyond childbearing years and males. To play the game go to: www.ci.vancouver.wa.us/solidwaste/pbt_site/images/PBT_tuna_game.asp. (Reprinted with permission from the City of Vancouver, WA ©2003.)

in yellowfin are on average about three times higher than those in canned light tuna made with skipjack.

Industry officials say each of the three leading U.S. canned tuna makers—StarKist, Bumble Bee and Chicken of the Sea—sells gourmet canned light tuna. StarKist calls its product "Gourmet's Choice," Chicken of the Sea markets a "Tonno" product under the Genova label, and Bumble Bee offers a "Tonno in olive oil" variety. When asked if there is more mercury in gourmet light tuna versus the regular cans, Stiker, the former Bumble Bee executive, said: "Most definitely. It's a bigger fish." StarKist and Chicken of the Sea declined to comment, referring questions to the Tuna Foundation.

Burney, the foundation's executive director, said that in the 1960s canned light tuna was primarily made with yellowfin. When the industry moved to new fishing grounds in the 1970s, boats caught fewer yellowfin and more low-mercury skipjack. So canned light tuna became mainly a skipjack product, with the yellowfin moved into a gourmet line.

The Tribune tested 18 cans of albacore and 18 cans of light tuna for mercury. After learning that yellowfin is often used in canned light, the newspaper analyzed 18 cans of gourmet tuna in a second round of testing.

The gourmet cans showed low levels of mercury: 0.06 parts per million—even lower than regular canned light and far lower than the average reported by the tuna industry.

Stiker said he was surprised by the findings. He speculated that Chicago had received shipments of gourmet cans made with small, juvenile yellowfin that would be low in mercury. Yellowfin range from 10 to 200 pounds, he said, "so you can certainly get some yellowfin that are low in mercury."

When the newspaper tested tuna steak made with yellowfin, it averaged 0.35. Canned light tuna averaged 0.11 parts per million and albacore 0.30.

Mercury content varied widely within most species tested. One can of light tuna had 0.31 parts per million of the toxic metal—in the range of albacore and other high-mercury fish. One can of StarKist had 10 times more mercury than another can of exactly the same kind of tuna.

"That's one of the reasons pregnant women have to be really careful," said Joanna Burger, a Rutgers University scientist whose staff conducted the mercury analysis for the Tribune. "If you happen to get a couple or three cans in the high range at a critical period when you are pregnant, it would not be good."

Among those calling for improved warnings about mercury in tuna is the American Medical Association, which adopted a policy last year that physicians should help make their patients more aware of the potential risks.

The group also urged the FDA to consider "requiring that fish consumption advisories and results related to mercury testing be posted where fish, including canned tuna, are sold."

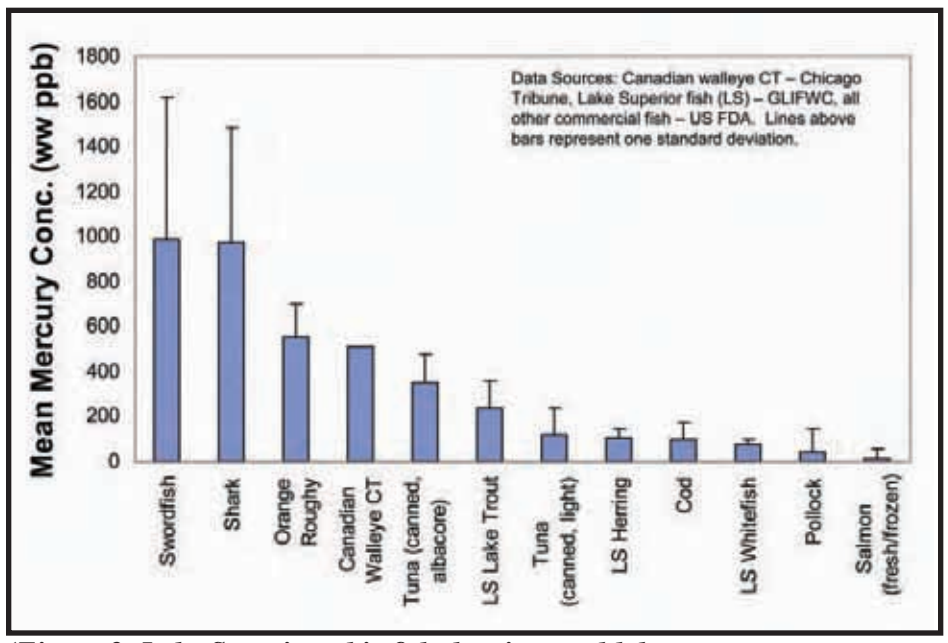
Last year, the state of California sued the nation's big three tuna producers, demanding they place warnings on cans of albacore and light tuna or post signs in grocery aisles to inform state residents that the products contain mercury. The state alleges the firms are violating a state law requiring business to warn people before exposing them to carcinogens or reproductive toxins. The case is continuing.

Industry officials are fighting the suit, and they have an unlikely ally: the FDA. The agency said the federal warning issued last year—the same one that misleads consumers about the levels of mercury in fish—is the best way to advise the public. In an August letter to California's attorney general, then-FDA Commissioner Lester Crawford wrote: "California should not interfere with FDA's carefully considered approach of advising consumers of both the benefits and possible risks of eating seafood."

The FDA, Crawford stated, has studied the mercury problem for years, has compiled "substantial data" and has developed "significant expertise" on educating consumers. The FDA, he concluded, is "uniquely qualified" to protect the public from mercury in seafood.

Health benefits of consuming Lake Superior fish

(Continued from page 9)



(Figure 3. Lake Superior whitefish, herring, and lake trout average mercury concentrations compared to some reported mercury concentrations for other commercially available fish.)

4. Trim skin and fatty tissue from fillets before cooking: The organic contaminants such as PCBs, DDT, dioxins/furans, and chlordane are generally found in the fatty tissues of organisms. **Trimming away skin and the fat along the middle, upper, and lower edges of the fillet will significantly reduce levels of these contaminants** (Figure 2). **While trimming fillets reduces organic contaminants, mercury cannot be removed by trimming because it binds to muscle tissue.**

5. Cook fish so fat drips away: **Cooking methods such as baking, broiling, and grilling fillets so fat can drip away provides an additional way to reduce organic contaminants, but not mercury.** Dr. Paul Addis from the University of Minnesota notes that "preparing fish with batter, breading, or frying reduces health benefits significantly." The process of frying adds additional fats and can break down beneficial Omega-3 fatty acids.

Health benefits of consuming Lake Superior fish

Much attention has been given to the presence of contaminants in fish in recent years. It is often easy to forget that fish are a great source of protein that are low in saturated fat and that many cold water fish species, including many Lake Superior fish, contain good levels of Omega-3 fatty acids (Figure 4).

According to Dr. Addis, the "primary benefit of Omega-3 fish oil is the reduction of platelet activity (blood clotting) and plaque formation which in turn can prevent heart attacks." There is also evidence that Omega-3 fatty acids may be beneficial to infant development. Thus, fish represent a healthy food choice if they are low in contaminants. This places extra importance on being aware of which fish species provide the greatest health benefits and the least amount of risk from contaminants.

Of the Lake Superior fish species, siscowet contain very high levels of Omega-3 fatty acids, but also contain the highest levels of contaminants. Lake Superior whitefish and herring contain good levels of Omega-3 fatty acids, but also contain lower levels of contaminants than siscowet and large lake trout. Thus, based on this information Lake Superior whitefish and herring are healthy choices because of high Omega-3 content and low contaminant concentrations. Eating Lake Superior whitefish and herring can also be part of a healthy traditional diet.

Dr. Harriet Kuhnlein, who published a report in 1995 entitled *Ojibwe Health and Traditional Food Use*, notes that "traditional cultures using fish and sea mammal food are well-known to consume important quantities of Omega-3 fatty acids (the omega fats) that protect against cardiovascular disease, certain cancers, and have recently been implicated in diabetes protection."

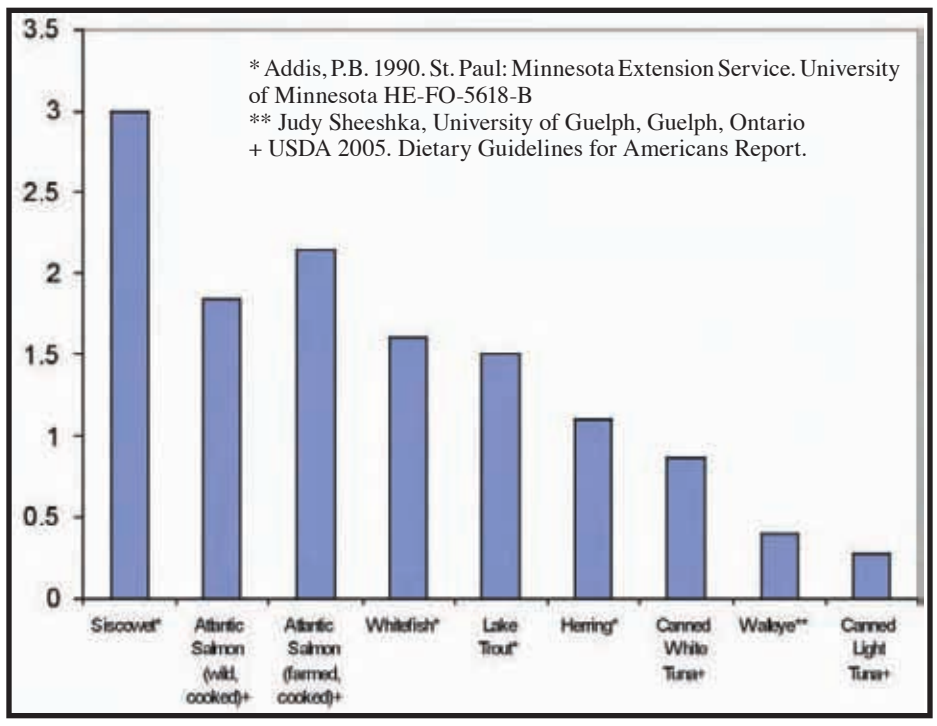


Figure 4. Omega-3 fatty acid (eicosapentaenoic acid and docosahexaenoic acid) content of Lake Superior fish species compared to walleye and commercially available salmon and tuna products.

Lake Superior lake trout, whitefish, & herring below FDA chemical concentration limits

The United States Food and Drug Administration regulates levels of certain chemical contaminants in fish that are sold commercially. Examples of chemicals that are regulated include mercury, PCBs, DDT, and chlordane. Concentrations of mercury, PCBs, and DDT in Lake Superior lake trout, siscowet trout, whitefish, and herring were all below FDA levels. However, the two largest sizes of siscowet trout (22-23 and 24.5-25.5 inches) exceeded the action level for chlordane. Other chemicals such as aldrin/dieldrin, heptachlor/heptachlor epoxide, and mirex are also regulated, but concentrations in Lake Superior fish species were well below these levels.

Further information about contaminants in Lake Superior lake trout, whitefish, and dioxins/furans in Lake Superior fish are available on GLIFWC's website *www.glifwc.org/* under "Biological Services" and "Reports."

Emily Miller, GLIFWC warden stationed at Lac du Flambeau, recently received her cross-deputization credentials from the state of Wisconsin. Miller joins five other GLIFWC officers who hold state credentials. (Photo by Charlie Otto Rasmussen)

Ten GLIFWC employees were recognized during the annual All Staff Meeting on March 21 in Odanah. On every five-year employment anniversary, staff members receive a pin marking five, ten or twenty years of service. GLIFWC award recipients and years of service include, back row: Steve Garske (5), Jim Thannum (20), Ron Parisien (20), Gerald DePerry (20), Peter David (20); front row, Roger McGeshick (5), Kim Campy (20) and Rose Soulier (20). Missing from the picture are Nick Milroy (5) and James Mattson (10). (Photo by Charlie Otto Rasmussen)

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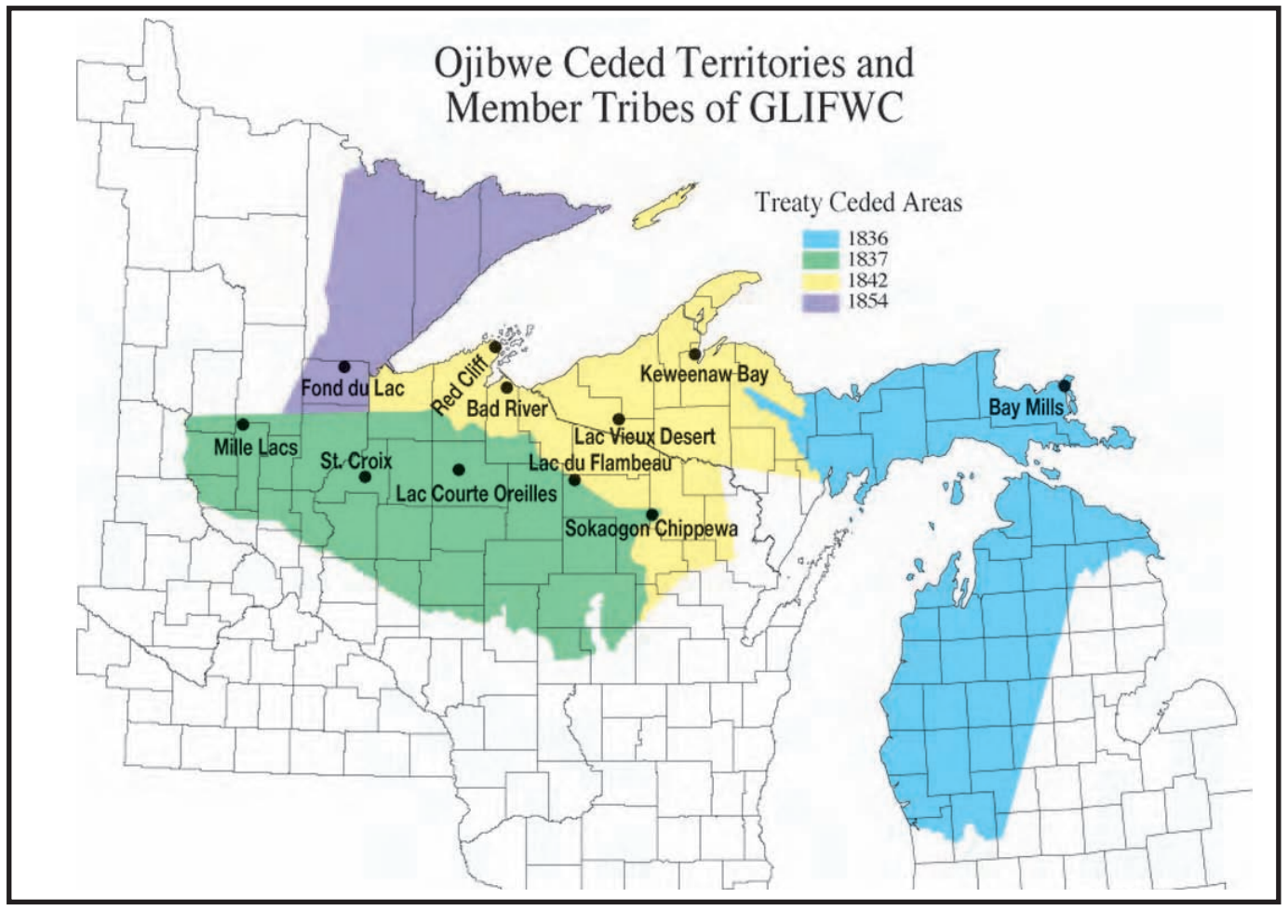

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